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# After the immigration shock:

The causal effect of immigration on electoral preferences

Working Paper version

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## **Abstract**

The influx of immigrants to Norway over the last decades is a large-scale natural experiment. This paper exploits municipal-level variations in the immigrant population (1977–2011) to estimate the causal effects on voter support for the right-wing, anti-immigration Progress Party.

The results indicate that voters keep incumbents accountable for permissive immigration policies. Immigration from non-Western countries (Africa, Asia, Latin America) has increased electoral support for the Progress Party. However, the effects are quite modest and noticeable only in the initial phases of immigration. Survey data covering ten elections (1989–2011) indicate a similar development in anti-immigration attitudes. The primary immigration shock tends to burn out quite fast as people get direct experience of immigrants on a daily basis.

# 1 Introduction

Immigration is possibly one of the most contentious issues politicians in democratic states have to handle. Yet it still remains to be settled how the issue of immigration spills over into the electoral arena.<sup>1</sup> According to the accountability hypothesis, voters believe immigration poses a threat their 'way of life' and will therefore punish incumbent parties for overly permissive immigration policies and vote for right-wing, anti-immigration parties. In the view of the contact hypothesis [Allport 1954] [Pettigrew 1998] [Pettigrew & Tropp 2006] [Kaufmann & Harris 2015], on the other hand, the effects of immigration on voter behavior are small and transient. Xenophobic attitudes and other immigrant-related concerns tend to diminish when the ethnic majority become familiar with the newcomers. For this reason, the anti-immigration party platform enjoys only modest gains.

This paper makes use of data on an 'immigration shock' to test these propositions. Historically, the Norwegian population has been extremely homogeneous in terms of ethnicity, language, and culture. For example, in 1970, there were fewer than 3,500 immigrants from non-Western countries in Norway, or 0.1 percent of the population. Indeed, two-thirds of the municipalities had not a single person originating from outside the Western hemisphere. The steep rise in immigration from Asia, Africa, and Latin America began in the late 1980s.<sup>2</sup> A large part of the present day immigrant population were asylum seekers on arrival who have since been granted residence permits and citizenship, and been united with their relatives through the government's family reunion scheme. Over the course of a single generation, Norway was transformed into a multi-ethnic society.

There is no scholarly agreement in the literature on the partisan effects of immigration.<sup>3</sup> On one hand, Lubbers et. al. (2002), Golder (2003) and Artzheimer (2009) and Semyonov and Rajzman (2006) found that immigration exert a positive influence on voter support for the anti-immigration parties. On the other hand, der Brug et. al. (2005) suggest that the number of asylum seekers has no impact on voter support for the anti-immigrant parties. Sides and Citrin (2007) suggest that contextual factors – which includes the size of the immigrant population - have little bearing on anti-immigration attitudes. Furthermore, Crepaz and Damron (2009) find the size of the welfare states bears a positive relation to acceptance

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<sup>1</sup>For example, the review by Hainmueller and Hopkins (2014) concludes that "Research on immigration attitudes to date has been surprisingly divorced from research on political partisanship and ideology. The relationship between immigration attitudes and political partisanship and ideology should be a central issue moving forward."

<sup>2</sup>For example, in 2013, Norway granted protection status to 6,770 asylum seekers. This amounts to 135 refugees per 100,000 Norwegians. Only Sweden and Malta accepted more refugees relative to their population sizes (Eurostat 2014).

<sup>3</sup>For a comprehensive review of the relevant literature based on field experiments and observational studies, see [Hainmueller & Hangartner 2013].

of immigrants, while the percentage foreign-born has no statistically significant impact on welfare chauvinism [cf. Ceobanu & Escandell 2010: 322].

These cross-national studies face a number of methodological problems. It is hard to say whether immigration affects political attitudes or attitudes influence immigration (reverse causality), and countries differ on so many dimensions that it is practically impossible to find a credible set of explicit controls (omitted variable bias). Cross-national data on immigrant populations vary considerably in quality and relevance.<sup>4</sup> Sub-national data on the size and composition of immigrant populations tend to have better quality, and cover longer time spans. Many institutional and other factors that vary between countries are invariant at the sub-national level.<sup>5</sup> Sub-national data has therefore been employed to analyze the political effects of immigration. Most studies usually use cross-section designs,<sup>6</sup> and the estimated effects are therefore susceptible to selection bias. For example, immigrants may settle in 'friendly areas', and antagonistic natives may respond to immigration by moving out of the neighborhood. It will appear as if immigration causes less resentment, suggesting that the results could be biased in favor of the

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<sup>4</sup>For example, Sides & Citrin (2007) employ OECD data on the percentage of foreign-borns in the population. Lubbers et al. (2002) use data on "non-European Union citizens." Similarly, Golder (2003) and Crepaz & Damron (2008) use data on the percentage of the population comprising "foreign citizens" in general. The variety of these data raises questions about country differences in naturalization and acceptance of double citizenship. van der Brug et al. (2005) and Arzheimer (2009) use data on asylum seeker numbers, the search for asylum constituting one of the main channels for people from non-Western countries. Applicant numbers are obviously related to the restrictiveness of immigration policies, and they vary considerably between countries. The indicators are questionable, moreover, first because the relevant immigrant populations may come from particular countries; second because people's opinions of immigration do not hinge on whether the latter have become naturalized or not; and third because the immigrant population may be multi-generational. The quality of the data varies a lot as well. The population registers of Scandinavian countries, Switzerland, and Germany contain highly reliable data on immigration. Many other countries employ on other data sources, such as labor market data and work permits. Their quality is lower, and the data are not necessarily comparable across countries.

<sup>5</sup>Hainmueller & Hopkins 2014 (c.f. their conclusion 4) urge researchers to address causality by moving away from cross-sectional designs where attitudes are regressed against attitudes, possibly exploiting panel data, conducting natural experiments, or field experiments. For examples of studies using natural experiments, see [Luttmer & Singhal 2011], [Hainmueller & Hopkins 2014] and [Freier et. al 2016].

<sup>6</sup>For example, such studies have analyzed political effects of immigration based on data on Denmark [Harmon 2012] [Gerdes 2011 ], Germany [Semyonov et. al. 2004], [Weber et.al. 2014], the Netherlands [Dinas & van Spanje 2011], Norway [Bay et. al. 2007], Sweden [Dahlberg et. al 2012], Switzerland [Hainmueller & Hopkins 2014] and the US [Hopkins 2010], [Hero & Preuhs 2007]. Jesuit et.al. (2009) present results from a study analyzing cross-regional variations in a number of countries. They find no support for the hypothesis that immigration increases voter support for the extreme right parties.

contact hypothesis.

The current analyses exploit municipal-level register data on the size of the Western and non-Western immigrant populations to Norway, and merge these data with corresponding statistics on voter support for the political parties in local and national elections (1977-2011). I argue that the sub-national variations in these immigrant populations are as good as random (conditional on observables), facilitating an estimation of causal effects on voter preferences. The key finding is that increases in the size of the non-Western immigrant population, induce more support for the anti-immigration, right-wing political party. Nevertheless, the effect is small and only noticeable when the first immigrants arrive; it fades completely once the immigrant population has reached a certain – relatively modest – size. Additional immigration has no electoral effects. I explore whether these voter reactions can be understood as an accountability effect, and whether personal dealings with immigrants (the contact hypothesis) explains the "dwindling" effect. The analyses therefore offer empirical support for both hypotheses.

The ensuing sections describe the institutional setting, including a brief outline of the election system and immigration policies. I outline the research design and provide descriptive statistics. Next, I present the baseline estimates of immigration, and discuss a large set of robustness tests. Having established the key result, I explore the causal mechanisms. First, I exploit that elections to the municipal and county councils are held concurrently. Only the municipalities have responsibility for immigration and integration policies. I therefore test the accountability hypothesis exploiting differences in voter support for the anti-immigration, right-wing party in the two elections. Second, I use survey data from the Norwegian Election Studies (1977-2011) to demonstrate that non-Western immigration raises concerns for national culture. Consistent with the contact hypothesis, this effect fades out when the immigration has reached a moderate level relative to the native population.

## 2 The Institutional setting

Norway has a three-tier system of government with 429 municipalities at the district level (2011), 19 counties at the regional level and central government at the national level. Norwegian counties and municipalities are responsible for implementing national welfare policies. The large local government sector delivers a number of services including child care, primary and secondary schooling, primary health care and care for the elderly and various infrastructure services. The municipal and county governments are financed by proportional income taxes and block grants, while user charges and property taxes account for a smaller part of

the costs. Since the income tax rates are regulated by central government, the local authorities have a little influence on total revenues.

## 2.1 Election system and voting rights

The election system is based on proportional representation on the local councils and in the national parliament (Storting). Norway has a system of staggered elections. National and local elections are held every fourth year but at an interval of two years between them. People who are eligible to vote are automatically registered in the national population register ('Folkeregisteret'), and they also receive a card in the mail containing information about the local polling place and the date of the election.

Only Norwegian citizens can vote in the national elections. The criteria on which Norwegian citizenship is granted differ between groups. Immigrants whose parents are not Norwegian nationals can apply for citizenship from the age of twelve. Several conditions apply. 1) a valid residence permit for at least one year. 2) certified proof of identity; 3) a clean record (no criminal convictions); 4) resident in for at least seven of the past ten years; and 5) have held residence permits that were each valid for at least one year. New rules in 2005 require applicants to have completed an introductory language course, or have sufficient knowledge of the Norwegian language. Special rules apply for some groups, particularly citizens from the other Nordic countries. Foreign nationals can vote in local elections (municipal and county council elections) after residing legally in the country for at least three years.<sup>7</sup>

In the 2009 national election, 4.6% of the electorate were first or second generation immigrants. In the 2011 local elections, 4.9% of the electorate were Norwegian citizens with immigrant background, while 5.5% were foreign nationals, which means that 10.4% of the electorate were immigrants. The Immigrant Election Surveys show that immigrant turnout rates are about 50% in the national elections and about 40% in the local elections (Kleven 2015). Rates of immigrant participation vary considerably by country of origin, and it is generally lower among immigrants from non-Western countries. Average voter turnout was 65.5% in the 1975-2011 local elections, and 79.5% in the 1977-2009 national elections.

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<sup>7</sup>Nationals from the other Nordic countries can vote in local elections as soon as they have a permanent residence permit in Norway.

## 2.2 Immigration and integration policies

There two types of immigrants, job seekers and refugees (including family members). Most of those seeking work come from the European Union and/or European Economic Area (EU/EEA). People from other countries need a residence permit, alternatively a more limited residence/work permit. Such permits are available to specialists, seasonal workers, and certain other groups. The Norwegian Directorate of Immigration (UDI) handles these applicants.

The current analysis addresses immigration from non-Western countries. Nearly all immigrants from these countries have been granted permanent residence as asylum seekers and through family reunions. Responsibility for these groups is shared by the municipalities and central government. The county authorities have no influence on immigration policy.<sup>8</sup> Parliament sets the legal framework for the handling of asylum seekers and family reunions. The UDI processes applications for protection, family reunion, and residence permit. It also offers asylum seekers temporary housing while their applications are being handled.

When a refugee has been granted permanent residence, the Directorate of Integration and Diversity (IMDi) takes on responsibility for their resettlement.<sup>9</sup> It makes specific requests to individual municipalities based on the number of refugees in need of settlement, and on the size, expertise, and relevant experience of the municipality in settling refugees, and local labor market conditions. As of 2002, the regional units of the IMDi have worked with the Norwegian Association of Local and Regional Authorities (KS) to assess requests to the municipalities. Nearly all refugees receive assistance from the IMDi to find housing.

Immigrants are obviously free to move from the first resettlement municipality and significant numbers do after a few years. Many move from the rural communities to larger population centers, particularly the Oslo conurbation. As of 2004, all municipalities provide a two-year introductory program for new refugees where they learn about society, have a chance to learn Norwegian and get some vocational training. The program also offers financial support. Admittance to this scheme assumes that the refugees do not move to other municipalities in the two first years after settlement and is probably one of the reasons for the sharp drop in the refugee relocation rate since 2004.<sup>10</sup>

Local authorities decide whether to accept all, some, or none of the refugees IMDi has asked them to take. A matching grant scheme has been designed to

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<sup>8</sup>The regional authorities - the counties - have responsibility for secondary education, public transportation, regional roads and regional development policies.

<sup>9</sup>The UDI was in charge of refugee settlement before 2002.

<sup>10</sup>For further documentation on refugee relocations, see Statistics Norway: <http://www.ssb.no/befolkning/artikler-og-publikasjoner/flyktninger-flytter-mindre-enn-for-men-mange-vil-til-oslo>

induce municipalities to take responsibility for refugee settlements. It covers municipal costs of providing housing and running an introductory program. When immigrants have been granted permanent residence, they are entitled to use municipal services like other citizens.

### 3 Descriptive statistics

The analyses rely on high-quality register data on immigrant populations and voter support for the political parties (1977-2011). These data facilitate comparisons of party preferences before and after the arrival of immigrants. Following Statistics Norway, the immigrant population is defined as "persons with two foreign-born parents, both those who have immigrated to Norway and those born in Norway of two foreign-born parents."<sup>11</sup>

Data on immigrant populations at the municipal and national levels were sourced from the national population register. The number of illegal immigrants not covered by the statistics is low, relative to the number of legal immigrants.<sup>12</sup> The current immigrant population consists of about 740,000 people (2014), or nearly 15 percent of the total population. Table 1 lists the relevant municipal-level demographic and election statistics.

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<sup>11</sup>For further documentation on definition and background statistics, see the relevant homepage of Statistics Norway: <http://www.ssb.no/en/innvandring-og-innvandrerer/nokkeltall/immigration-and-immigrants>

<sup>12</sup>Statistics Norway estimated the number of illegal immigrants to be 18.000 in 2008, potentially ranging from 10.500 to 32.000.

Table 1. Descriptive statistics 1977-2011

	(1)	(2)	(3)	(4)	(5)
	N	Mean	SD	Min	Max
Share of population at pre-school age	16,278	0.0827	0.0170	0.0318	0.161
Share of population at school age	16,278	0.132	0.0208	0.0577	0.211
Share of population aged 66 years and higher	16,278	0.162	0.0383	0.0522	0.325
The female share of the municipality's population	16,278	0.495	0.0114	0.421	0.552
Unemployment rate	15,423	0.0231	0.0133	0	0.129
Total native population	15,566	9,615	26,471	191	489,248
NWI: Non-Western immigrants, % native population	15,566	0.931	1.260	0	16.50
WI: Western immigrants, % native population	15,566	2.078	1.905	0	22.42
SR: Cumul. resettlement requests, % native pop.	7,991	1.140	1.987	0	20.63
SD: Cumul. resettlement acceptances, % native pop.	7,991	0.711	1.395	0	16.76
Votes for Progress Party, %	8,327	8.462	8.264	0	49.30
Votes for Conservative Party, %	8,327	16.41	9.346	0	59.00
Votes for Liberal Party, %	8,327	4.297	4.114	0	47.94
Votes for Christian Peoples Party, %	8,327	10.09	7.743	0	51.25
Votes for Center Party, %	8,327	14.97	11.06	0	68.51
Votes for Socialist Left Party, %	8,327	5.746	4.662	0	45
Votes for the Red Electoral Alliance, %	7,879	0.499	01.07	0	24.60
Votes for other political parties, %	7,879	6.016	12.11	0	100

Notes. The table comprises municipal-level register data for the 1977-2013 period. The statistics on party preferences include biannual data on voting in local and national elections respectively. The municipal-level demographic statistics are register data taken from the homepage of Jon Fiva, see <http://www.jon.fiva.no/data.htm>. Data on immigration comes from the homepage of Statistics Norway. Data on settlement requests and municipal decisions on immigrant resettlement covering the period 1995-2013 comes directly from Directorate of Integration and Diversity (IMDi).

### 3.1 The immigrant population in Norway

In Figure 1, I display data on the size of the immigrant population in Norway. Non-Western immigration started in the 1970s. The graph indicates significant increases in the 1980s and 1990s, mostly as consequence the result of asylum seekers fleeing from civil wars and unrest in various parts of the world. Large groups of immigrants came from Vietnam, Chile, Iran, and Sri Lanka in the 1980s, and from the Balkan countries, Iraq, and Somalia in the 1990s. Before the 2000s,

most immigrants from Western countries came from the other Western European and Scandinavian countries. The spikes in the 2000s are due to the accession of several Eastern European countries to the common labor market between 2004 and 2007, most being labor immigrants from Poland and the Baltic states.

Figure 1. The immigrant population in Norway

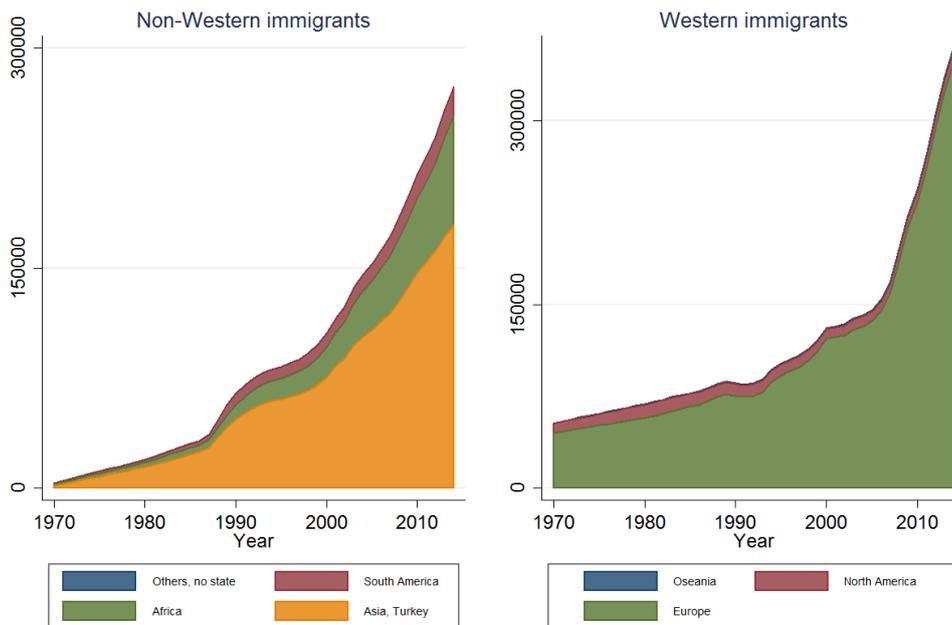
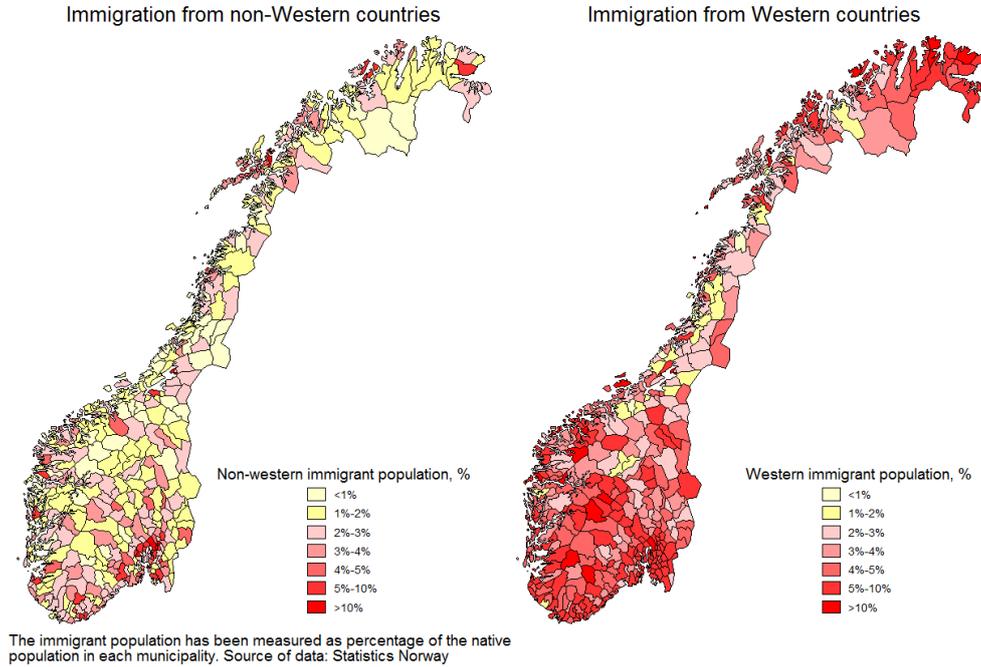


Figure 2 displays the geographic distribution of immigrant populations in 2013. Immigrants originating from Western countries account for somewhat larger shares of the population than do those from non-Western countries. Immigrants tend to concentrate in urban areas, particularly the Oslo conurbation. Yet I also observe several municipalities on the west-coast, in the interior and in Northern Norway have relatively large immigrant populations.

Figure 2. The immigrant population in Norway 2011



### 3.2 Progress Party voter support

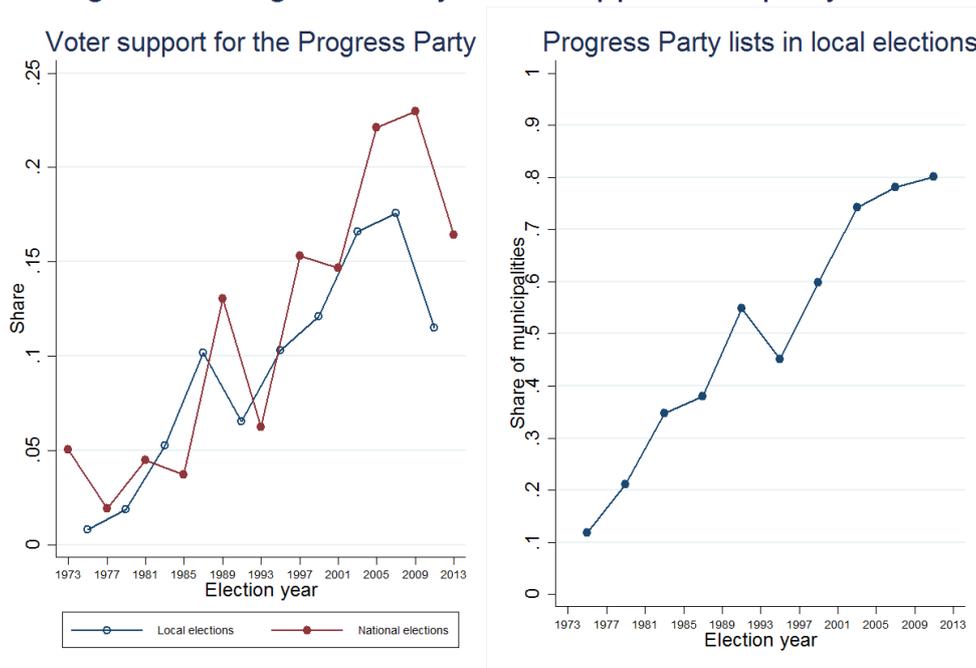
The Progress Party is one of the most successful right-wing, anti-immigration parties in Europe. The party was founded on a liberalist program in 1973, campaigning for lower taxes and slimmer government. A restrictive immigration policy became a key policy ingredient in the 1987 local elections.<sup>13</sup> The current party offers a broad policy program, particularly advocating better public health care and old-age care, more generous old-age pensions and a more rapid development of transportation infrastructure [Bjørklund & Bergh 2013].

Figure 3 displays the development of voter support for the Progress Party in the local (municipal) and national (parliamentary) elections. The overall pattern is one of increasing voter support, largely in parallel with rises in the non-Western immigrant population. The breakthrough for the party was the 1987 local elections (where immigration was the major political issue) followed by the 1989 national election. Support for the Progress Party peaked at 22.9 percent in the 2009 national election. Voter support is somewhat lower in local elections, particularly the 2011 local elections.

<sup>13</sup>Party manifestos and newspaper articles suggest that the Progress Party favors a restrictive immigration policy, while the others take neutral or liberal positions [Gulbrandsen 2010].

Figure 3 also displays share of municipalities with Progress Party lists in the local elections. The diagram shows the party only offered lists in 10 percent of the municipalities in the 1975 local elections. The party augmented its organization and offered lists in about 80 percent of the municipalities in the 2011 elections.

Figure 3. Progress Party voter support and party lists



## 4 Empirical strategy

I start with a model with fixed effects for municipalities and election years. The model controls for factors that are fixed over time, but varies between municipalities. Let  $j$  denote municipality and  $t$  election year,  $\theta_j$  captures municipality fixed effects, and  $\lambda_{rt}$  denotes the region-year effects.

The regions ( $N=90$ ) are labor market regions, and with at least one urban settlement and a surrounding commuting area.<sup>14</sup> The counterfactual assumption required to identify causal effects is that municipalities (most) affected by immigration would have experienced the same trend in voter preferences as those not (less) affected, had they not received any immigrants (i.e. the parallel lines assumption). Adding region-year fixed effects to the model relaxes this assumption.

<sup>14</sup>For documentation, see Statistics Norway: [https://www.ssb.no/a/english/publikasjoner/pdf/nos\\_c634\\_en/nos\\_c634\\_en.pdf](https://www.ssb.no/a/english/publikasjoner/pdf/nos_c634_en/nos_c634_en.pdf)

This would be important if regional trends in economic, demographic or related indicators correlate with trends in immigration and political attitudes. This might lead to biased estimates of immigration effects on voter support for the Progress Party. The more flexible model implies that I assume parallel paths within economic regions only, not between regions. A number of additional robustness tests are presented and discussed below.

$ProgressParty_{jt}$  measures the percentage of the electorate who voted in favor of the Progress Party) in municipality  $j$  in election year  $t$ .  $NWI_{jt}$  is the percentage of non-Western immigrants living in municipality  $j$  in election year  $t$ , and  $WI_{jt}$  is the percentage of immigrants coming from Western countries. Quadratic terms account for possible non-linear effects of immigration. I include time-varying controls for demographic characteristics of municipalities, the size of the native population (measured on a log-scale), shares of children, young, elderly, women and the rates of unemployment. The relative sizes of the immigrant populations correlate with the demographic structure of municipalities, and municipalities with large immigrant populations often display higher rates of unemployment. These variables, particularly population size, may also affect voter participation (Geys 2006: 642).

The model has been estimated separately for the local and national elections, i.e. to the municipal councils and the *Storting*. Notation for election type has been suppressed in the following model specification:

$$ProgressParty_{jt} = \alpha_1 NWI_{jt} + \alpha_2 (NWI_{jt})^2 + \beta_1 WI_{jt} + \beta_2 (WI_{jt})^2 + Controls_{jt} + \lambda_{rt} + \theta_j + \epsilon_{jt}$$

The accountability and contact hypotheses apply to partisan effects of non-Western immigration. If they are understood as competing theoretical models, the accountability hypothesis would imply that  $\alpha_1 > 0$  and  $\alpha_2 \geq 0$ , and the contact hypothesis would imply that  $\alpha_1 < 0$  and  $\alpha_2 \leq 0$ . Alternatively, they might be complementary if the first waves of immigration cause increasing Progress Party support, while additional immigration has no or even negative effects. This would imply a non-linear effect, that is  $\alpha_1 > 0$  and  $\alpha_2 < 0$ .

## 5 Baseline results

In Table 2, I present regression estimates using Progress Party voter support as response variable. The models are estimated separately for voter preferences in local and national elections. All standard errors are clustered at the municipality level. Models (1), (2), (4) and (5) are estimated with municipality and year fixed effects, while (3) and (6) yield the baseline model estimates that include economic region - year effects. The linear estimates displayed in (1) and (4) suggest relatively

small and positive effects for the size of the non-Western immigrant population, and these estimates are marginally significant in the national elections only. The non-linear models yield more informative results. Non-Western immigration causes an initial and significant increase in Progress Party support, but the effect tapers off rather swiftly. Once immigration has reached a level of 3.5–4 percent, additional non-Western immigration yields no additional voter support for the Progress Party. The effects of non-Western immigration are somewhat larger in the local elections, while immigration from Western countries has no significant impact on Progress Party support.<sup>15</sup>

A handful of previous studies have estimated non-linear effects of immigrant populations. For example, Wagner et. al (2006) employ data on the percentage of foreigners (i.e., without citizenship) in 440 districts in Germany. They relate the immigration indicator to survey data from 2002 on prejudice against ethnic minorities. They estimate a non-linear model, and find that natives living districts with a larger percentage of foreigners tend to have less prejudice against foreigners. A similar approach has been applied on Dutch data, and it suggests a curvilinear effect of on anti-Muslim attitudes (Savelkoul et al. 2011). Schneider (2008) employs cross-national data on the size of immigrant populations in Europe, as measured by first-generation immigrants (i.e., born abroad) from non-Western countries. She measures "perceived ethnic threat" by survey data from the European Social Survey (2002/2003), and find that the size immigrant population bears a non-linear relationship to ethnic treat. Rink and Swyngedouw (2009) examine support for the anti-immigrant party Vlaams Blok in Flanders in three elections (1991, 1995 and 1999). They exploit survey data on nearly 4.000 respondents in 175 municipalities. They estimate effects using municipality-level data on the percentage of immigrants from 10 countries of origin with a dominant Muslim population. Similar to Table 2, their regression analyses indicate a non-linear effect of immigration. The regression model assumes municipality random rather than fixed effects, which renders their estimates susceptible to selection bias. These studies present estimates based on analyses of cross-sectional data, and causal interpretations are therefore questionable.

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<sup>15</sup>The effects of immigration on other political parties are presented in Appendix A1.

The marginal effects on Progress Party support are substantial and significant in municipalities with a small non-Western (0%, 2%), but not when immigration has reached a higher level (5%). The immigration effects on voter support for the other parties are small and mostly insignificant.

Table 2. Progress Party voter support. Baseline regression estimates

	(1)	(2)	(3)	(4)	(5)	(6)
	Local	Local	Local	National	National	National
NWI	0.027 (0.182)	1.208*** (0.339)	1.366*** (0.375)	0.296* (0.131)	0.977*** (0.176)	0.792*** (0.184)
NWI <sup>2</sup>		-0.147*** (0.044)	-0.199*** (0.047)		-0.095*** (0.017)	-0.099*** (0.026)
WI	-0.021 (0.131)	0.443 (0.300)	0.141 (0.277)	0.020 (0.101)	-0.014 (0.191)	-0.159 (0.171)
WI <sup>2</sup>		-0.039* (0.019)	-0.032 (0.019)		0.002 (0.013)	0.012 (0.015)
Observations	3,779	3,779	3,779	3,763	3,763	3,763
R-squared	0.514	0.524	0.687	0.910	0.912	0.963
Number of municipalities	426	426	426	426	426	426
Election year FE	YES	YES	YES	YES	YES	YES
Municipality FE	YES	YES	YES	YES	YES	YES
Control variables	YES	YES	YES	YES	YES	YES
Region*Year FE	NO	NO	YES	NO	NO	YES

Robust standard errors in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05

Note. The response variable is voter support for the Progress Party, defined separately for municipal and national elections and as measured in percent of total number of votes. NWI is Non-Western immigrants measured as percent of native population, and WI is Western immigrants as a percent of native population. The models include the following time varying controls (cf. Table 1): shares of children, young, elderly, women; total native population (log); and the unemployment rate. The standard errors are robust standard errors clustered on municipalities.

Larger voter support for the Progress Party affects party representation on the local councils, and might also influence local party platforms. This could bias the immigration estimates in the local elections. First, Progress Party representation could lead to tighter immigration policies [Folke 2014]. Local councils can influence the size of the immigrant population by deciding how many refugees they want to receive, following a request from the Directorate of Integration and Diversity (IMDi), and by implementing other policies such as social welfare and housing. Reverse causality could therefore lead to a downward bias in the estimates. Second, local party representation might influence public opinion, with implications for subsequent voting behavior. For example, Carlsson et. al (2015) employ a regression discontinuity design to estimate whether party representation impacts on public

attitudes. Based on Swedish data, they find that more anti-immigration representation leads to a drop in anti-immigration attitudes. Additional anti-immigrant representation has no impact on voter support in subsequent elections. Finally, the other parties may tighten their own immigration policies in response to a growing immigrant population, to improve their popularity and electoral chances against the Progress Party. Some studies based on the Comparative Manifesto Project (CMP) indicate that such shifts have occurred in the national parties, although the changes are relatively modest [Akkerman 2012] [Alonso & de da Fonseca 2011] [Schumacher & Kersbergen 2014]. In the local elections, the estimates could represent changing policy platforms rather than voter behavior.

However, these concerns are not relevant to the analysis of voting in national elections. In these elections, voters in different municipalities face identical party platforms,<sup>16</sup> and voting behavior in national elections has no effect on local representation. It is reassuring to see that the estimates based on local election data are comparable to those based on national election data.

## 5.1 Robustness tests

I present several robustness tests in Appendices B1–B6. The modelling approach assumes that the timing of immigration into municipalities should not correlate with municipality characteristics in periods prior to immigration. I present cross-sectional regressions that relate the timing of immigration to the full set of party vote shares in the 1977 national elections (Appendix B1). These regressions include a set of demographic controls and economic region fixed effects. The analyses suggest that given these controls, the timing of immigration from non-Western countries is unrelated to initial voter preferences.

I also offer alternative estimates of immigration effects (Appendix B2). One set of models employs a linear, municipality-specific trend. Another set of models employs standard errors clustered on regions, which takes into account that levels of immigration might be positively correlated between municipalities in the same region. The estimates and standard errors are very similar to those presented in Table 2.

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<sup>16</sup>Gulbrandsen [2010:256] has examined the Norwegian parties' policies on immigration by analyzing party manifestoes and newspapers articles from the 1980s, and these data suggest that the positions of the Norwegian parties have been quite stable. The Progress Party has favored restrictive policies throughout the period, while the Liberal Party, the Christian People's Party and the Socialist Left Party have taken a liberal position. The Labor Party and Center Party are less explicit on immigration policies, but seem to favor a more permissive approach. The Conservative Party was positive to immigration in the mid-1980s, but reverted to a more restrictive position in the 1990s.

Furthermore, I estimate a linear probability model using the occurrence of Progress Party lists as the response variable (cf. Figure 3), and show that immigration has no significant impact on the likelihood of lists (in the local elections). This shows that the reported estimates in Table 2 are due to voter behavior, not to the responses of political parties (Appendix B3, equation (1)). I present results for two alternative models of Progress Party voter support (Appendix B3, equations (2) and (4)). One adds number of years with immigrants residing in the municipality. The first year with resident immigrants is defined as a population with at least 10 immigrants or a population that accounts for at least 0.1 percent relative to the native population. This model includes interaction terms to see whether a longer residence period of Western and non-Western immigrants leads to smaller immigration effects on Progress Party support.<sup>17</sup> The estimates indicate that this is the case. The negative quadratic effect is much lower and insignificant when the timing variable is added to the model. I also estimate immigration effects using first differences, defined over election periods (Appendix B3, equations (3) and (5)).<sup>18</sup> The non-linear effects are captured by including an interaction term between levels and changes in the size of the immigrant populations.<sup>19</sup> An increase in the size of the non-Western immigrant population causes support for the Progress Party to increase, but effects are smaller when the immigrant population has reached a modest size. These estimates corroborate the key result: after an

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<sup>17</sup>Let  $IY_{jt}$  denote number of immigrant years in the municipality, defined as number of years since the immigrant population was greater than 10 persons or more than 0.1%. We center this variable at the sample mean to facilitate comparisons with the baseline model. This lead to the following regression specification:

$$PartySupport_{jt} = \gamma_1 NWI_{jt} + \gamma_2 (NWI_{jt})^2 + \delta_1 WI_{jt} + \delta_2 (WI_{jt})^2 + \eta_1 IY_{it} + \eta_2 IY_{it} NWI_{it} + \eta_3 IY_{it} WI_{it} + Controls_{jt} + \varphi_t + \psi_j + \omega_{jt}$$

<sup>18</sup>Estimation with a standard municipality fixed effects (FE) are inefficient in situations with highly positive serial correlations. If residuals follow a random walk, it is more efficient to estimate the model by first differences (FD). Following Wooldridge [2010], a relevant test statistic suggests the existence of a positive serial correlation. I estimate the baseline model using first differences. I take out the residuals from these regressions, and estimate regressions where the residuals are regressed against their lagged values. In the absence of serial correlation, the parameter equals -0,5. The estimated test statistics are -0.27 with a standard error of 0.021 (local elections) and -0.40 with a standard deviation of 0.020, both differing significantly from -0.5.

<sup>19</sup>The first difference model (FD) is specified as follows: Let  $\Delta$  be the first difference operation, i.e.  $\Delta PartySupport_{jt} = PartySupport_{jt} - PartySupport_{jt-4}$ , and similarly for the other variables. The model has been estimated separately for local and national elections (notation not included):

$$\Delta PartySupport_{jt} = \gamma_0 \Delta NWI_{jt} + \gamma_1 NWI_{jt-4} + \gamma_3 \Delta NWI_{jt} NWI_{jt-4} + \gamma_4 \Delta WI_{jt} + \gamma_5 WI_{jt-4} + \gamma_6 \Delta WI_{jt} WI_{jt-4} + \Delta Controls_{jt} + \Delta \vartheta_t + \Delta \xi_{jt}.$$

The covariates included in the model are the same as in the baseline specification, but entered as first differences.

initial immigration shock, immigration has no impact on voter support for the extreme right.

I also consider the impact of unemployment and immigration in explaining support for the Progress Party (Appendix B4). The baseline model controls for the unemployment rate, and the modified model adds an interaction term capturing the combined effect of unemployment and immigrant population sizes. It appears that immigration from Western countries (mostly labor immigration) increases Progress Party voter support when unemployment is high. This is only observed in the national elections, which is consistent with central government's responsibility for macroeconomic policies. The non-linear effects of immigration are similar to those obtained in the baseline model.<sup>20</sup>

An additional explanation is selection due to mobility between municipalities. People who support the Progress Party as consequence of anti-immigrant attitudes might be more likely to move out of the municipality in response to immigration, while those who are more positive to the immigrants tend to stay behind. Such selection effects would also be consistent with the non-linear effect reported in Table 2. Based on British data, a detailed study by Kaufmann and Harris (2015) found little support for a similar interpretation. To test this hypothesis, I exploit data from two large national surveys with information on respondents' plans for moving out of the current municipality over the coming three years. The responses to the 2009 and 2012 surveys<sup>21</sup> were merged with the municipality-level data similar to those used in Table 2. This allows me to estimate immigration effects on plans to move out of the municipality. I estimate cross-sectional regressions using municipality-level controls, a host of individual-level controls and economic region and year fixed effects (Appendix B5). For the average respondent, a larger non-Western immigrant population appears to increase the likelihood of their planning to move out of the municipality. Nevertheless, this is not the case for Progress Party voters. These results do not support a selection hypothesis.

Since the main hypothesis addresses immigration effects on native voters; a concern is that immigration affects the composition of the electorate. Election surveys suggest that support for the Progress Party is low among non-Western immigrants. However, significant shares of these immigrants are not eligible to vote, particularly in the national elections, and non-Western immigrants have low rates of turnout (cf. Section 2.1). The survey data analyzed (Appendix B5) can

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<sup>20</sup>The control variables are potentially endogenous since immigration may affect the demographics and rates of unemployment ("posttreatment selection bias"). Excluding the covariates from the regression yields very similar immigration estimates (not presented).

<sup>21</sup>The "Citizen Survey" is administered by Agency for Public Management and eGovernment (Difi). It is conducted each second year using questionnaires on paper or web. Each of the surveys are sent to 30 000 inhabitants, and data is representative for different types of municipalities. The response rate is about 42 percent.

be used to shed light on this hypothesis. I regress voter support for the Progress Party on a subsample defined by respondents who are born in Norway and also have two parents who are born in Norway. These analyses relies on cross-sectional variations in the size of the immigrant populations. Despite this limitation, it is encouraging to see that the estimates are similar to those reported in Table 2.

## 6 Government accountability

Democratic accountability implies that citizens cast their votes in favor of opposition parties when they dislike the incumbents' policies. In the current section, I focus on the elections to the municipal councils (local elections), and test whether the observed voting behavior can be understood as an accountability effect.

### 6.1 Information

Voters can only keep governments responsible for immigration if they are reasonably well informed about changes in the immigrant population. Most studies show that people overestimate the size of the immigrant populations. This might imply that political attitudes to immigration are based on misconceived notions of actual immigration. This interpretation appears to be inconsistent with the analyses presented in Table 2.<sup>22</sup> Several studies show a positive correlation between perceptions and the actual sizes of immigrant populations [Sides & Citrin 2007]; [Lahav 2004] [Schlueter & Scheepers 2010]. Nevertheless, the non-linear pattern estimated Table 2 can be interpreted as an information problem. Most people might be able to distinguish between having and not having immigrants residing in the municipality, but they cannot observe changes in the size of immigrant population once immigration has reached a certain level.

These interpretations can be tested on data from the Local Election Surveys. In the 2007 survey,<sup>23</sup> respondents were asked: "Out of 100 persons living in your *mu-*

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<sup>22</sup>Based on German data, Semyonov et al. [2004] found no relation between the actual size of the immigrant population and the perceived threat of immigration. The perceived size of the immigrant population impacted positively on the perceived threat (see also [Schneider 2008] [Wagner et. al. 2006]).

<sup>23</sup>The data applied in the ensuing analyses are based on the National Election Surveys conducted each fourth year in the period 1977-2009, and the Local Election Surveys from the period 1999-2011. The data are provided by Statistics Norway (SSB), and prepared and made available by the Norwegian Center for Research Data (NSD). The Institute of Social Research (ISF) were responsible for the original study and Statistics Norway collected the data. Neither ISF, SSB nor NSD are responsible for the analyses/interpretation of the data presented here. Detailed documentation of sampling procedures and response rates is available from the Norwegian Center for

*municipality*, how many have a non-Western background?" And as a follow-up: "Out of 100 persons living in *Norway*, how many have a non-Western background?". In Figure 4, I display how responses to these questions correlated with the actual size of the immigrant populations.

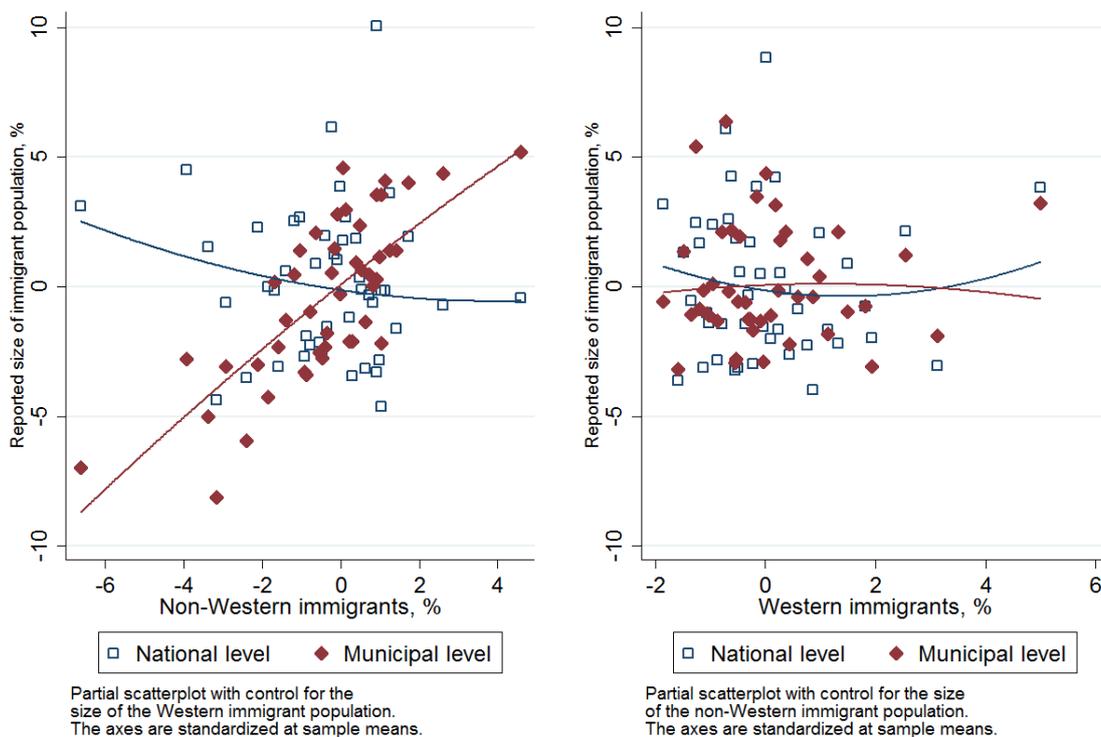
The left plot in Figure 4 indicates that the size of the non-Western immigrant population is linearly related to the reported size of the municipal-level non-Western immigrant population. A formal test corroborates this linear relationship. It is also noteworthy that the actual municipal-level immigrant populations are unrelated to estimates of the immigrant population at the national level. The right plot shows that no such relationship exists between actual and perceived sizes of Western immigrant populations. This might explain why support for the Progress Party is unrelated to number of immigrants from Western countries.<sup>24</sup>

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Research Data, see [http://www.nsd.uib.no/nsddata/serier/norske\\_valgundersokelser\\_eng.html](http://www.nsd.uib.no/nsddata/serier/norske_valgundersokelser_eng.html)

<sup>24</sup>As a further test, I estimate regression models that relate survey responses on whether immigrants are residing in the neighborhood. The four Local Elections Surveys conducted in the 1999, 2003, 2007, and 2011 local elections (N=10026) asked the following: "Do you have immigrants living in your neighborhood?" If asked, the interviewers should inform the respondent that the question referred to non-Western immigrants. This facilitates an analysis based on a model with municipality and year fixed effects, which also includes individual-level and municipality-level controls (respondents' education, gender, age; municipalities' population size, age distribution of the population and gender balance). A larger non-Western immigrant population share (log-scale) has a significant positive effect on the probability that respondents say they have immigrants in their neighborhood. The corresponding effect for the Western immigrant population is positive, but much smaller and marginally significant. These regression estimates are available on request.

Figure 4. Electoral information on the size of immigrant populations



## 6.2 Progress Party voting - accountability effects

The institutional setup facilitates a challenging test of the accountability hypothesis. First, the county authorities have no influence on immigration or responsibility for integration policies, and support for the Progress Party in the county council elections taps factors that are unrelated to immigration (given the accountability hypothesis). Since elections to county and municipality councils are held concurrently, I estimate regression models that use the difference in Progress Party support in the municipal and county election. Let  $ProgressParty_{jt}^{Municipal}$  denote support for the Progress Party in the municipal council elections, and let  $ProgressParty_{jt}^{County}$  denote support for the Progress Party in the county council elections, both measured at the municipal level. The modified response variable is defined as  $\Delta ProgressParty_{jt} = ProgressParty_{jt}^{Municipal} - ProgressParty_{jt}^{County}$ . I estimate a regression with  $\Delta ProgressParty_{jt}$  as the response variable, and in-

clude the same variables as in the baseline regression.<sup>25</sup>

Second, I expand the baseline accountability model by adding the immigrant population in the labor market region (excluding the relevant municipality) as an additional explanatory variable. I would not expect voters to keep the local incumbent responsible for immigration to neighboring municipalities. In addition, I estimate regressions with voter support for the Progress Party in the national elections. The accountability hypothesis would be consistent with regional effects on Progress Party support in these elections.

Finally, I exploit data relating directly to actual decisions by the local councils and central government body. The size of the immigrant population in a particular municipality is influenced by the numbers the IMIDI needs to relocate, and the number of refugees the local council is willing to receive. Starting in 1995, I employ accumulated settlement requests (SR) and decisions (SD), measured relative to the native populations as alternative indicators of immigration. I would expect voters to keep the local council responsible for their resettlement decisions, while requests should not influence Progress Party support in the local elections. I therefore estimate effects of requests and decisions separately for voting in the local and national elections.

Regression estimates based on these three features are presented in Table 3. The baseline estimates (1) show that the size of the non-Western immigrant population has a positive impact municipality-specific support for the Progress Party. The effect is non-linear and somewhat lower than reported in Table 2.

The regional effects are low and non-significant in the local elections (2), but have a positive and significant effect on the national elections (3). Finally, I observe that resettlement decisions impact positively on Progress Party support in the local elections (4), but not in the national elections (5).

Overall, these regression estimates support for the accountability hypothesis. It is the municipality's responsibility to settle and integrate refugees that accounts for the effect of immigration on voter behavior. This interpretation is also consistent with empirical analyses of party effects on immigration policies. Party representation impacts on actual immigration to Swedish municipalities.[Folke 2014] A similar effect may exist in Norwegian municipalities [Gulbrandsen 2010].

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<sup>25</sup>The Progress Party has relatively few incumbent positions. Less than 10% of the local governments had a mayor or deputy mayor in the local elections prior to 2003, and only had such positions in 13-15% of the municipalities from that election. Excluding municipalities with Progress Party mayors or deputy mayors does not change the estimates much.

Table 3. Accountability effects

	(1)	(2)	(3)	(4)	(5)
	Local	Local	National	Local	National
NWI	0.584*	0.618	0.637*		
	(0.251)	(0.343)	(0.257)		
NWI <sup>2</sup>	-0.079**	-0.087*	-0.018		
	(0.025)	(0.036)	(0.035)		
NWIR		0.188	-0.787		
		(0.873)	(0.728)		
NWIR <sup>2</sup>		-0.049	0.503**		
		(0.146)	(0.155)		
SD				0.681*	0.095
				(0.314)	(0.238)
SD <sup>2</sup>				-0.087**	-0.003
				(0.028)	(0.021)
SR				-0.255	0.083
				(0.291)	(0.175)
SR <sup>2</sup>				0.025	-0.010
				(0.019)	(0.016)
Observations	3,777	3,752	3,736	2,115	1,695
R-squared	0.379	0.377	0.963	0.297	0.931
Number of municipalities	426	423	423	426	426
Election year FE	YES	YES	YES	YES	YES
Municipality FE	YES	YES	YES	YES	YES
Control variables	YES	YES	YES	YES	YES
Year-region FE	YES	YES	YES	YES	YES

Robust standard errors in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05

Notes. NWI is Non-Western immigrants measured as percent of native population. WIR denotes the percentage of Western immigrants living in the economic region where the municipality is located (exclusive the relevant municipality, and NWIR is defined similarly as the percentage of non-Western immigrants living in the economic region. SD is accumulated settlement requests, measured as percent of the native population. RD is accumulated settlement decisions, measured as percent of native populations. The models include the same set of time varying controls as in Table 1, including the share of Western immigrants (WI). The standard errors are robust standard errors clustered on municipalities.

## 7 After the immigration shock

While the previous section addressed the positive linear immigration effect on Progress Party support, the current section focuses on the negative quadratic effect (cf. Table 3). The contact hypothesis offers one explanation [Allport 1954]. Getting to know the newcomers could mean more accurate knowledge and more sympathy for the immigrants [Pettigrew 1998] [Pettigrew & Tropp 2008]. This may be why, after the first wave of immigrants have arrived, additional immigration does not translate into greater support for anti-immigration parties. This interpretation assumes that pre-immigration anxieties are ill-founded, and possibly shaped by prejudice and stereotyping. To test this interpretation further, I exploit data from several Election Surveys.

### 7.1 Attitudes to immigration

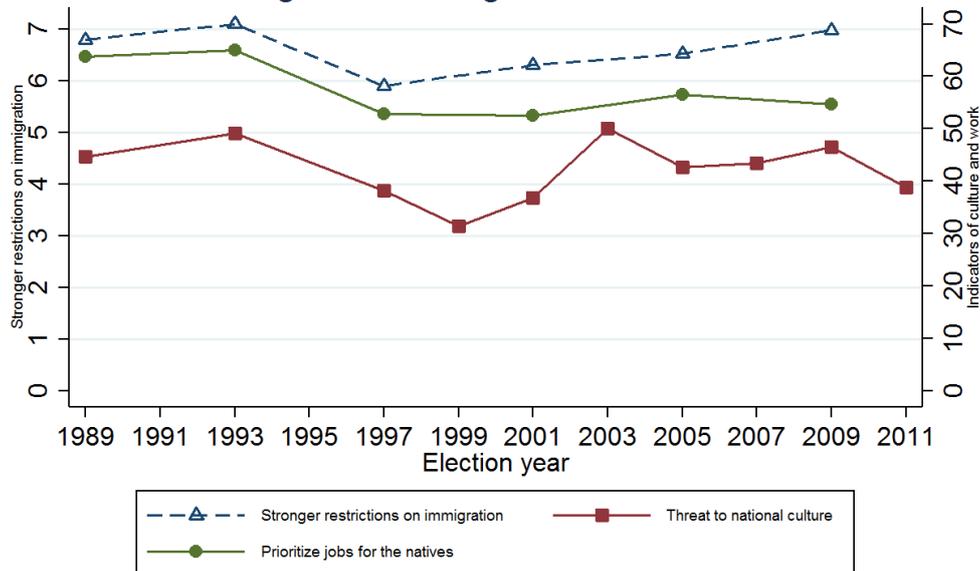
The National Election Studies (1989, 1993, 1997, 2001, 2005, 2009) asked respondents for their opinion on the following statements: "Immigration represents a serious threat to our national culture", and "When times are bad, we should first and foremost provide jobs for Norwegians."<sup>26</sup> Furthermore, respondents were also asked say whether they think immigration policies should become more or less restrictive.<sup>27</sup> These surveys have been combined into one dataset, and I display the annual scores of the indicators in Figure 5. Overall, the indicators are quite stable over the two decades, with a brief period in the late 1990 with somewhat less restrictive attitudes. The significant increase in the immigrant population (see Figure 1) appears not to correlate positively or negatively with anti-immigration attitudes.

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<sup>26</sup>The statement "Immigration represents a serious threat to our national culture" was also included in the Local Election Studies (1999, 2003, 2007, 2011). The response categories were slightly different in the Local Election Studies. The survey instrument did not include the "Yes and no" response alternative. Appendix A2 gives the frequency distributions.

<sup>27</sup>A related literature addresses concerns related to measuring political attitudes to racial discrimination, including biased survey responses caused by social desirability. Huddy and Feldman [2009] provide an extensive review based on studies from the US.

Figure 5. Immigration attitudes



Note. The diagram displays annual average scores for responses. Culture: Immigration represents a serious threat to our national culture. Work: When times are bad, we should first and foremost provide jobs for Norwegians. Coding of responses (right axis): Complete agreement (100), Qualified agreement (67), Yes and No (50), Qualified disagreement (33), Complete disagreement (0). Immigration policy (left axis): Then there is the question of Norwegian immigration policy. The value 0 expresses the view that we should make it easier for immigrants to enter Norway, while the value 10 expresses the opinion that the number of immigrants coming to Norway should be restricted to an even greater extent than at present. Where would you place yourself on this scale, or haven't you given much thought to this issue?

## 7.2 Immigration and immigration attitudes

As to be expected, concerns related to the effects of immigration on culture and work correlates positively with support for the Progress Party, the view that "The Progress Party has the best immigration policy"<sup>28</sup>, and preferences for a more restrictive immigration policy. In Appendix A3, I show that concerns over national culture display the stronger correlation with these political attitudes, while the importance of work is less important [Hainmueller & Hopkins 2014], [Hainmueller & Hiscox 2007]. In table 4, I regress the indicators of work and culture against actual levels of immigration, measured at the municipality level.<sup>29</sup>

<sup>28</sup>The exact wording of the survey question goes like this: "We would like to hear how you feel about the parties' policy on some current issues. The question is in each case which party you consider to have the best policy - given that you have an opinion on the matter.

... C. When it comes to immigration. Which party has, in your opinion, the best policy?"

<sup>29</sup>Note that the use of two indicators does not allow calculation of indicators of validity and reliability.

Table 4. Immigration and immigration attitudes 1989-2011

	(1)	(2)	(3)	(4)	(5)	(6)
		Culture			Work	
NWI	1.584*	1.997	1.949	0.858	2.904	2.938
	(0.870)	(1.239)	(1.247)	(1.591)	(1.776)	(1.799)
NWI <sup>2</sup>	-0.105***	-0.199*	-0.194*	-0.056	-0.279*	-0.282*
	(0.035)	(0.102)	(0.104)	(0.054)	(0.167)	(0.168)
NWIR		1.884	2.642***		0.897	0.235
		(1.832)	(0.935)		(3.481)	(1.417)
NWIR <sup>2</sup>		0.119			-0.106	
		(0.224)			(0.551)	
Observations	18,408	16,699	16,699	10,785	9,604	9,604
R-squared	0.087	0.089	0.089	0.091	0.083	0.083
Election year FE	YES	YES	YES	YES	YES	YES
Municipality FE	YES	YES	YES	YES	YES	YES
Control variables	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

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

Note. The table shows regression analyses using Culture and Work as response variables (cf. Figure 5). Culture is measured by responses to the statement: "*Immigration represents a serious threat to our national culture*" Work is measured by responses to the statement: "*When times are bad, we should first and foremost provide jobs for Norwegians*" The responses are coded: Complete agreement (100); Qualified agreement (67); Yes and No (50); Qualified disagreement (33); Complete disagreement (0). The survey datasets were merged with corresponding data on municipalities. The control variables comprise the set of variables as in Tables 2 and 3. The standard errors are clustered on municipalities.

The survey datasets have been merged with the municipal-level data used in the previous sections so as to facilitate an analysis of immigration effects on perceived cultural threats. The contact hypothesis predicts a non-linear relationship similar to the regression estimates presented in Table 2.

I therefore estimate models using the threat indicator as response variable. The right-hand side variables are the same as those in Tables 2 and 3, i.e., the immigrant populations, the covariates, municipality and election year fixed effects. The model also includes the size of the immigrant population in the regions. Following the contact hypothesis, I expect to see a linear, positive effect of immigration to the surrounding municipalities. The standard errors are clustered at the municipality level.

The regression results are presented in Table 4, and I present estimates for the non-Western immigrant population only. The first specification (1) indicates a positive, yet small and insignificant, linear effect. The quadratic term is significant and negative, suggesting the anxiety effect disappears when immigration reaches a certain level. The second model specification (2) includes effects of immigration to the region. Both the linear and quadratic terms are positive. When I include the linear term only (3), the regional effect is significant and positive. These estimates indicate that immigrant anxiety is a temporary phenomenon, and that geographic proximity to immigrants tends to dilute xenophobic attitudes.

## 8 Summary

Immigration from non-Western countries has contributed only modestly to the success of the right-wing Progress Party. This result is based on a number of empirical tests, including regression models with a municipality, year, and region-year specific effects. Alternative model specifications using first differences, municipality-specific time-trends and measuring the timing of immigration corroborate the main result.

At least part of the effect is due to voters' response to the immigration policies of local government. This understanding is based on analyses of differences in voting in municipal and county council elections. The interpretation receives additional support from analysis of central government requests to municipal authorities to aid in the resettlement of refugees, and the subsequent response by local councils.

The immigration effects are small and transient. Support for the Progress Party disappears when the immigrant population reaches a level of about 4 percent of the wider population. Further immigration appears not to increase support for the extreme right. Survey data show that most want a more restrictive immigration policy, and many perceive immigration to be a threat to national culture and employment. Yes, these anxieties have been relatively stable over the last decades. Cultural anxieties tend to increase when the first groups of immigrants arrive in the municipality, but further immigration bears little relation to voter attitudes. The analyses are limited as by lack of individual level data on social interaction between immigrants and natives. The results are, however, consistent with the hypothesis that direct contact with immigrants alleviates concerns, particularly with respect to native culture. The anti-immigration party platform has therefore had a limited mobilizing potential, indicating that much of the voter support for the Progress Party is due to its broader policy platform.

The Norwegian case is characterized by low unemployment rates, relatively high rates of economic growth, and extensive redistribution through a generous welfare state. Anti-immigration attitudes are therefore mostly fuelled by cultural resentment, and are less related to employment competition or access to and financing of public welfare benefits. The contact hypothesis therefore kicks in quite strongly, diluting the accountability effect considerably. A weaker economic situation would mean stronger competition for jobs and cutbacks in welfare programs. In this case, immigration policies might have more visible effects on voters' material positions, suggesting that the accountability response could dominate electoral behavior.

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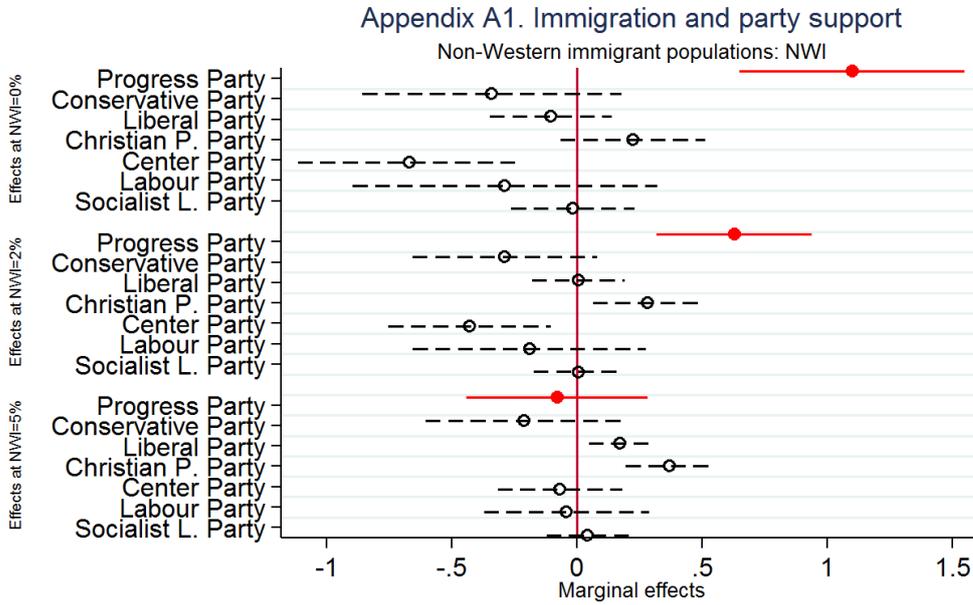
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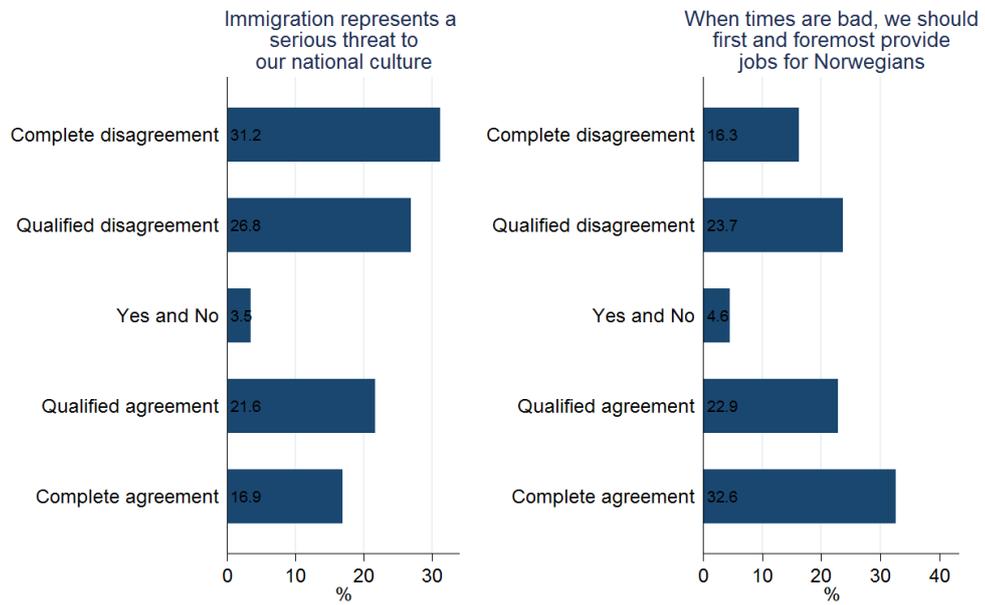
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# 9 Appendix



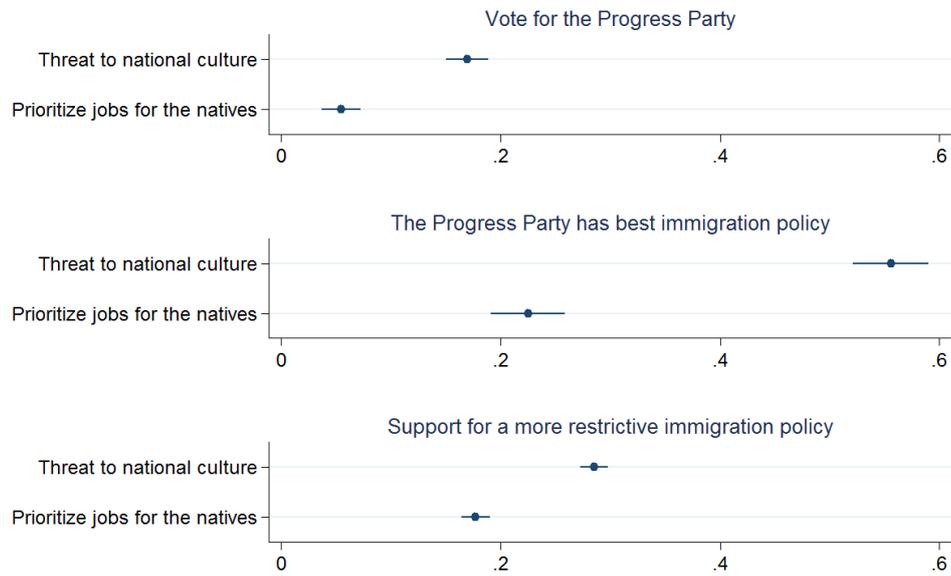
Notes. The diagrams display regression estimates for the effects of non-Western immigration using the municipal-level support for the political parties as response variables. The models include the same fixed effects and covariates as in the baseline regression model. The estimates and the corresponding confidence intervals are calculated for non-Western immigration levels of 0%, 2% and 5% respectively.

## Appendix A2. Indicators of immigration attitudes



Note. For further documentation, see Table 4 and Figure 5.

## Appendix A3. Immigration attitudes and political opinions



Note. The diagram displays estimates from regressions using political opinions as response variables, and attitudes to immigration as explanatory variables. All variables are scaled between 0 and 1. The regression models include controls for election year and municipality fixed effects.

Appendix B1. Testing the natural experiment assumption

	(1)	(2)
	Years	Years
	NWI>0.5%	NWI>1.5%
Observations	398	398
R-squared	0.778	0.658
Election year FE	YES	YES
Control variables	YES	YES
Region FE	YES	YES
F > test	1.355	0.945
Prob > F	0.228	0.484

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Notes. The response variable is number of years with non-Western immigrants living in the municipality in the 1970–2011 period. The table displays a cross-sectional regression using the percentage support for the political parties in the 1977 election, using the Labor Party as reference category. The F-test indicates the joint significance of these variables. The model includes the following controls: age composition of the population, size of the native population (log-scale), unemployment rate, and economic region fixed effects.

Table B2. Progress Party voter support. Robustness

	(1)	(2)	(3)	(4)
	Local	Local	National	National
NWI	1.167*** (0.283)	1.366** (0.443)	0.846*** (0.132)	0.792*** (0.210)
NWI <sup>2</sup>	-0.271*** (0.035)	-0.199*** (0.050)	-0.128*** (0.022)	-0.099** (0.029)
WI	0.158 (0.310)	0.141 (0.285)	-0.007 (0.130)	-0.159 (0.187)
WI <sup>2</sup>	-0.022 (0.025)	-0.032 (0.019)	0.007 (0.010)	0.012 (0.018)
Observations	3,779	3,779	3,763	3,763
R-squared	0.733	0.687	0.961	0.963
Number of municipalities	426	426	426	426
Election year FE	YES	YES	YES	YES
Municipality FE	YES	YES	YES	YES
Control variables	YES	YES	YES	YES
Municipality specific trend	YES	NO	YES	NO
Region*Year FE	NO	YES	NO	YES
Clustered on	MUN.	REG.	MUN.	REG.

Robust standard errors in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05

Notes. See Table 2 for description of control variables.

Table B3. Progress Party voter support. Alternative model specifications

VARIABLES	(1) Local lists	(2) Local	(3) Local	(4) National	(5) National
NWI	-0.011 (0.022)	0.917** (0.315)		0.792*** (0.177)	
NWI <sup>2</sup>	-0.003 (0.002)	0.013 (0.036)		-0.034 (0.020)	
WI	0.012 (0.019)	0.161 (0.306)		-0.115 (0.182)	
WI <sup>2</sup>	-0.001 (0.001)	-0.000 (0.021)		0.012 (0.010)	
IY		0.118* (0.046)		0.028 (0.026)	
NWI * IY		-0.053*** (0.014)		-0.018* (0.008)	
WI*IY		-0.019 (0.010)		-0.011 (0.007)	
$\Delta NWI_{jt}$			0.791** (0.266)		0.325** (0.119)
$\Delta NWI_{jt} * NWI_{jt-4}$			-0.318*** (0.082)		-0.083* (0.039)
$\Delta WI_{jt}$			0.077 (0.190)		-0.012 (0.106)
$\Delta WI_{jt} * WI_{jt-4}$			-0.064 (0.039)		0.011 (0.019)
Observations	3,783	3,698	3,352	3,682	3,337
R-squared	0.296	0.541	0.222	0.914	0.792
Number of knr	426	417		417	
Election year FE	YES	YES	YES	YES	YES
Municipality FE	YES	YES	NO	YES	NO
Control variables	YES	YES	YES	YES	YES
Municipality specific trend	NO	NO	NO	NO	NO

Robust standard errors in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05

Notes. The response variable in (1) is a dummy variable indicating whether the Progress Party offers lists in the local elections. The linear probability model has been estimated with the same right-hand side variables as in the baseline specification. Models (2) and (4) extend the baseline model by adding controls for the timing of the first immigration.  $IY_{jt}$  denotes number of immigrant years in the municipality, defined as number of years passed since the immigrant population counted more than 10 persons or more than 0.1%. The variable is centered at the

sample mean. Models (3) and (5) rely on first differences (FD)  $\Delta$  is the first difference operator. Both response variable and the explanatory variables are defined as differences defined over one election period (4 years). The controls employed in models (2)-(5) are the same as in Table 2.

Table B4. Progress Party voter support. Unemployment effects

	(1)	(2)
	Local	Local
NWI	1.387*** (0.384)	0.738*** (0.175)
NWI <sup>2</sup>	-0.201*** (0.048)	-0.094*** (0.024)
WI	0.124 (0.268)	0.003 (0.158)
WI <sup>2</sup>	-0.030 (0.018)	-0.014 (0.013)
Unemployment rate	0.301 (0.206)	-0.407*** (0.112)
NWI*Unemployment rate	-0.038 (0.070)	0.062 (0.054)
WI*Unemployment rate	-0.019 (0.043)	0.167*** (0.048)
Observations	3,779	3,763
R-squared	0.687	0.964
Number of municipalities	426	426
Election year FE	YES	YES
Municipality FE	YES	YES
Control variables	YES	YES

Robust standard errors in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05

Notes. The unemployment rate (%) has been centered at the sample mean. For other variable definitions, see Table 2.

Appendix B5. Geographic mobility and immigration

	(1)	(2)	(3)
	All	Progress Party only	Not Progress Party
NWI	0.437* (0.197)	-0.275 (0.482)	0.509* (0.216)
WI	-0.019 (0.152)	0.122 (0.429)	-0.031 (0.167)
NWIR	0.373 (0.463)	-0.860 (1.261)	0.590 (0.501)
WIR	0.370 (0.374)	-1.975* (0.968)	0.671 (0.418)
Observations	14,735	1,718	13,017
R-squared	0.206	0.181	0.216
Election year FE	YES	YES	YES
Region FE	YES	YES	YES
Municipality controls	YES	YES	YES
Individual controls	YES	YES	YES

Robust standard errors in parentheses

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ 

Notes. The regression models are based on national surveys ("Citizen Survey") conducted in 2009/2010 and 2012/2013, see <https://www.difi.no/rapporter-og-undersokelser/statistikk-og-undersokelser>. The response variable is individual-level data taken from a survey question: "*Do you think you will live in the current municipality in three years?*" Respondents stating NO were coded 1, those who said YES were coded 0. About 6.9% said they expected to move to another municipality. The models have been estimated separately for respondents who reported that they voted for – or not voted for – the Progress Party in the previous election. The regression includes a number of individual-level controls taken from the survey: respondents' age, gender, number of children in the household, education level, marital status, income level and type of neighborhood. The survey data were combined with the municipality-level data used in Table 2. The model includes economic region and year fixed effects. The standard errors are robust standard errors clustered on municipalities.

Appendix B6. Progress Party support of native citizens

	(1)	(2)	(3)
	Natives	Natives	Natives
NWI	0.545 (0.418)	1.334** (0.468)	1.319 (0.842)
NWI <sup>2</sup>	-3.959 (2.165)	-6.893** (2.191)	-7.676 (6.101)
Observations	8,697	7,301	7,301
R-squared	0.001	0.035	0.052
Election year FE	YES	YES	YES
Economic region FE	NO	NO	YES
Municipality controls	NO	YES	YES
Individual controls	NO	YES	YES

Robust standard errors in parentheses

\*\*\* p&lt;0.001, \*\* p&lt;0.01, \* p&lt;0.05

Notes. The regression models are based on national surveys ("Citizen Surveys") conducted in 2009/2010 and 2012/2013, see <https://www.difi.no/rapporter-og-undersokelser/statistikk-og-undersokelser>. The response variable is individual-level data taken from a survey question: "*Which party did you vote for in the national elections in 2005 (2009)?*" Respondents stating that they voted for the Progress Party were coded 1, those who said they voted for other parties were coded 0. The survey data were combined with the municipality-level data used in Table 2, particularly the share of the non-Western immigrant population (NWI). Model (1) includes controls for election years only; model (2) includes controls for municipal-level (the size of the Western immigrant population (WI), populations size measured in a log-scale; the age distribution of the municipal population) and respondent-level characteristics (respondents' age, gender, number of children in the household, education level, marital status, income level and type of neighborhood). Model (3) includes economic region fixed effects. The standard errors are clustered on municipalities.