

Are political and economic integration intertwined?

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Abstract

Economic incentives play a key role in the decision to run for office, but little is known on how they shape immigrants' self-selection into candidacy. We study this question using a two-period Roy model and show that if returns to labour market experience differ between migrants and natives, this will affect the relative likelihood to run for office for the two groups. We empirically assess this prediction using administrative data from Norway, a country with a very liberal regime for participation in local elections. Our results strongly support our theoretical model and indicate that immigrants' political and economic integration are closely intertwined.

JEL classification: F22; J45

Keywords: Immigration; Local Elections; Candidacy Decision; Labor Markets.

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Immigrants are underrepresented in the political process, and in particular among candidates and those elected to office (Bloemraad 2013; Dancygier 2014). Under-representation depends on an array of factors, broadly pointing towards the “demand” and “supply” of candidates. In party-based systems, much emphasis has been placed on demand side determinants, and more specifically on the role of party elites (Dancygier et al. 2015, Folke et al. 2017 and Dancygier et al. 2019). Especially in local elections, where nomination procedures are less controlled by parties than in national contests (e.g. Cirone et al. 2019), supply side factors are likely to play an important role – and in fact a shortage of suitable candidates has been identified (Ringkjøb and Aars 2010). Still, little is known on what determines the decision to seek office among immigrant groups, and in particular whether and how economic incentives matter (Bloemraad 2007). In this paper, we study the differences between immigrants and natives in their decision to run for office, and uncover the key role played by economic integration.

Our analysis focuses on candidacy for local office in Norway, a country where immigrants are allowed to participate in local elections, as both voters and candidates, upon the completion of a three-year residency requirement. Using data on the universe of candidates in the 2007, 2011 and 2015 municipal elections, we begin by documenting the patterns of office-seeking, highlighting that while immigrants do run for office in significant numbers, they are much less likely to do so than natives. Moreover, the data also show that long term immigrants are significantly more likely to become candidates than their more recent counterparts. We can think of at least two possible explanations for this stylized fact. First, as foreign born individuals spend time in Norway, they might learn about the issues relevant to their local community and become more motivated to enter politics. Second, the opportunity cost of running for office might differ between older and more recent immigrants.

We capture these ideas in a simple two-period Roy model of the candidate entry decision, extending the framework introduced by Dal Bó et al. (2017). In particular, we consider a population of immigrants and natives, composed of agents differing along two dimensions: intrinsic political motivation and ability. Individuals decide whether to become candidates by trading off labour market earnings against the expected gains from a political career:

as the return to labour market experience – representing the opportunity cost of office – increases, *ceteris paribus*, the likelihood of seeking election decreases.

The model can rationalize differential patterns of candidacy between natives and immigrants. In particular, our data indicate that the return to labour market experience is initially higher for immigrants than for natives – a result confirming the existence of economic assimilation in Norway. Importantly, we document that the immigrant–native differential returns to labour market experience change across education, gender and age groups, providing further scope to assess the predictions of the model by comparing more homogeneous subgroups of the population. Crucially, we show that the differential returns across these subgroups change in a manner that mirrors the observed self-selection patterns, as predicted by the model. We also find that these same forces are at work when we separately analyze recent and long term immigrants, suggesting that labor market factors play an important role in shaping candidacy decisions, independently of possible changes in intrinsic motivation that could occur over time.

These findings indicate that even in party–based democracies like Norway, candidacy in local elections is strongly affected by economic incentives, working through the labour market. At the same time, they do not imply that the demand side of candidacy, as expressed by political parties, does not matter. On the contrary, they indicate that – alongside the selection determined by party committees – individual self–selection does play an important role in determining the final nomination outcome. Importantly, we also document that the self–selection patterns highlighted in our baseline analysis are common across the political spectrum, hold in a variety of electoral contexts, and are broadly unaffected by origin country features. Taken together, these results suggest that the selection criteria applied by party officials are likely to be orthogonal to those at work for the individual decision to seek candidacy.

Our analysis speaks to three strands of literature. First, our work contributes to the literature on the political integration of immigrants and ethnic minorities. Much work has focused on immigrants as voters while considerably less research has examined immigrants as candidates. A few recent studies have documented a widespread lack of descriptive represen-

tation for foreigners, focusing on the role played by political institutions (see Togeby 2008 and Dancygier 2014) – and their interaction with the spatial distribution of the immigrant population (Bloemraad 2013; Dancygier 2013). Dancygier et al. (2015), by contrast, use Swedish data to show that individual characteristics and contextual factors cannot completely explain the immigrant-native representation gap in local elections. This gap is instead attributed to party gatekeepers, who, by choosing positions on the slate, can affect candidates’ electoral success (see also Dancygier et al. 2019). In our paper we provide new descriptive evidence on the pattern of immigrant candidacy and study instead whether labor market incentives might play a role in explaining them.

Second, our paper contributes to the body of works on the determinants of the decision to run for office. Building on the citizen candidate model (Besley and Coate 1997 and Osborne and Slivinski 1996), a series of papers have analysed the effects of monetary rewards on the selection of politicians. For example, Caselli and Morelli (2004) show that if the opportunity cost of holding office is higher for more ‘able’ candidates, then less ‘able’ candidates have a comparative advantage in seeking office. In this setting, higher financial rewards for politicians might not necessarily improve the expected ‘ability’ of those elected – they will do so only if the reward is sufficiently high. Similar results have been uncovered also by Messner and Polborn (2004). In a related contribution, Poutvaara and Takalo (2007) develop a rich framework in which the financial reward from office holding affects candidates quality via its impact on election campaigns. In line with earlier findings, they also identify a potentially non-monotonic relationship between the value of officeholding and candidate ability. While this literature is interested in analyzing the impact of financial rewards on candidate ‘ability’, we are interested in comparing the effect of different labor market returns for individuals with the same ability on their willingness to enter into politics. In particular, building on the literature on the economic assimilation of immigrants, we show that higher returns from labor market experience for immigrants reduce their incentives to run for office.¹

¹For evidence that immigrant earnings tend to grow faster than those of natives over time – even after accounting for language fluency, age at migration, macroeconomic shocks in the host country and selective out-migration patterns, see Dustmann and Van Soest (2001), Bleakley and Chin (2004), Bratsberg et al. (2006) and Lubotsky (2007). Using historical data for the United States, Abramitzky et al. (2014) have shown that the convergence process was quite slow. For a survey of the literature, see Abramitzky and Platt

Third, our analysis contributes also more generally to the literature on politically under-represented subgroups of the population (e.g. Lawless and Fox 2010, Wasserman 2018 and Bernini, Facchini, and Testa 2023).

In particular, our results have broader implications for the analysis of the political participation of minorities and other under-represented groups that go beyond the case of migrants in Norway. On the one hand, differences in the returns to labour market experience are likely to shape the decision to seek office more broadly. This mechanism could help understand why the young - enjoying comparatively higher returns to labour market experience - are less likely than the old to run for office in many democracies. On the other hand, initially higher returns to experience for immigrants have been documented in the vast majority of destinations and thus we expect our findings to apply to all those countries granting foreigners early access to local politics.

The remainder of the paper is organized as follows: Section 1 discusses our data, whereas Section 2 presents our model of the candidate's entry decision. Section 3 uses the lens provided by the model to compare the decision to run for office of immigrants and natives, whereas in Section 4, we investigate the role of political parties. Section 5 presents a series of additional results while Section 6 concludes.

1 Data and Descriptive Evidence

Norway is one of the countries with the highest share of immigrants in Europe: in 2015, the foreign born represented 13% of the total population (against an average of 8.7% in the EU28 countries in the same year, according to Eurostat), up from 5.3% in 2000 (see Table 1). Foreign citizens are eligible to vote and run for office in local elections irrespective of their nationality,² provided that they are 18 years old by the end of the election year and have been resident in the country for at least three years.³ There are two layers of local governments in Norway – counties (19) and municipalities (428). The latter play a more

Boustan (2017).

²See Earnest (2015) for other examples of countries where non-nationals are allowed to vote in local elections in a non discriminatory fashion.

³This requirement is waived for nationals of other Nordic countries.

important role in the provision of public services and public goods, and for this reason our analysis will focus on municipal elections. See Appendix A.1 for more details.

Table 1: Share of Immigrants and Country Background

	2000	2007	2015
Share of Foreign born	5.3	7.3	12.9
<i>Distribution by Origin</i>			
Nordic Countries	21	15	11
Other EU 15 (including EEA)	13	11	10
New EU Member Countries	5	9	26
Other	61	65	53

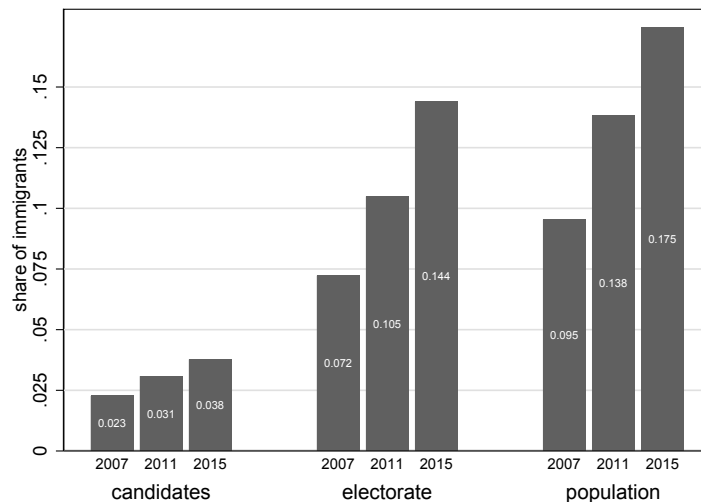
Note: Percentages reported. Source: Norwegian Statistical Office. Immigrants are persons born abroad of two foreign-born parents. Nordic countries: Denmark, Greenland, Finland, Faroe Islands, Iceland and Sweden. Other EU 15 (including EEA): Austria, Belgium, France, Germany, Greece, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Portugal, Spain, Switzerland, United Kingdom. New EU Member Countries: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Slovenia, Poland, Romania, Slovakia.

We base our analysis on two rich administrative datasets provided by Statistics Norway. First, we obtain individual level data on the universe of candidates running for municipal elections in 2007, 2011 and 2015. Since Nordic countries' citizens enjoy political rights more similar to those of Norwegians, our analysis will focus on non-Nordic immigrants. Additionally, given that we are primarily interested in establishing a relationship between labour market outcomes and the decision to run for office, we restrict our sample to those aged 24 to 63, i.e., working-age individuals who have had the opportunity to complete higher (tertiary) education. As a result, we are left with respectively 132,480 and 4,101 observations of Norwegian-born and non-Nordic immigrant candidates.⁴

Second, we obtain information on the entire population entitled to vote in municipal elections from administrative register data. In Figure 1, we report the share of immigrants in three populations among those aged 24-63: candidates, electorate and total population.

⁴Among the native born, we also include second-generation immigrants (i.e., Norwegians born from immigrant parents), who represent 0.16 per cent of the candidates and 0.52 per cent of the total population. In this group, we also include individuals born abroad to Norwegian parents, who account for 0.64 per cent of the candidates and 0.85 of the total population. All our results are robust to the exclusion of either or both of these groups.

Figure 1: Share of immigrants among the candidates, electorate and population



Source: Norwegian Population Register. We restrict the analysis to individuals aged 24-63. Population includes anyone in that age group. Electorate includes natives aged 24-63 and immigrants aged 24-63 with at least 3 years of residency. Immigrants are foreign-born individuals from both foreign-born parents, excluding Nordic immigrants.

From this picture, we can see that immigrants are in general under-represented in the political process and this particularly among candidates.

In Table 2 we compare the characteristics of the electorate and those of the candidates by immigration status. On average, immigrants are approximately 2.5 years younger than natives, but this gap declines when looking at candidates. Interestingly, among immigrants, women are as likely as men to run for office, whereas this is not true for natives. Finally, relative to natives immigrants are more concentrated at the bottom and at the top of the education distribution. Moreover, they are more likely to live in urban areas (64% v. 49%). Urban residents are less likely to run for office, as the share of candidates living in cities is considerably lower than that of the underlying population (20% for natives and 35% for immigrants). We will account for these differences between immigrant and natives not only by controlling for individual level characteristics and municipality-year fixed effects, but also by implementing a propensity score matching technique to balance the two populations.

As shown in the bottom panel of Table 2 on average, 0.6% of the foreign born run for office, whereas this proportion is more than three times as high for natives. Differences in individual and location characteristics explain only about half of this gap, as shown in Appendix Table A.1. Even when they run for office, immigrants are less likely to be in a

Table 2: Descriptive Statistics

	Natives		Immigrants	
	Total	Candidates	Total	Candidates
Average age	43.74	46.30	41.28	44.54
Share of females	0.49	0.43	0.48	0.48
No educ. or compulsory	0.20	0.13	0.34	0.17
High school	0.45	0.44	0.33	0.27
College	0.27	0.34	0.22	0.38
Postgraduate	0.08	0.10	0.12	0.18
Share of urban resident	0.49	0.20	0.64	0.35
Observations	6,570,625	132,480	720,439	4,101
Probability of being:	Candidate	Elected	Candidate	Elected
Any position	1.98%	20.15%	0.57%	12.12%
Bolded	0.3%	77.41%	0.05%	51.83%
Bolded, credible party	0.24%	81.07%	0.04%	57.74%
Any position, non-credible party	0.08%	0.81%	0.04%	2%

Source: Norwegian Population Register. Total includes only individuals in electorate. Immigrants are foreign born from both foreign born parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 election years 2007, 2011 and 2015. Elected is the probability of being elected conditional on being a candidate. Bolded candidates are those who are put in privileged positions at the top of the list and their names are written in bold. These candidates are given 25% more party votes than non-bolded candidates and their maximum number depends on the size of the council. Credible parties are parties that elected at least one councillor in the previous election.

prominent position: while roughly 15% of native candidates are bolded (i.e. put in privileged positions at the top of the list, and receiving 25% more party votes than other candidates – see Appendix A.1 for details), this is true for only 8% of immigrants. Furthermore, when we restrict our attention to bolded candidates of “credible” parties, i.e. parties that elected at least one councillor in the previous election, immigrants appear even more under-represented. Regarding the elected, a native candidate has a 20% probability of becoming a councillor, whereas this is only 12% for an immigrant. This probability increases for both type of candidates if they are bolded, and even more so if they are bolded for credible parties.

Separately considering the three elections studied in our analysis, Table 3 shows that native candidacy rates have declined over time, from 2.1% in 2007, to 1.8% in 2015. A similar pattern is observed for eligible immigrants, whose candidacy rates declined from 0.7% in 2007 to 0.5%. Importantly, candidacy rates among long term foreign residents (e.g.

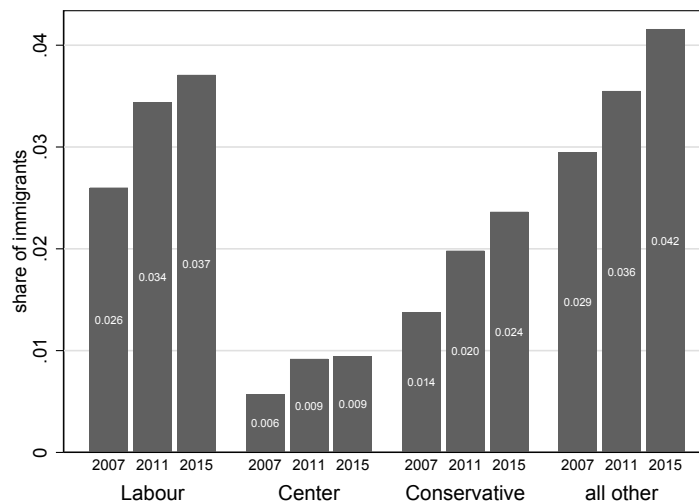
individuals who have been in Norway for more than 15 years) are twice as high as those for short term residents, and the figures are broadly stable over time, suggesting that longer term immigrants are significantly more likely to run for office than more recent migrants. The figures reported in Panel B further indicate that the overall decline in candidacy rates among immigrants is likely due to the large inflow of new immigrants that took place in the period considered.

Table 3: Descriptive Statistics

<i>Election year</i>	2007	2011	2015
Panel A: Probability to run for office			
Natives	2.1%	2.0%	1.8%
Immigrants	0.7%	0.6%	0.5%
Long Term Immigrants	0.9%	0.8%	0.7%
Short Term Immigrants	0.4%	0.4%	0.4%
Panel B: Eligible immigrants and natives			
Natives	2,206,772	2,178,610	2,158,243
Immigrants	156,159	228,351	335,929

Source: Norwegian Population Register. Sample includes only individuals aged 24-63 in the electorate. Immigrants are foreign born from both foreign born parents, excluding Nordic immigrants.

Figure 2: Share of immigrants among candidates, by party



Source: Norwegian Population Register. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants.

Immigrant candidates are not evenly distributed among parties, with left-leaning political groups having more candidates with immigrant backgrounds than their more right-wing counterparts. For example, as we can see in Figure 2, in 2015, 3.7 per cent of the Labour Party candidates were immigrants, a share that falls to 2.4 per cent for the Conservatives and to 0.9 per cent for the Centre Party. Smaller parties and local lists – accounting for approximately one-third of the total seats – display instead a comparatively high share of foreign candidates.

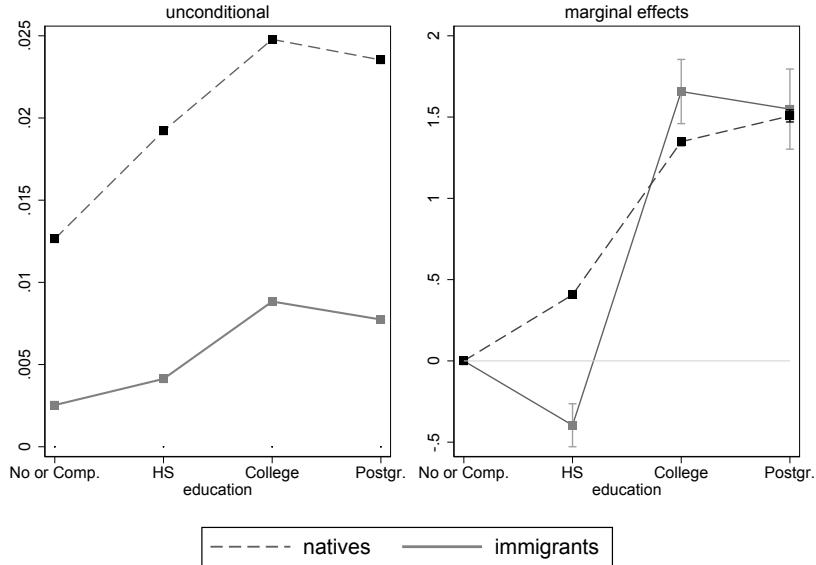
We can now turn to consider the probability to run for office for different subgroups of the populations, defined by education, gender and age. In the left panel of Figure 3, we plot the unconditional probability of running for election for immigrants and natives by education level. This probability is systematically higher for natives than for immigrants, but the gap between the two groups widens as the education level increases. This unconditional pattern could, however, also be driven by differences in the composition of the two populations within each education group – i.e., immigrants and natives could significantly differ along other dimensions. To identify the effect of education net of other individual characteristics, we estimate a linear probability model where we regress a dummy for whether individuals run for office on a set of dummies for educational attainment, age groups, gender, and their interaction with a dummy for immigrant status, while also controlling for other variables such as marital and employment status. We also include a set of municipality and year interaction dummies, to account for all municipality-specific time-varying factors, that may influence the probability to run (e.g. the size of the immigrant population – see Folke et al. 2017), as well as to capture native attitudes towards immigrants and other local socio-economic factors.⁵

We display the marginal effects of different levels of education for natives and immigrants on the probability to run for office in the right panel of Figure 3, where we have normalized the estimated coefficients for each education level by the respective baseline probability (i.e. by the group-specific probability of seeking office for a high-school dropout).⁶ As we can see, while native high school graduates are 40% more likely to run for office than their counter-

⁵See Appendix A.2 for more details about the empirical model we estimate.

⁶The baseline probability for immigrants who have completed at most compulsory education is 0.25% while that for natives is 1.26%.

Figure 3: Probability of running for office by education



Source: Norwegian Population Register. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63 and pool 3 elections (2007, 2011 and 2015). The right panel shows the % increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education, separately for immigrants and natives and it includes 95% confidence intervals.

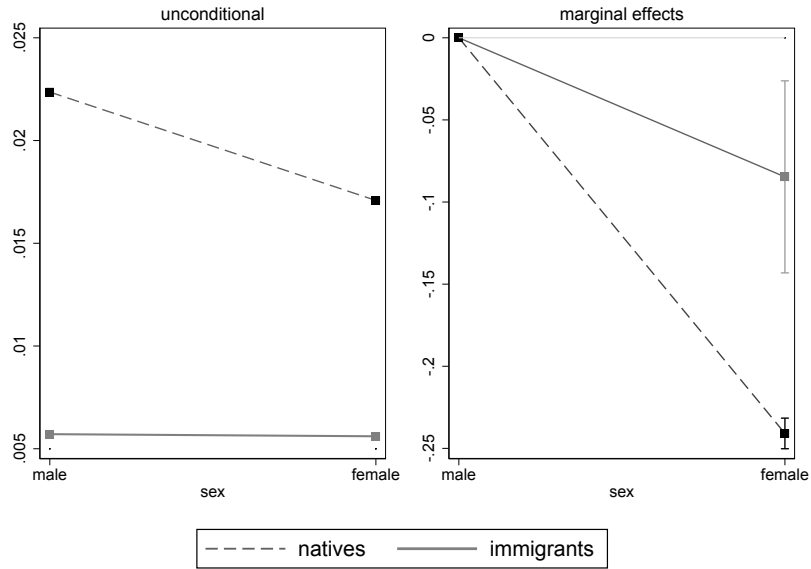
parts who have not completed this level of education, among immigrants the effect of high school completion is negative (-40%). On the other hand, the marginal effect of college education is positive for both (135 and 165% for natives and immigrants, respectively). Finally, a postgraduate education has a similar, positive effect for both groups but no additional effect relative to college for either group.

In Figure 4, we investigate instead the effect of gender. In the left panel, we report the raw percentage of candidates for natives and immigrants: while female natives are less likely to run for office than their male counterparts, female immigrants are as likely as males to seek office. In the right panel, we follow the same strategy as in Figure 3 and account for individual-level heterogeneity. In particular, we report the marginal effect of gender normalized by the baseline (i.e., males' likelihood of standing for election).⁷ We still find that native women are more than 20% less likely than males to run for office, a difference that declines to less than 10% among immigrants.

Finally, in Figure 5, we study the effect of age. The likelihood of running for office (left

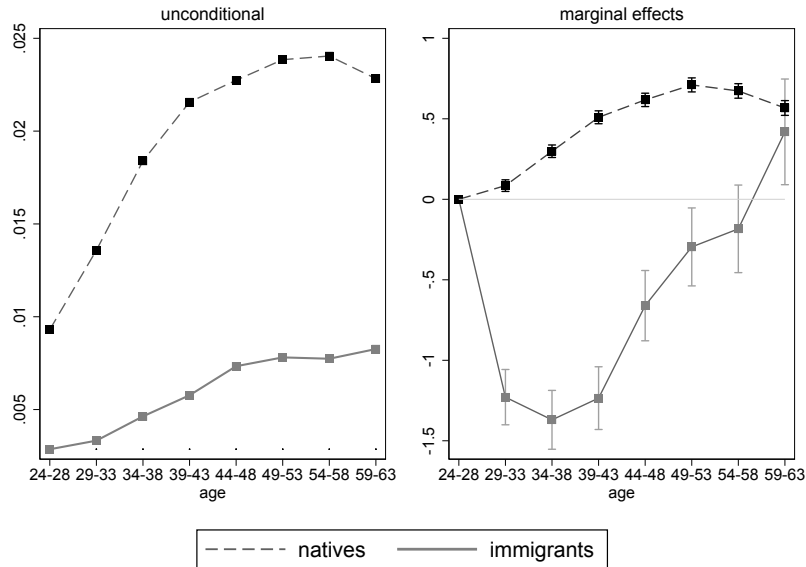
⁷The baseline probability for immigrant males is 0.57% and that for natives 2.2%.

Figure 4: Probability of running for office by gender



Source: Norwegian Population Register. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). The right panel shows the % increase in the probability to run for office relative to males, separately for immigrants and natives and it includes 95% confidence intervals.

Figure 5: Probability of running for office by age



Source: Norwegian Population Register. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). The right panel shows the % increase in the probability of running for office for each age group, relative to the baseline 24-28, separately for immigrants and natives and it includes 95% confidence intervals.

panel) increases steadily with age for immigrants. For natives, it also increases, but peaks at 54-58. In the right panel, we account for individual-level heterogeneity and report the marginal effect of age normalized by the baseline (i.e., the likelihood of standing for election for individuals aged 24-28 in the same group).⁸ As shown by the dashed line, this likelihood is increasing with age for natives until their early fifties and declines slightly thereafter. The corresponding path for immigrants is different, as shown by the solid line. Up to the early forties, age does not appear to affect the likelihood of running for office, except for an initial decline. Starting from the early forties onwards, the effect of age appears similar to that of natives, shifted 15 years forward.

In summary, our analysis has highlighted two interesting stylized facts. First, immigrants do run for local office, even if less than natives. Second, the role played by education differs between the two groups, and this is also true for age and gender. To understand what drives these patterns, we present next a simple theoretical framework that can be used to guide our investigation.

2 Model

We study the decision to run for office in local elections, extending the Roy model of candidacy recently proposed by Dal Bó et al. (2017) by allowing for two groups that differ in their labour market position. Natives and immigrants are heterogeneous along two dimensions, i.e., “ability” ($y_i, i = M, N$) and “intrinsic motivation” ($p_i, i = M, N$). Furthermore, we assume that immigrants’ talents are rewarded less than those of natives in the Norwegian labour market, because of the well-known difficulties immigrants face upon arrival in the destination country. As a result, an immigrant will earn only a fraction $(1 - c)$ ($0 < c < 1$) of what a similarly talented native earns. To keep the analysis simple, we will assume that ability and motivation are bounded above and jointly uniformly distributed over a convex set: $(y_i, p_i) \in T_i$, with $y_i \in [0, \bar{Y}]$ and $p_i \in [0, \bar{P}_i]$, where $\bar{P}_M \leq \bar{P}_N$ to capture the idea that migrants and natives might differ in their intrinsic motivation to run for office.

⁸The baseline probability for immigrants aged 24-28 is 0.28% and that for natives 0.93%.

Individuals live for two periods, and there is no discounting. The decision to enter politics is taken in period 1, is not reversible and does not involve an upfront monetary cost.⁹ If individuals do not enter politics in period 1, they earn an income that is proportional to their ability. In other words, natives earn an income y , whereas immigrants earn an income $(1 - c)y$. In the second period, due to seniority, earnings increase by a factor of $\delta_i > 1$, $i = M, N$, and immigrants' economic assimilation would imply $\delta_M > \delta_N$.

If individuals decide instead to enter politics, they will be allowed to run and will be elected to office with probability $q(y)$, and if elected, they will enjoy an ego rent $\frac{p_i}{2}$ in each of the two periods.¹⁰ Elected individuals will also have to forgo some career prospects, and while their first-period earnings will continue to be y ($(1 - c)y$) for natives (migrants), in the second period, their expected earnings will be given by $\delta_N\theta y$ ($\delta_M\theta(1 - c)y$), with $0 < \theta < 1$ for natives (migrants). Following Dal Bó et al. (2017), the parameter θ captures the reduction in second-period earnings due to the choice of a political career.¹¹ Some of the first-period council members will be asked to join the local government, becoming full-time politicians in the second period and earn a wage $w < \bar{Y}$, which is identical for natives and immigrants, in addition to enjoying the ego rent $\frac{p_i}{2}$. A native councillor will accept the offer to become a full-time politician if $y\theta\delta_N < w$, or alternatively if $y < \frac{w}{\theta\delta_N}$. The likelihood of being offered a full time appointment in the local government is assumed to be exogenously given by π .¹²

As a result, if $y < \frac{w}{\theta\delta_N}$ a native decides to become a politician if and only if:

$$(1 + \delta_N)y \leq [1 - q(y)](1 + \delta_N)y + q(y) \{p_N + y[1 + \theta\delta_N](1 - \pi) + (y + w)\pi\} \quad (1)$$

⁹This assumption simplifies the analysis and while it is well suited to describe candidacy in the large number of small Norwegian municipalities considered in the analysis, it might be restrictive when it comes to larger cities. For this reason in a series of robustness checks we have excluded from our empirical analysis the largest cities.

¹⁰Note that while we do not explicitly model the decision of whether to remain in politics after the end of the second period, our ego rent can capture the potentially heterogeneous future labour market returns accruing to politicians as a result of their experience in office.

¹¹In the Appendix, we study the behaviour of the model when $\theta > 1$, i.e., when being a part-time politician in the second period enhances one's labour market returns, as in Kotakorpi, Poutvaara, and Terviö (2017).

¹²This is a simplifying assumption as we abstract away from the possibility that an individual's decision to accept a full time political appointment might affect the choices of other potential candidates. Allowing this probability to differ between immigrants and natives would not qualitatively affect our results.

In other words, the total return from employment $(1+\delta_N)y$ must be smaller than the expected return from running for office. The latter is given by the sum of what the candidate would earn if she were not elected to office in the first period and the expected earnings she would obtain if elected to office in the first period and possibly become a full-time politician in the second. On the other hand, if $y > \frac{w}{\theta\delta_N}$, then a native will never accept a mayoral appointment if offered and she will decide to run for office if and only if:

$$(1 + \delta_N)y \leq [1 - q(y)] (1 + \delta_N)y + q(y) \{p_N + y[1 + \theta\delta_N]\} \quad (2)$$

Consider now the case of an immigrant. She will accept to be appointed mayor in the second period if $y(1-c)\theta\delta_M < w$ or alternatively $y < \frac{w}{(1-c)\theta\delta_M}$. As a result, if $y < \frac{w}{(1-c)\theta\delta_M}$, then an immigrant will run for office if and only if:

$$(1-c)(1+\delta_M)y \leq [1 - q(y)] (1-c)(1+\delta_M)y + q(y) \{p_M + y(1-c)(1 + \theta\delta_M)(1 - \pi) + [(1-c)y + w]\pi\} \quad (3)$$

with an analogous interpretation. On the other hand, if $y > \frac{w}{(1-c)\theta\delta_M}$ then an immigrant will never accept a mayoral appointment and will run for office if and only if

$$(1 - c)(1 + \delta_M)y \leq [1 - q(y)] (1 - c)(1 + \delta_M)y + q(y) \{p_M + y(1 - c)(1 + \theta\delta_M)\} \quad (4)$$

Rearranging, equations 1 and 2 can be rewritten as:

$$p_N + \pi[w - \theta\delta_N y] \geq \delta_N y(1 - \theta) \quad (5)$$

and

$$p_N \geq \delta_N y(1 - \theta) \quad (6)$$

The first term on the left-hand side of equations 1 and 2 captures the ego rent associated with being in office; the second term on the left-hand side of equation 1 captures the expected income gain from becoming a full-time politician. To choose a political career, the expected gain from running for office needs to be larger than the opportunity cost of doing so in terms

of career prospects. Similarly, equations 3 and 4 can be rewritten as follows:

$$p_M + \pi[w - \theta\delta_M y(1 - c)] \geq \delta_M y(1 - c)(1 - \theta) \quad (7)$$

and

$$p_M \geq \delta_M y(1 - c)(1 - \theta) \quad (8)$$

with an analogous interpretation.¹³

In Appendix A.4 we show under which conditions natives are more likely to run for office than immigrants, highlighting the role played by differences in the returns to labour market experience. The main predictions of the model we take to the data focus on how the likelihood of running for office is affected by i) the returns to experience; ii) the wage earned by full-time politicians; and iii) the likelihood of becoming a full-time politician, and are summarized below.

Proposition 1 *The following holds:*

- i.) An increase in the returns to the labour market experience of immigrants relative to that of natives decreases immigrants' likelihood of running for office relative to natives (and vice versa).*
- ii.) An increase in the wage earned by a professional politician increases the likelihood that both natives and immigrants will run for office.*
- iii.) An increase in the probability of becoming full-time politician increases the likelihood that both natives and immigrants will run for office.*

Proof. See Appendix. ■

The intuition for result *i.)* is that if immigrants enjoy a return to labour market experience that is sufficiently higher than natives, *ceteris paribus*, they will have a higher opportunity cost of running for office, and as a result, they will be less likely to do so. As

¹³Note that the term $q(y)$ does not affect the cost-benefit calculations of individuals when they decide to run for office. For a framework with positive costs of campaigning and elections, focussing on how financial incentives in office affect the patterns of selection of candidates, see Poutvaara and Takalo (2007).

for part *ii.*) the intuition is straightforward: a higher wage for full-time politicians makes it, *ceteris paribus*, more attractive to run for office. Finally, for part *iii.*), becoming a full-time politician implies completely forgoing any outside employment opportunity, but only relatively “low skill” individuals will accept to do so, for whom a full time politician wage more than compensates the loss of income from the labor market. As a result, if the probability of being selected for a full time political appointment increases, they will be more likely to run for office.

3 Explaining Candidacy

We turn now to study whether the patterns of selection into politics highlighted in the descriptive analysis can be rationalized by our theoretical framework.

3.1 The role of the return to labour market experience

The key parameters in our theoretical analysis are δ_M and δ_N , i.e., the returns to labour market experience for immigrants and natives. To estimate them we run the following model:

$$\log w_{imt} = Experience'_{imt}\rho + Experience'_{imt}\lambda \times M_{imt} + X'_{imt}\kappa + \beta M_{imt} + \theta_m \times \tau_t + v_{imt} \quad (9)$$

where w_{imt} are hourly wages for individuals in employment and $Experience_{imt}$ is a third order polynomial of potential Norwegian labour market experience.¹⁴ The latter is defined as follows: for natives and immigrants who acquired their highest educational qualifications in Norway, it is the current age minus the age at which the individual left full-time education; for immigrants who came to Norway after completing their education, experience is instead defined as years since migration. X_{imt} is a vector of control variables including dummies for gender, marital status, five-year age intervals and four education groups defined earlier and M_{imt} is an indicator for immigrant status, whereas the interactions of the municipality and year fixed effects θ_m and τ_t account for all time-varying factors specific to each municipality.

¹⁴For a similar specification, see Borjas (2015). All our results are robust to the use of a linear, quadratic or fourth order polynomial.

Our estimates of ρ and λ are reported in Table A.3 in the Appendix and imply that annual wage growth is higher for immigrants than natives in the first five years since migration in Norway, confirming the existence of wage assimilation (Barth et al. 2004). The main prediction of our model (see part *i.*) of Proposition 1) is that immigrant-native differences in the probability of running for office vary across subgroups of the population in a manner mirroring immigrant-native differences in returns to labour market experience. In particular, a relative increase in the returns to labour market experience for immigrants decreases their relative likelihood of running for office (and vice versa). This proposition can therefore shed light on the patterns of selection into politics on education, gender and age discussed in Section 1. Consider, for instance, education: our model suggests that the differential between immigrants and natives in the probability of candidacy changes across education groups following (with the opposite sign) the evolution of the immigrant-native differentials in returns to experience across those same groups.

Thus, to determine whether the model is consistent with the data we can correlate the evolution of the two immigrant-native differentials (in probability of running for office and in returns to experience) across population subgroups. To this end, we obtain separate measures of the returns to experience for each education level, gender and age group by estimating appropriately modified versions of equation 9,¹⁵ and combine them with our estimates from section 1 on differentials in probability to seek office by group.

An empirical assessment of this prediction relies on the extent to which intrinsic motivation does not vary differentially across subgroups of the population. If this assumption does not hold, then the evolution of immigrant-native differentials in the probability to run for office might also be driven by changes in intrinsic motivation. Note that our exercise does not require intrinsic motivation to be equally distributed between immigrants and natives, or across education, gender and age groups. All we need is that differences in intrinsic motivation across subgroups are constant between immigrants and natives.

¹⁵In particular, focusing on education, we estimate four separate equations, one for each education group; turning to gender, we estimate two equations, one for males, the other for females, and finally, focusing on age, we estimate eight different equations, one for each age group. The set of dummy variables included in X changes depending on the dimension we are focusing on, e.g., in the models by education, we include only age and gender dummies in addition to marital status.

Table 4: Intrinsic motivation

	Probability of being interested in politics				
	(1)	(2)	(3)	(4)	(5)
HS	0.114*** (0.043)			0.136*** (0.043)	0.146*** (0.043)
College	0.244*** (0.044)			0.284*** (0.044)	0.295*** (0.044)
Postgr.	0.261*** (0.098)			0.308*** (0.097)	0.311*** (0.097)
HS × Immigrant	0.01 (0.076)			-0.025 (0.075)	-0.038 (0.076)
College × Immigrant	0.000 (0.084)			-0.064 (0.084)	-0.07 (0.084)
Postgr. × Immigrant	0.016 (0.233)			-0.102 (0.232)	-0.097 (0.232)
Age 30-39		0.036 (0.047)		0.037 (0.046)	0.044 (0.046)
Age 40-49		0.127*** (0.043)		0.132*** (0.042)	0.138*** (0.042)
Age 50-59		0.158*** (0.043)		0.174*** (0.042)	0.184*** (0.042)
Age 30-39 × Immigrant		0.077 (0.099)		0.043 (0.098)	0.029 (0.098)
Age 40-49 × Immigrant		-0.034 (0.097)		-0.082 (0.095)	-0.092 (0.096)
Age 50-59 × Immigrant		0.011 (0.104)		-0.074 (0.104)	-0.086 (0.104)
Female			-0.123*** (0.023)	-0.155*** (0.023)	-0.159*** (0.023)
Female × Immigrant			-0.017 (0.057)	0.038 (0.057)	0.044 (0.057)
Immigrant	-0.075 (0.054)	-0.141* (0.084)	-0.120*** (0.043)	0.015 (0.099)	0.018 (0.100)
R-squared	0.054	0.039	0.044	0.09	0.094
Observations	2,025	2,025	2,025	2,025	2,025
<i>Fixed Effects</i>					
Macro region	No	No	No	No	Yes
Year	Yes	Yes	Yes	Yes	Yes
Average probability	0.61	0.61	0.61	0.61	0.61

Source: Local Election Surveys in Norway for 2007 and 2011; Local Election Survey among immigrants and Norwegian-born with immigrant parents for 2007 and 2011. Individuals in the age group 22-59 and we pool 2 election years 2007, 2011. ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Notes: Entries are weighted using sample weights, rescaled to make it representative of the scale of the immigrant population when surveys are pooled together. Immigrant is 1 if the individual is born outside Norway from foreign parents and 0 otherwise. Macro regions are Hedmark and Oppland, Eastern Norway, Agder and Rogaland, Western Norway, Trøndelag, Northern Norway. Excluded category are high school dropouts and age 22-29. Age categories are those reported in the survey.

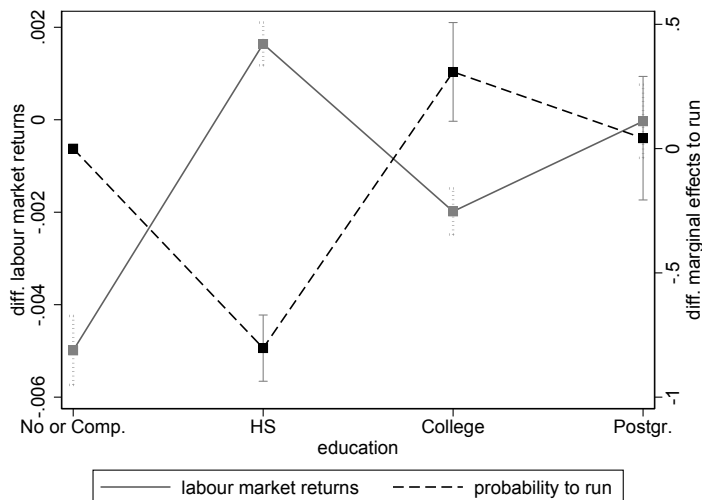
To assess the plausibility of this assumption, we use data from the 2007 and 2011 rounds of the Norwegian Election Survey,¹⁶ proxying intrinsic motivation with interest in politics. In particular, we regress an “interested in politics” indicator on dummies for education groups, age categories and gender, allowing their effect to vary by immigrant status. All of our specifications additionally include time and region fixed effects. The results reported in Table 4 indicate that male and older, more educated respondents are more interested in politics. Yet – importantly – these effects do not differ between immigrants and natives.

Figure 6 plots – for each education category – the difference between immigrants and natives in returns to experience evaluated at the group-specific mean (solid line, measured on the left axis), estimated from equation 9, versus the difference between immigrants and natives in the marginal effect of education on the probability of seeking office, i.e. the estimates of γ_{edu}^e from equation A.1 (Appendix A.2)– normalized by their respective baselines (dashed line, measured on the right axis). The graph shows that the evolution of the differentials in the marginal effect of education on the probability of running is a mirror image of the evolution of the returns to labour market experience. The immigrant–native differential in returns to one additional year of labour market experience increase by 0.65 percentage points when moving from the group with at most compulsory education to those who have completed high school. Such a relative increase in labour market returns for immigrants translates in a reduction of about 80% in the probability to seek office of immigrants relative to natives. Similarly, the immigrant-native differential in returns to experience decreases by 0.36 percentage points moving from the group of high school to college educated. Such a reduction in the differential returns to experience is matched by a corresponding 30% higher high school to college increase in the probability to run for office for immigrants relative to natives. There are instead no statistically significant changes in immigrant-native differential returns to experience between college and postgraduate educated workers, which is reflected in no statistically significant changes in the differential probability to run for office. These findings provide support for the channel highlighted in the theoretical model.¹⁷

¹⁶The most recent survey covering immigrants was carried out in 2011. See Appendix A.5 for more details.

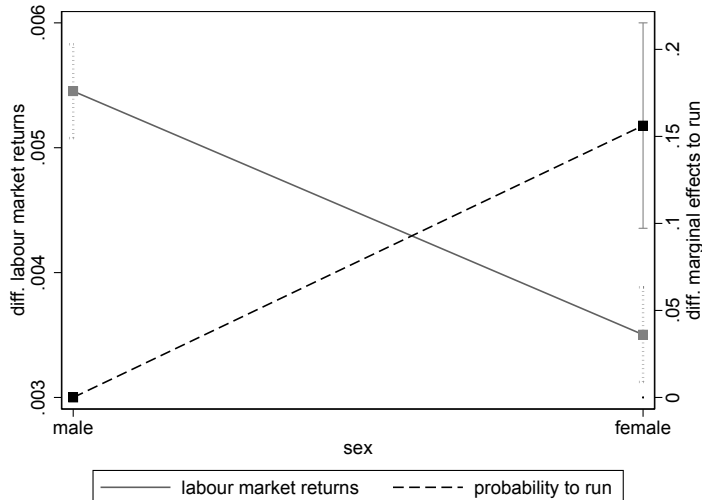
¹⁷In Appendix Figure A.3 we show the results separately for immigrants that arrived in Norway before and after completing their studies. As expected, our results are driven by the first group.

Figure 6: Returns to experience and likelihood to run for office: gaps by education



The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives (evaluated at the group-specific mean) for each education level. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each education level, relative to the baseline of at most compulsory education. Immigrants are foreign-born individuals to immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register.

Figure 7: Returns to experience and likelihood to run for office: gaps by gender



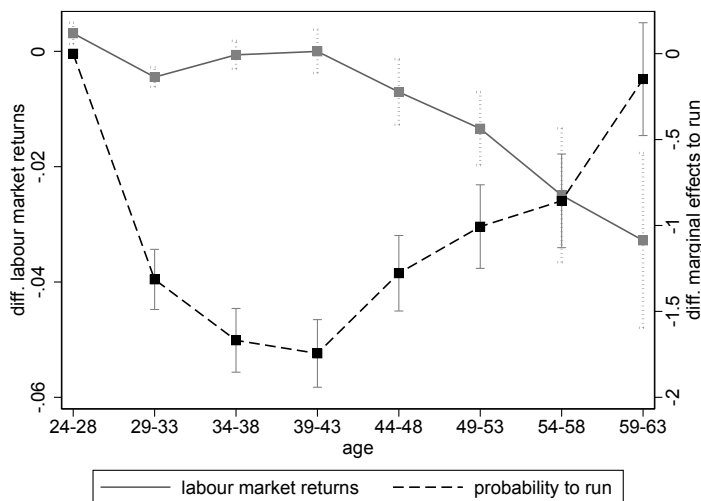
The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives (evaluated at the group-specific mean) by gender. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for women relative to men. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register.

Similarly, we plot in Figure 7 the difference between immigrants and natives in returns to experience, evaluated at the group-specific mean, by gender (solid line, measured on the

left axis), versus the corresponding differences in the marginal effect of gender (where the reference category is male) on the probability of seeking office (dashed line, measured on the right axis). Also in this case, the evolution of the differentials in the marginal effect of gender on the probability of running is a mirror image of the evolution of the returns to labour market experience, which is consistent with our theoretical framework.¹⁸

Finally, in Figure 8, we plot for each age category the difference in the returns to experience between immigrants and natives, evaluated at the group-specific mean (solid line, measured on the left axis), versus the corresponding difference in the marginal effect of age on the probability of seeking office (dashed line, measured on the right axis). Once again the findings are consistent with our theoretical predictions, since the two lines are mirror images of each other.

Figure 8: Returns to experience and likelihood to run for office: gaps by age



The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives (evaluated at the group-specific mean) by age. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each age group relative to the baseline 24-28. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register.

As we discussed in Section 1, the immigrant and native populations are not balanced

¹⁸In other words, the difference in the opportunity cost of running for office for immigrants relative to natives is smaller for females compared to males. At the same time the female-male differential in the probability of running for office is less negative (see also Figure 4) for immigrants than for natives. This result is fully consistent with our theoretical model and mirrors the unconditional findings in Table 2, showing that the share of women among candidates and in the general population is the same among immigrants, whereas it is lower for natives.

along a number of characteristics, e.g. education and distribution across space. In all our specification we account for these differences, by including individual characteristics and municipality–year fixed effects. Still, we are concerned that our results might be driven by individuals whose attributes fall outside of the common support. Moreover, heterogeneity on observables increases the sensitivity to bias due to the presence of unobserved covariates. To address these concerns we implement a propensity score matching design, whereby we restrict our analysis to individuals sharing a common support.¹⁹ Our results are reported in Appendix Figure A.2 and show that the patterns we have uncovered in Figure 6-8 are virtually unaffected.

In the remainder of the paper we will focus on results by education category. Those by gender and age are available upon request from the authors.

3.2 The direct returns to a political career

The last two results in Proposition 1 highlight the impact of changes in the (exogenous) probability of becoming a full-time politician and in the income earned in that role. In particular, part *ii.*) emphasizes that the higher the wage earned by a professional politician, the higher the likelihood that individuals will run for office; part *iii.*) instead states that the probability of becoming a full-time politician increases the likelihood of running for office. Both mechanisms are at work for natives and immigrants.

To assess these predictions, we estimate the following model:

$$Y_{imt} = \alpha + \beta w_{mt} + \gamma \pi_{imt} + X'_{imt}\eta + \theta_m + \tau_t + \epsilon_{imt} \quad (10)$$

where Y_{imt} is a binary variable for either being a candidate or for being a bolded candidate of a credible party;²⁰ w_{mt} is the full-time politician’s wage, proxied by the mayor’s wage,

¹⁹Specifically, we use a caliper width of 0.01 and no replacement. We estimate the probability score by regressing the dummy for immigrant on the following characteristics as defined in the previous regressions: education, gender, age, employment status, marital status and municipality dummies, on the total population (including candidates). We find that 0.4 percent of observations (30,254) in the total population and 0.05 percent of observations (7) among candidates are off support, and exclude them in the check.

²⁰To facilitate the interpretation of the coefficient, the binary variable takes value 0 or 100.

relative to average earnings in the municipality; π_{imt} is the ex ante probability of becoming a full-time politician; X_{imt} is a vector of control variables including education, gender, age, marital and employment status and a set of dummies for municipality size; and θ_m and τ_t are municipality and year fixed effects, respectively.²¹

Note that the empirical counterpart of the exogenous probability of becoming a full-time politician introduced in our model is not immediately available. To construct it, we model the ex-ante likelihood of becoming a full-time politicians as depending on two factors. First, on the ex ante probability of being elected in the municipality council. Second, and proxying the probability of becoming full-time politician with the probability of becoming mayor, on the probability of being appointed mayor if a member of the municipal council.

Hence, the probability of becoming full-time politician is the product of the probability of being elected to office if running for a credible party $p_{council}$ and the probability p_{mayor} of being appointed mayor if a member of the municipal council:

$$\pi = p_{council} \times p_{mayor} \tag{11}$$

where $p_{council}$ =Number of councilors/Maximum number of candidates of credible parties. Since in most cases the first ranked candidate on the ballot list of the winning party is appointed mayor, we define p_{mayor} as the predicted individual probability of being ranked first on the ballot list of the party that has received the highest share of votes in the municipality elections in the previous electoral round.²²

Based on our model we expect both $\beta > 0$ and $\delta > 0$. Our results, reported in Table 5, offer broad support for these predictions. To facilitate the interpretation of the coefficients, both π and w have been standardized. We estimate the model on the full sample (columns (1) and (3)) and on a sample that excludes the first five major cities of Norway (population-

²¹Note that the politician’s wage variable varies only at the municipality level over time. For this reason, we cannot include municipality-by-year fixed effects, as in previous specifications.

²²Specifically, we regress an indicator variable that is equal to 1 when a candidate is ranked first on the ballot of a credible party on dummies for education groups, age categories and gender. All of our specifications additionally include time by municipality fixed effects. We run this regression on the full-sample of candidates and apply the results from this regression to predict the probability of being mayor in the full-population using individual level characteristics.

Table 5: The direct returns to a political career

	All Candidates		Bolted Candidates	
	(1)	(2)	(3)	(4)
Relative FT politician wage	0.028 (0.019)	0.032* (0.019)	0.0089** (0.0044)	0.0094** (0.0045)
Prob. to become FT politician	0.690*** (0.108)	0.487*** (0.066)	0.211*** (0.030)	0.181*** (0.028)
Other controls	Yes	Yes	Yes	Yes
Top 5 cities excluded	No	Yes	No	Yes
<i>Fixed Effects</i>				
Municipality	Yes	Yes	Yes	Yes
Year	No	Yes	Yes	Yes
Observations	6,346,485	4,342,177	6,258,915	4,260,189

Source: Norwegian Population Register. Individuals in the age group 24-63 and we pool 3 election years 2007, 2011 and 2015. Standard errors are clustered at the municipality level. ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Notes: Variables are standardized using national mean and standard deviation for each election year. Other controls include dummies for immigrant status, education, gender, age, marital status, employment and municipality size. "Top 5 cities excluded" refers to the five largest cities (population-wise) excluded from the regression following this order: 1. Oslo, 2. Bergen, 3. Trondheim, 4. Stavanger, 5. Borum. Probability to run rescaled between 0 and 100. The estimated coefficients are the marginal effects of each variable FT politician stands for full-time politician.

wise).²³ In column (1), we estimate the model on the full sample when the dependent variable is the probability of becoming a candidate. As expected, an increase in the full-time politician's wage has a positive effect on the likelihood of running for office, although the estimate is imprecise and not statistically significant at conventional levels. Likewise, a higher probability of becoming a full-time politician is positively correlated with the likelihood of candidacy.

A seat on a municipal council in a large city may often be a starting point for a career in national politics. Our simple model is not designed to capture the incentives involved in this case. For this reason, in column (2) we repeat the same exercise while excluding large cities. The findings are qualitatively similar, although the point estimates tend to become

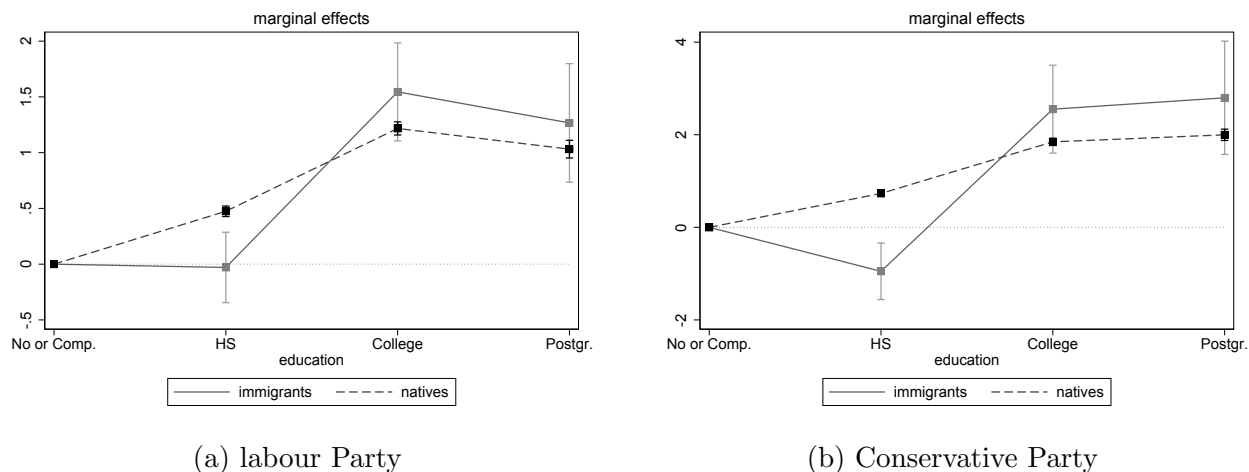
²³The top 5 largest cities excluded from the regression following this order: 1. Oslo, 2. Bergen, 3. Trondheim, 4. Stavanger, 5. Borum.

slightly smaller for variable proxying the probability to become full-time politician π but – consistently with our expectations – slightly larger and more precisely estimated for the variable proxying the mayor wage w .²⁴

As we previously discussed, bolded candidates are much more likely to be elected than other individuals running for office, and hence, we expect the incentives highlighted in our model to be more powerful for bolded candidates than for the others. To assess whether this is the case, in columns (3) and (4) we have replicated our analysis estimating equation (10) when the dependent variable is an indicator for being candidate in a bolded position. As expected, all of our model’s predictions are confirmed, and both the coefficient on mayoral wages and on the probability of becoming a full-time politician are precisely estimated to be positive.

4 The Role of Political Parties

Figure 9: Probability of running for office by education: labour vs. Conservatives



Source: Norwegian Population Register. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63 and pool 3 elections (2007, 2011 and 2015). The figure shows the % increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education, separately for immigrants and natives.

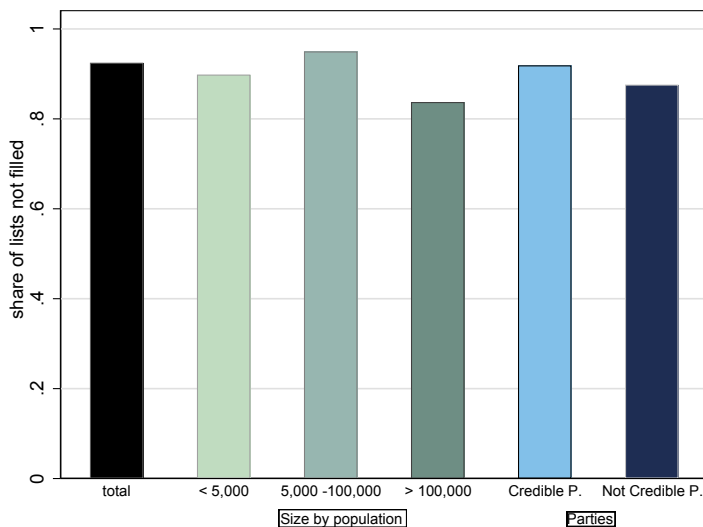
Party officials play an important role in the formation of the electoral slate, and this is particularly true for party-based democracies like Norway. In fact, the literature has em-

²⁴Additional results excluding Oslo, top 2, top 3 and top 4 cities in Norway are reported in Appendix Table A.4.

phasized that party elites are often responsible for keeping immigrants and minority groups out of the electoral competition (Dancygier et al. 2015 and Folke et al. 2017). The importance of party officials in selecting candidates suggests that their decisions can shape the characteristics of individuals running for office, potentially leading to different selection mechanisms between immigrants and natives. While selection on the “demand side” – i.e., by political parties – is likely to affect the composition of the electoral roster, our analysis thus far has focused on individual self-selection into politics. This “supply side” of candidacy may be especially salient in local elections, where nomination procedures are less controlled by parties (e.g. Cirone et al. 2019), and where a shortage of suitable candidates has been lamented (Ringkjøb and Aars 2010).

Our results indicate that immigrant-native differences in the patterns of selection on education, gender and age are consistent with gaps in labour market returns. These returns are likely to drive the decision to run for office – as highlighted in our theoretical model. On the other hand, there is no obvious reason to believe that they would similarly affect party officials’ choices. In other words, what is required for our conclusions to hold is not that party officials play no role, but that their selection criteria are orthogonal to those driving individual decisions to seek office.

Figure 10: Share of lists with available candidate slots



Source: Norwegian Population Register. We pool 3 elections (2007, 2011 and 2015). The figure shows the share of lists that have not been filled, overall (black), by size of municipality and by type of party.

Parties differ in the likelihood to field immigrant candidates, with left-wing forces enlisting more foreigners. While these differences might be driven by many factors, what is crucial for the interpretation of our results is that the role of individual characteristics is similar across parties. Reassuringly, as shown in Figure 9, the marginal effect of education on the probability of running for office is similar for the labour and Conservative parties, which secured well over 50% of the available seats in our sample period.²⁵

Parties typically aim to compile a broad list to increase electoral support, but as argued by Ringkjøb and Aars (2010) they often experience difficulties in finding enough candidates and our data confirm that over 90% of all lists are not at full capacity, and this is true across all municipality sizes and parties (Figure 10). Even in the five cities with over 100,000 inhabitants, where the maximum number of candidates is more likely to be binding, less than 20% of the lists were full. Importantly, both credible and non-credible parties had many empty slots.

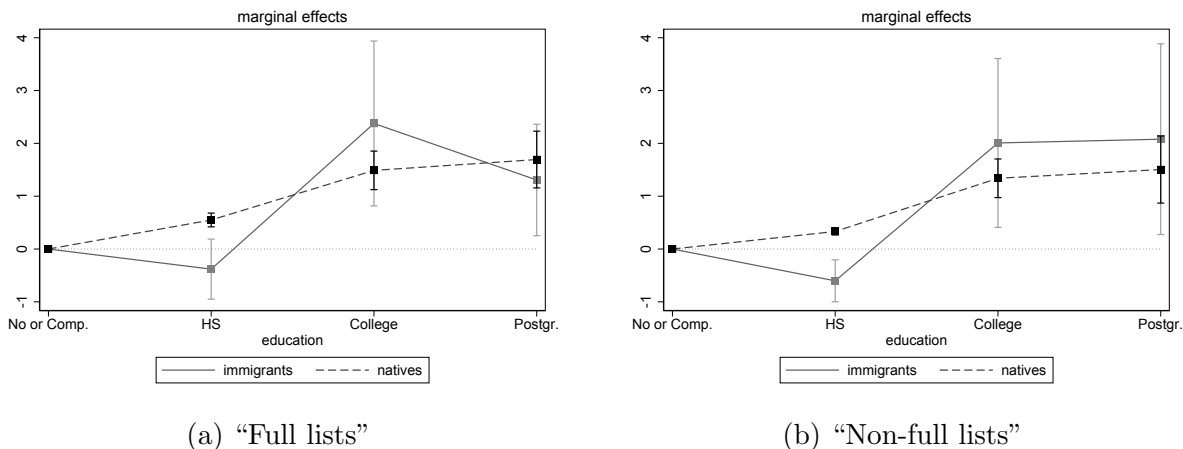
Since the demand side of the selection process – shaped by party officials – likely differs between “full” and “non-full” lists, finding similar patterns would provide evidence on the role of candidates’ self-selection. We investigate this question in Figure 11.²⁶ Among natives running on “Full lists” (left panel), there is a positive, significant and broadly monotonic marginal effect of education. Among immigrants, this effect is instead non-monotonic and not always significant. The picture is similar for candidates in “Non-full lists”. Interestingly, the patterns observed in both panels are in line with those revealed in the full sample (see Figure 3).

In urban areas political parties are typically more structured than in rural areas. Hence, they may exercise more control over the composition of the electoral slate in cities than in the countryside. To investigate whether this leads to differences in the patterns of candidate self-selection, we compare the marginal effects of education on the likelihood of seeking office for immigrants and natives across geography. Reassuringly, the results (reported in Appendix

²⁵We have repeated the same exercise for the Centre Party – the third main political force – and for a residual group (other parties). The results – reported in Figure A.4 – are broadly similar, except for the Centre Party, for which immigrants consistently make up less than 1% of the candidates.

²⁶A list is “full” if all available slots are filled and “non-full” if at least 30% of the slots are not filled. Alternative thresholds deliver broadly similar results.

Figure 11: Probability of running for office by education: “Full” vs. “Non-full” lists

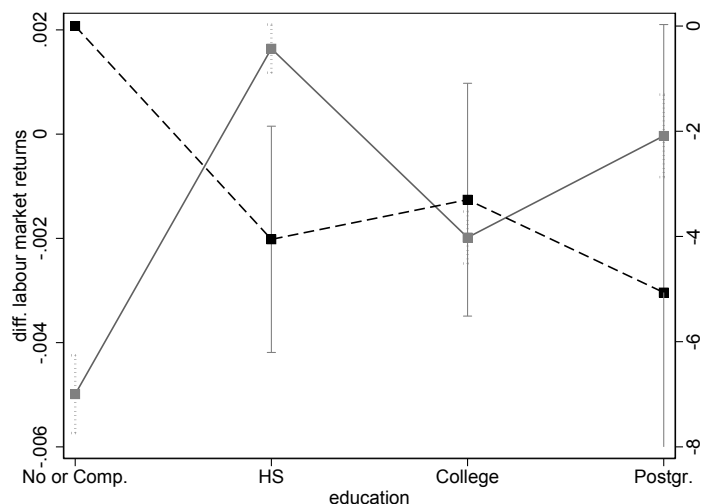


Source: Norwegian Population Register. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63 and pool 3 elections (2007, 2011 and 2015). The figure shows the % increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education, separately for immigrants and natives.

Figure A.5) are very similar in both cases, providing additional evidence on the importance of supply-side determinants.

Finally, another way to highlight the role of supply-side determinants in explaining our results is to look at the role played by differential labour market returns in shaping other forms of costly participation or civic engagement, that do not involve party gate-keepers. The 2007 and 2011 National Election Surveys (see section 3) allow us to study immigrant-native differences in active party membership. Joining a political party is almost entirely an individual decision, entailing at most a very limited role for party officials. Once a member, active participation in party life (going to meetings, campaigning events, etc) is a costly individual activity where there is no room for party gatekeepers. Figure 12 shows that immigrant-native differentials in the marginal effect of education on the probability of active party membership evolve similarly to those on the likelihood to seek office, i.e. inversely to the differentials in the evolution of returns to experience. This pattern is fully consistent with our previous results. Moreover the fact that we observe it also in an activity where the role of the “demand side” is essentially absent, further corroborates the plausibility of our theoretical mechanism.

Figure 12: Returns to experience and active party membership: gaps by education



The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives (evaluated at the group-specific mean) for each education level. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of being an active party member for each education level, relative to the baseline of at most compulsory education. Immigrants are foreign-born individuals to immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register and National Election Survey.

5 Additional Results

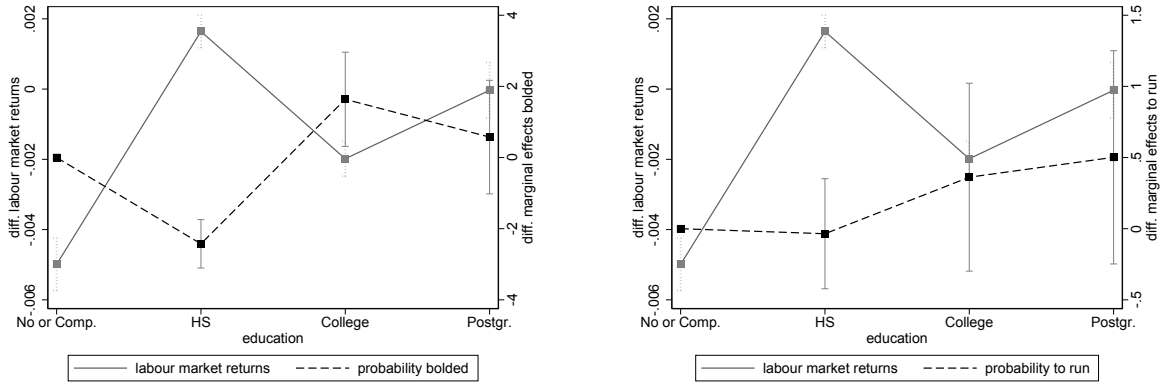
The simple theoretical model developed in Section 2 focuses on the decision to run for office, emphasizing the role played by labour market incentives. In this section, we provide additional evidence supporting the mechanisms highlighted in our analysis.

5.1 The role of labour market incentives

If potential candidates exhibit low attachment to the labour market or do not stand a realistic chance of election, the trade-off emphasized in our model will not be practically relevant. We consider two contexts in which this might be the case.

Individuals running for minor political groups ex ante have very limited chances of success, while bolded candidates of credible parties are instead very likely to be elected (see Table 2). For the former, both expected benefits and costs of running for office are likely to be negligible; for the latter, they will instead be significant. To assess whether these differences matter, we replicate our analysis separately for candidates running in bolded positions for

Figure 13: Returns to experience and likelihood to run for office: gaps by party type



(a) Bolded, credible parties

(b) Non-credible parties

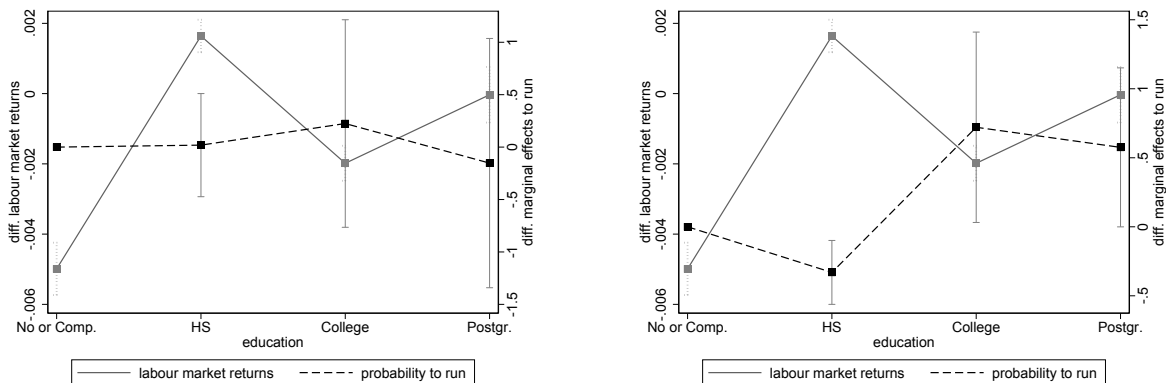
The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives by education. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Bolded candidates are those who are put in privileged positions at the top of the list and their names are written in bold. These candidates are given 25% more party votes than non-bolded candidates and their maximum number depends on the size of the council. Credible parties are parties that elected at least one councillor in the previous election. Source: Norwegian Population Register.

credible parties and those who run for non-credible parties. Our results are reported in Figure 13 and indicate that the predictions of our theoretical model are strongly supported for individuals facing a concrete chance of being elected (left panel), whereas support is weaker for those running for minor parties (right panel).

The degree of labour market attachment varies in the population, and we expect our key mechanism to be at work the higher is the individual engagement with the labour market. We explore this idea along two different lines. First, we compare inactive individuals and individuals in the labour force and then males and females.

The results based on labour market participation are reported in Figure 14. The left panel focuses on the inactives, i.e., individuals who are not employed and not looking for work, whereas in the right panel, we consider those in the labour force. For the first group, the difference in the marginal effect of education on the likelihood of running for office between natives and immigrants is essentially flat across education levels. This is consistent with the idea that – for individuals out of the labour force – other factors explain differences in the likelihood of being a candidate. Importantly, however, for those in the labour force, the immigrant-native gaps follow the patterns predicted by our model (right panel).

Figure 14: Returns to experience and likelihood to run for office: gaps by labour market status



(a) Inactives

(b) In the labour force

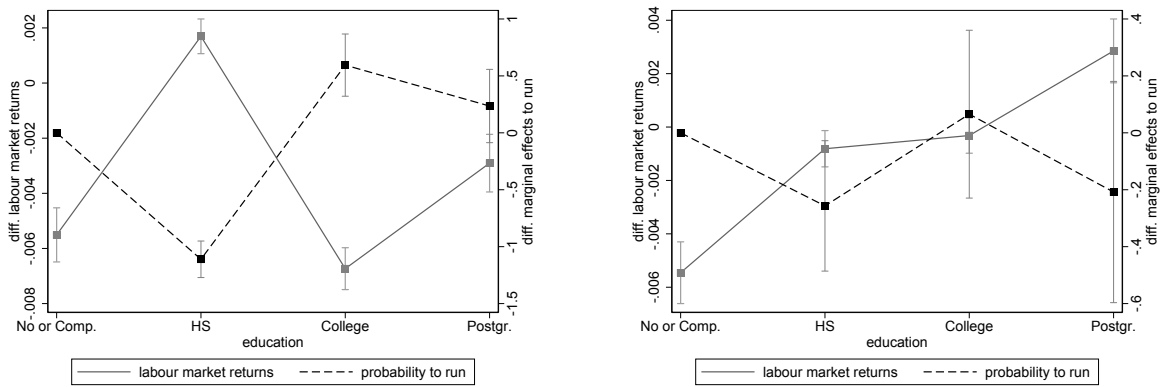
The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives by education. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register.

With respect to gender, even if female labour force participation in Norway is remarkably high at 78.5% for the age group considered, it is still lower than for males (84.5%). Importantly, women are much more likely than men to be in part-time employment (36 vs. 12%) and, overall, work significantly shorter hours. For this reason, we expect foregone labour market earnings to play a stronger role in shaping the decision to run for office among males than among females.

We investigate whether this is the case in Figure 15. The immigrant-native differential in labour market returns increases monotonically with education for women (right panel), whereas for men (left panel), it displays a non-monotonic pattern, in line with that observed for the entire population. As expected, while the pattern of differential probability of running by education for males closely mirrors the corresponding differential patterns in labour market returns, this is not the case for females. In other words, the average effect we revealed in Figure 6 is driven by male candidates – i.e., the group with higher labour market attachment.

Finally, the literature on assimilation has shown that the native-immigrant gap in labor market outcomes tends to decline with the amount of time the foreign born individuals spend

Figure 15: Returns to experience and likelihood to run for office: gaps by gender

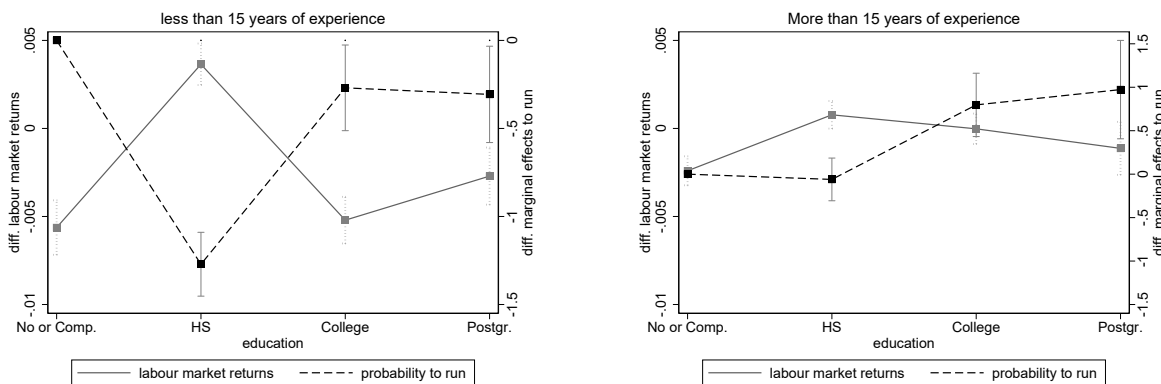


(a) Males

(b) Females

The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives by education. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register.

Figure 16: Returns to labour market experience and the likelihood to run for office: gaps by years in Norway



(a) Recent immigrants

(b) Earlier immigrants

The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives by education. Recent immigrants have less than 15 years of potential experience in Norway, while earlier immigrants have more than 15 years of experience. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register.

in the destination country. At the same time, immigrants who remain longer in Norway might learn more about the country and the issues relevant for their local community, and become more ‘intrinsically motivated’ to run for office. To analyse the role played by this important confounding factor, in Figure 16 we replicate our baseline analysis separately for immigrants who have been in the country for less and more than 15 years. Our results indicate that while the immigrant-native differentials in returns to experience are smaller for the foreign born who have been in Norway for more than 15 years than for more recent migrants, the mechanism we have shown to be at work in our baseline analysis continues to hold, also for immigrants who have settled in the country.

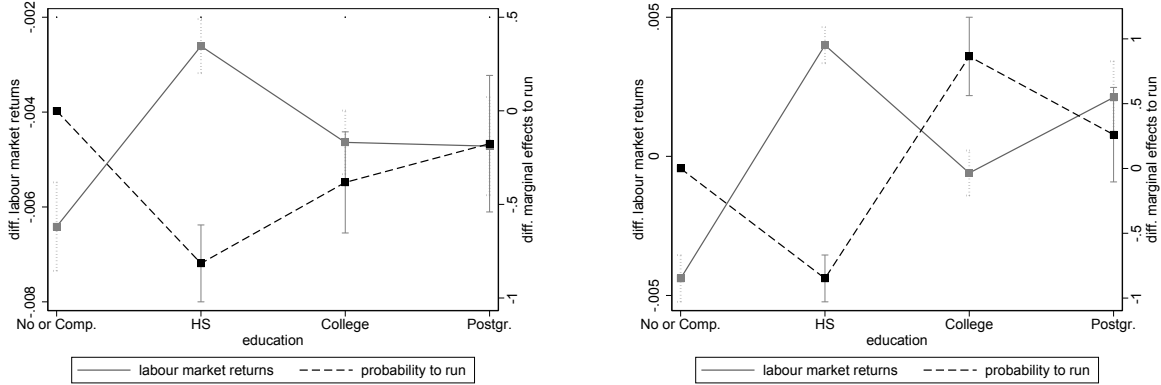
5.2 The role of origin countries

Immigrants to Norway come from countries that vary substantially in their cultural, linguistic, political and institutional characteristics. Clearly, these are all important factors that might play a role in the decision to run for office. In this section, we explore this heterogeneity, focusing on two salient dimensions: linguistic proximity and political regime at origin.

5.2.1 Linguistic proximity

Having a common language has been shown to be an important determinant of migration flows between two countries (Adsera and Pytlikova 2015). Moreover, a vast literature has shown that local language proficiency influences the economic and social success of immigrants at destination (e.g., Dustmann 1994, Dustmann and Van Soest 2001, Bleakley and Chin 2004, Bleakley and Chin 2010), and that the ease of learning the local language is inversely related to the distance from the mother tongue (Isphording and Otten 2014). In our context, destination country’s language proficiency is likely to have both direct and indirect effects on the decision to run for office. On the one hand, it directly facilitates political participation, by allowing a better understanding of the institutional setting and the political competition; on the other, it will make the gap in the returns to experience with respect to natives smaller, thus reducing the difference in the opportunity cost of candidacy.

Figure 17: Returns to experience and likelihood to run for office: gaps by language



(a) High proximity

(b) Low proximity

The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives by education. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register.

To study the role of language, we measure the proximity of immigrants' mother tongue to Norwegian using the Levenshtein index and consider "High" and "Low" proximity subsamples, characterized respectively by a Levenshtein index below and above the median. Foreigners whose language is closer to Norwegian are more likely to run for office than the rest of the immigrant population, but this pattern is driven by individual- and context-level characteristics.²⁷ Our main question, however, concerns the indirect effect of language proficiency on the opportunity cost of running for office. To answer it we estimate – separately by linguistic proximity – the marginal effects of individual characteristics on the likelihood of running for office and the returns to labour market experience. This is a more demanding exercise, as the differential returns to experience may exhibit different patterns between the two groups, which according to our theoretical model, should be mirrored by correspondingly different patterns in the marginal effects of education (age and gender) on the probability of running.

The results are reported in Figure 17. The evolution of the differentials in the returns to labour market experience by education diverges between the two groups. In particular, in the high linguistic proximity group, the differential is negative for all levels of education, whereas

²⁷These results are available upon request.

in the low-proximity group this is true only for high school graduates and postgraduate degree holders. This difference reflects the fact that immigrants from linguistically closer countries have no (or low) wage disadvantage relative to similarly educated natives, and as a result do not have to “close” any gap relative to natives. On the contrary, immigrants from linguistically distant countries suffer from initially sizable wage gaps that tend to decline over time as they learn the language and, more broadly, acquire destination-specific human capital. Importantly, the differential in the marginal effects of education on the probability of running is in both cases consistent with our theoretical prediction.

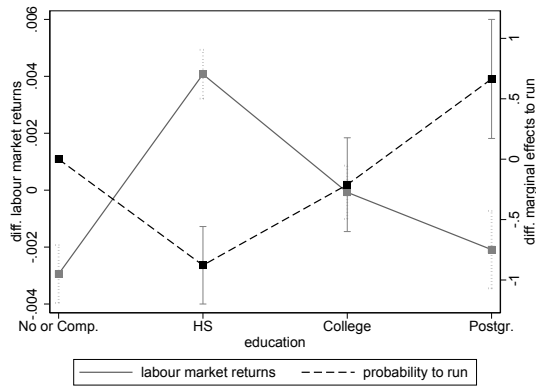
5.2.2 Political culture in the origin country

Much work in political science has emphasized the role of transferable norms, which shape the behaviour of foreigners in the host country, but as clearly summarized by Ramakrishnan and Espenshade (2001), multiple forces are typically at work, and thus the direction of the relationship is far from obvious. Is the key trade-off highlighted in our theoretical model – the opportunity cost of running for office – affected by political socialization at origin? To answer this question, we group countries based on their level of democracy, as measured by the average Polity IV score over the period 1966-2015 (Marshall et al. 2017), identifying “democracies” if the score ranges between 6 and 10, “anocracies” for values between -5 and +5, and “autocracies” for values below -6. While all foreigners are less likely than natives to run for office, the conditional probability gaps are larger for immigrants from democratic countries and smaller for those coming from anocracies and autocracies.

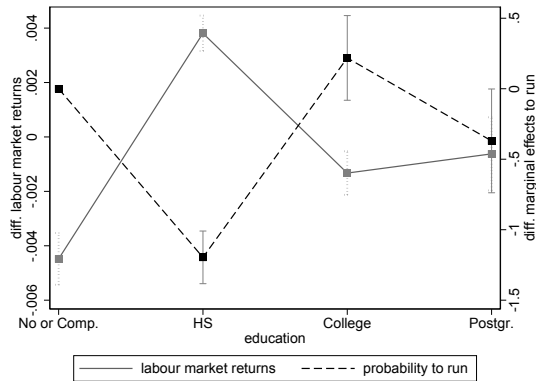
These results hint at the importance of having a democratic culture in the country of origin on the willingness to stand for office. For this reason it is interesting to assess whether the mechanism highlighted by our theoretical model are at work for all the three groups of countries. To this end we estimate – separately by level of democracy – the marginal effects of individual characteristics on the likelihood of running for office and the returns to labour market experience.

Our findings reported in Figure 18 provide strong support for the mechanism highlighted in our theoretical model. The patterns of differential labour market returns by education

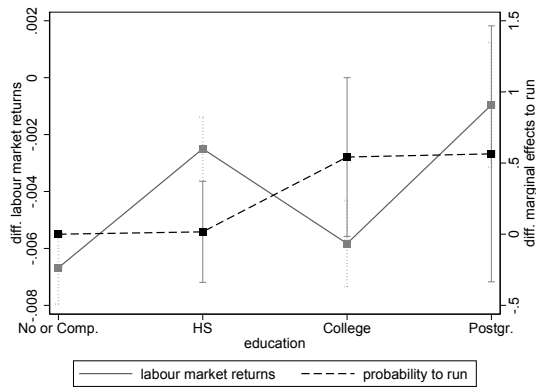
Figure 18: Returns to experience and likelihood to run for office: gaps by democracy at origin



(a) Democracy



(b) Anocracy



(c) Autocracy

The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives by education. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register.

exhibit significant heterogeneity across the three groups of countries. Notably, these differentials are substantially flatter for individuals born in the least democratic countries (panel c), where the level of education does not have a significant impact on the difference in returns to experience with respect to natives and, similarly, does not affect the gap in the likelihood of standing for office. Furthermore, for individuals originating in both democracies and anocracies – the vast majority of our sample – the differential patterns in the probability of running closely mirror the underlying differences in the returns to labour market experience.

6 Conclusions

As more immigrants make destination countries their new homes, understanding the determinants of their under-representation in the political process is becoming increasingly important. In this paper, we studied this issue by focusing on a country – Norway – that has experienced a large inflow of immigrants over the past 20 years and has generous provisions to extend the franchise in local elections to foreign nationals.

Using a unique dataset, we have documented the patterns of selection into office-seeking for natives and the foreign born, and proposed a simple model of the candidate entry decision to highlight that returns to labour market experience can play a crucial role. Consistent with the predictions of the model, our empirical analysis showed that immigrant–native differentials in returns to experience – across a variety of subgroups of the population – mirror the observed selection patterns. This finding thus highlights that economic and political integration are closely intertwined: as migrants integrate economically, their returns to experience become closer to those of comparable natives, resulting in a similar opportunity cost of entering politics. Therefore, our model suggests that a faster economic integration (i.e. a faster convergence of immigrants’ return to experience to those of natives) would also facilitate their political integration, a conclusion that to the best of our knowledge provides new insights into the complex process through which immigrants adapt to life in the host country.

We can think of at least two directions for further research. Our stylized theoretical

model focused on the trade-off between entering politics and remaining active in the labour market. It did not explicitly consider the possibility that undertaking a political career might have repercussions for subsequent labour market opportunities, for example through the acquisition of new human capital or the development of a larger social network. Given the narrow focus of our analysis on local elections, the extent to which these types of considerations will shape the decision to run for office is unclear, but exploring their role and the extent to which it might differ between immigrants and natives is potentially very relevant.

A large literature has documented that policy choices at the local level are likely affected by some salient attribute of the elected official in charge. Using our rich data on the migration backgrounds of local councillors and mayors and the rich set of services that are under the control of municipal governments in Norway, it would be interesting to investigate whether foreign-born politicians favour different policy choices compared to their native counterparts and, if so, which interventions they would emphasize. While both are important questions, we leave them for future research.

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A Appendix

A.1 Country background

In this section we provide background information on Norway's administrative structure and electoral system.

A.1.1 Administrative structure

Norway is a constitutional monarchy, divided into 19 counties and 428 municipalities. Municipalities play an important role in the provision of public services (Borge 2010), and their expenditures and revenues amount to 17% and 14% of GDP, respectively. They are responsible for local infrastructure and welfare, including education, health and social care. County governments' responsibilities are instead more limited and their total revenues and expenditures amount to only approximately 3% of GDP. Both layers of government have taxation powers, within a range specified by the central government. Given the more prominent role played by municipal authorities, our analysis will focus on municipal elections.

A.1.2 Elections

Municipalities are governed by elected councils. Local elections are held every four years in September. Norwegian citizens are eligible to vote and run for office if they turn 18 by the end of the election year. Norway enfranchises foreign citizens in local elections irrespective of their nationality,²⁸ provided that they have been resident in the country for at least three years.²⁹ Candidates must be residents of the municipality where they run. Thus, the country represents an ideal setting to study immigrant political participation. However, only Norwegian citizens are allowed to vote in national elections. The turnout in local elections has been stable at approximately 60% over the last three elections. For immigrants data are available only for the 2015 election, when their turnout was 29%.³⁰

²⁸See Earnest (2015) for other examples of countries where non-nationals are allowed to vote in local elections in a non discriminatory fashion.

²⁹This requirement is waived for nationals of other Nordic countries.

³⁰See http://www.nsd.uib.no/nsddata/serier/norske_valgundersokelser_eng.html.

Members of the council are elected from a single district, using an open list proportional system. The minimum number of seats on a council is mandated by law and is a function of the total population. During our period of analysis, it varied between 11 (for municipalities with population under 5,000) and 43 (for municipalities with more than 100,000 residents).

In each municipality, a party can enlist a maximum number of candidates equal to the available number of council seats plus six. Voters express their preference for one list and can cast preferential votes in favour of individual candidates. Individuals on the list are elected on the basis of the share of votes obtained by the party, their position on the list and the number of preferential votes they have received. Some candidates are put in privileged positions at the top of the list, and their names are written in bold (*stemmetillegg*). These candidates are given 25% more party votes than non-bolded candidates and their maximum number depends on the size of the council.³¹ Electoral lists are typically compiled as the result of a two-steps process. First, parties organize a nomination committee to identify candidates. Second, during a nomination meeting open to all local party members, the actual party ballot is decided (Cirone et al. 2019).³² Importantly, as pointed out by Ringkjøb and Aars (2010) it has historically been difficult for parties to find enough candidates willing to run for local office in many municipalities (see Section 4 in the main text for more details).

A.1.3 Data sources and definitions

Candidates' characteristics have been obtained from the "Municipal and county council election, candidates" dataset.³³ Information is provided on the municipality in which candidates run, their party affiliation, whether they are bolded and a wealth of socio-demographic characteristics including gender, age, immigration status, educational attainment and income.

Immigrants are persons born abroad from two foreign-born parents.

Nordic countries: Denmark, Greenland, Finland, Faroe Islands, Iceland and Sweden.

Other EU 15 (including EEA): Austria, Belgium, France, Germany, Greece, Ireland, Italy,

³¹For further information, see Bergh and Bjørklund (2010) and Fiva and Røhr (2018).

³²During the period covered by our study, there were no mandatory gender quotas for electoral lists. The major political parties, however – with the exception of the Conservative Party – had adopted gender quotas on a voluntary basis (see Teigen 2015).

³³See <https://www.ssb.no/en/valg/statistikker/kommvalgform> for further details.

Liechtenstein, Luxembourg, Netherlands, Portugal, Spain, Switzerland, United Kingdom. New EU Member Countries: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Slovenia, Poland, Romania, Slovakia.

A.2 Estimation of marginal effects of education, age and gender on the probability to run for office

To identify the effect of education, age and gender net of other individual characteristics, we estimate the following model:

$$\begin{aligned}
 Y_{imt} = & \alpha + \alpha^M \times M_{imt} + \sum_{e=2}^4 (\beta_{edu}^e I_{imt}^e + \gamma_{edu}^e I_{imt}^e \times M_{imt}) + \sum_{a=2}^8 (\beta_{age}^a I_{imt}^a + \gamma_{age}^a I_{imt}^a \times M_{imt}) + \\
 & + \beta_{sex} I_{imt}^s + \gamma_{sex} I_{imt}^s \times M_{imt} + X'_{imt} \delta + \theta_m \times \tau_t + \epsilon_{imt}
 \end{aligned} \tag{A.1}$$

where Y_{imt} identifies whether individual i living in municipality m runs for office at time t ; I_{imt}^e are indicator variables for educational attainment ($e = 2, 3, 4$ capture respectively completed high school, college and postgraduate education, with high school dropouts the omitted category); M_{imt} is a dummy variable for immigrant status; I_{imt}^a are indicator variables for eight five-year age intervals (with the omitted group being 24–28); I_{imt}^s is a dummy identifying females; and X_{imt} is a vector of individual characteristics (e.g., marital and employment status). Finally, θ_m and τ_t are sets of municipality and year dummies, respectively. Their interactions account for all time-varying factors specific to each municipality, that may influence the probability to run for office. For example, these include the size of the immigrant population, that as shown in the literature might affect individual decisions to seek candidacy (e.g. Folke et al. 2017), as well as accounting for native attitudes towards immigrants and other local socio-economic factors.³⁴

The marginal effects of different education levels for natives and immigrants are given by β_{edu}^e and $\beta_{edu}^e + \gamma_{edu}^e$, respectively, which indicate the percentage-point difference in the

³⁴In Table A.2 in the Appendix we also allowed for the effect of municipality-year-specific characteristics to vary between natives and immigrants by inserting in the specification the triple interaction $\theta_m \times \tau_t \times M_{imt}$. The marginal effects of interest are not affected.

probability of running for office for individuals with education level e , relative to high school dropouts within each of the two groups. However, since the probability of running for office for a high-school dropout differs between natives and immigrants, the marginal effect of education can be more clearly interpreted in percentage terms, by normalizing the estimated coefficients by the respective baseline probability.³⁵ For this reason, we plot the normalized coefficients in the right panel of Figure 3 in Section 1.

The marginal effects of gender for natives and immigrants are given by β_{sex} and $\beta_{sex} + \gamma_{sex}$. Also in this case, since the baseline value (i.e., males' likelihood of standing for election) is different for immigrants (0.57%) and natives (2.2%) we report normalized coefficients in the right panel of Figure 4 in Section 1.

Finally, the marginal effects of age on the likelihood of running for office are captured by β_{age}^a and $\beta_{age}^a + \gamma_{age}^a$. We normalize also these coefficients by their baseline³⁶ (i.e., the likelihood of standing for election for individuals aged 24-28 in the same group), before plotting them in the right panel of Figure 5.

A.3 Positive returns to a political career

In the baseline theoretical analysis, we assumed that embarking on a political career involved a cost in terms of forgone labour market earnings in the second period if the councillor did not become a full-time politician. The model can easily be extended to also consider the case in which embarking on a political career actually enhances labour market earnings, i.e., $\theta > 1$. It is easy to show that our main result, namely part *i.*) of Proposition 1, continues to hold. Likewise, it is easy to see that also part *ii.*) and *iii.*) are still valid.

³⁵The baseline probability for immigrants who have completed at most compulsory education is 0.25% while that for natives is 1.26%.

³⁶The baseline probability for immigrants aged 24-28 is 0.28% while that for natives is 0.93%.

A.4 Proofs

We start by determining under which conditions natives are more likely to run for office than immigrants. To this end, rearrange equations 5 and 6 to obtain:

$$p_N \geq [\pi\theta + (1 - \theta)]\delta_N y - \pi w \quad \text{if} \quad y < \frac{w}{\theta\delta_N} \quad (\text{A.2})$$

and

$$p_N \geq (1 - \theta)\delta_N y \quad \text{if} \quad y \geq \frac{w}{\theta\delta_N} \quad (\text{A.3})$$

Analogously, rearrange equations 7 and 8 to obtain:

$$p_M \geq [\pi\theta + (1 - \theta)](1 - c)\delta_M y - \pi w \quad \text{if} \quad y < \frac{w}{(1 - c)\theta\delta_M} \quad (\text{A.4})$$

and

$$p_M \geq (1 - \theta)(1 - c)\delta_M y \quad \text{if} \quad y \geq \frac{w}{(1 - c)\theta\delta_M} \quad (\text{A.5})$$

Figure A.1 illustrates the decision to enter politics, and the two shaded areas highlight when a native (dashed area) and an immigrant (grey area) will do so.³⁷ Immigrants are more likely to run for office than natives if their return to labour market experience are sufficiently larger than those of natives. These results are formally proved in the following

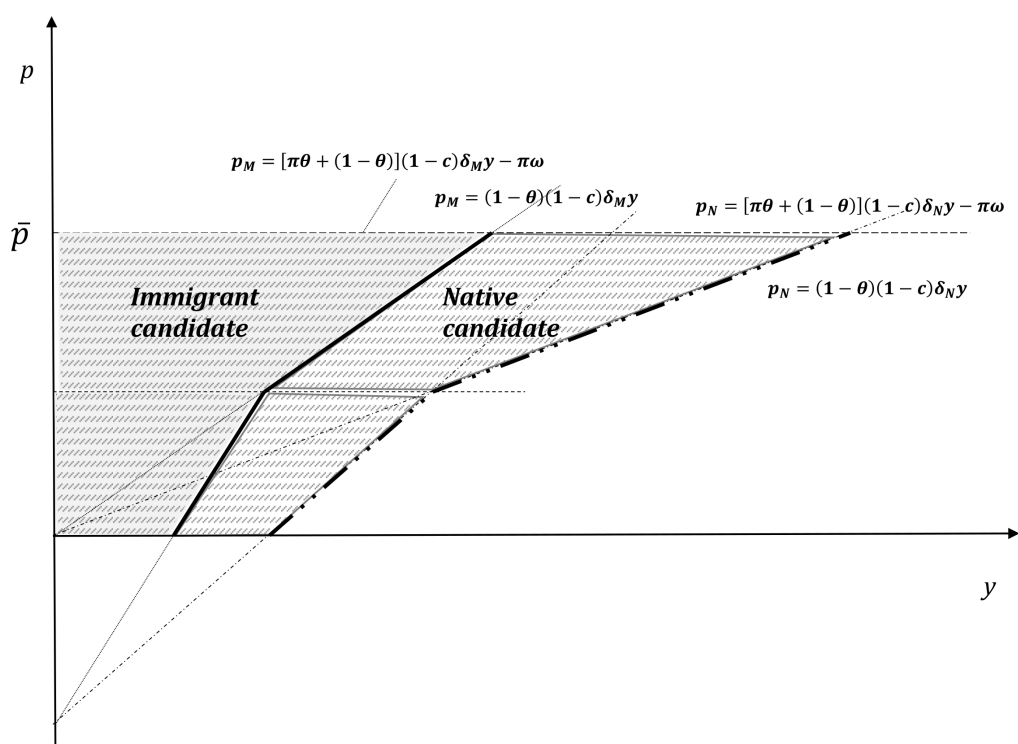
Lemma 1 *If $\delta_M > \frac{\delta_N}{1-c} \frac{\bar{P}_N}{\bar{P}_M} \left[\frac{(1-\theta)\phi w^2 + \theta^2 \bar{P}_M^2}{(1-\theta)\phi w^2 + \theta^2 \bar{P}_N^2} \right]$ then immigrants are less likely than natives to run for office.*

Proof. A native's likelihood of running for office is given by:

$$E[Run_N] = \frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_N\delta_N} \left[\phi w^2 + \frac{\theta^2 \bar{P}_N^2}{1 - \theta} \right] \quad (\text{A.6})$$

³⁷Note that in drawing the picture, we have assumed some individuals' ability is high enough that even if they have the highest possible intrinsic motivation, they will never run for office. In other words, $\bar{Y} > \frac{\pi w + \bar{P}}{[\pi\theta + (1-\theta)]\delta_N}$. We will retain this assumption throughout our analysis. While drawing the graph we have assumed that $\delta_M > \frac{\delta_N}{1-c}$, but our formal argument below allows also for $\delta_M \leq \frac{\delta_N}{1-c}$.

Figure A.1: Running for office



where $\phi = \frac{\pi(1-\theta)\theta}{\pi\theta+(1-\theta)}$. Analogously, an immigrant's likelihood of running for office is given by

$$E[Run_M] = \frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_M\delta_M(1-c)} \left[\phi w^2 + \frac{\theta^2 \bar{P}_M^2}{1-\theta} \right] \quad (\text{A.7})$$

It follows immediately that if $\delta_M > \frac{\delta_N}{1-c} \frac{\bar{P}_N}{\bar{P}_M} \left[\frac{(1-\theta)\phi w^2 + \theta^2 \bar{P}_M^2}{(1-\theta)\phi w^2 + \theta^2 \bar{P}_N^2} \right]$, A.6 > A.7.

■

Proof of Proposition 1.

To establish part *i.*), consider

$$E[Run_M] - E[Run_N] = \frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_M\delta_M(1-c)} \left[\phi w^2 + \frac{\theta^2 \bar{P}_M^2}{1-\theta} \right] - \frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_N\delta_N} \left[\phi w^2 + \frac{\theta^2 \bar{P}_N^2}{1-\theta} \right] \quad (\text{A.8})$$

where $\phi = \frac{\pi(1-\theta)\theta}{\pi\theta+(1-\theta)}$. Then,

$$\frac{\partial(E[Run_M] - E[Run_N])}{\partial\delta_M} = -\frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_M\delta_M^2(1-c)} \left[\phi w^2 + \frac{\theta^2 \bar{P}_M^2}{1-\theta} \right] < 0 \quad (\text{A.9})$$

and

$$\frac{\partial(E[Run_M] - E[Run_N])}{\partial\delta_N} = \frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_N\delta_N^2} \left[\phi w^2 + \frac{\theta^2 \bar{P}_N^2}{1-\theta} \right] > 0 \quad (\text{A.10})$$

To prove part *ii.*), note that

$$\frac{\partial E[Run_N]}{\partial w} = \frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_N\delta_N} 2\phi w > 0 \quad (\text{A.11})$$

and that

$$\frac{\partial E[Run_M]}{\partial w} = \frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_M\delta_M} 2\phi w > 0 \quad (\text{A.12})$$

Finally, to establish *iii.*), note that:

$$\frac{\partial E[Run_N]}{\partial \pi} = \frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_N\delta_N} \frac{w^2\theta(1-\theta)^2}{[\pi\theta + (1-\theta)]^2} > 0 \quad (\text{A.13})$$

and that

$$\frac{\partial E[Run_M]}{\partial \pi} = \frac{1}{2\bar{Y}\theta^2} \frac{1}{\bar{P}_M\delta_M(1-c)} \frac{w^2\theta(1-\theta)^2}{[\pi\theta + (1-\theta)]^2} > 0 \quad (\text{A.14})$$

A.5 Norwegian election survey

The Norwegian Election Research Programme, in collaboration with Statistics Norway runs periodical election surveys. In our analysis we use the “Local Election Survey” and combine it with the “Local election survey among immigrants and Norwegian born with immigrant parents” carried out in 2007 and 2011. We restrict our sample to individuals aged 22–59. For more information on the data, see https://nsd.no/nsddata/serier/norske_valgundersokelser_eng.html.

To construct our “Interested in politics” indicator we use answers to the question “How interested are you in politics?” Four options were offered to individuals answering this question: “Not interested at all”, “Not very interested”, “Quite interested” and “Very interested”. Our indicator takes a value of 1 if the individual is “Quite interested” or “Very interested” and 0 otherwise. The mean value of the indicator in the entire sample (i.e. involving both immigrant and native respondents) is 0.65, increasing from 0.56 to 0.69 between 2007 and 2011. The share of immigrants interested in politics is 0.51, which compares to 0.68 for natives; the same values for immigrants (natives) were respectively 0.47(0.60) in 2007 and 0.55 (0.71) in 2011. Immigrants are individuals born abroad from foreign parents.

The macro regions considered in the survey are Hedmark and Oppland, Eastern Norway, Agder and Rogaland, Western Norway, Trøndelag and Northern Norway.

A.6 Direct returns: robustness checks

In Section 3.2, we showed that, as suggested by our theoretical model, higher relative wages earned by professional politicians lead to a higher individual likelihood of running for office. Additionally, our results indicate that the effect of an increase in the (exogenous) probability of becoming a full-time politician on the decision to run for office is positive. Furthermore, we have showed that these findings hold more strongly for bolded candidates, and when we

exclude from the sample the five largest Norwegian municipalities.

In this section, we check the robustness of our results to the manipulation of the threshold used to define “large” municipalities. Specifically, in Table A.4 we show how our results are affected when the sample is progressively restricted excluding only the largest city, Oslo (column 1), and then progressively excluding also the second (Bergen, column 2), third (Trondheim, column 3), fourth (Stavanger, column 4) and fifth (Borum, column 5) largest Norwegian cities. All the results are in line with our main results of Table 5.

A.7 Additional results

Table A.1: Probability to run for office: marginal effects, different interactions

	(1)	All candidates		(4)
		(2)	(3)	
Immigrant	-0.0141*** (0.0001)	-0.0072*** (0.0001)	-0.0068*** (0.0001)	-0.0068*** (0.0001)
R-Squared	0.001	0.023	0.041	0.042
Observations	7,427,645	7,427,645	7,426,850	7,426,850
Other controls	No	No	Yes	Yes
<i>Fixed Effects</i>				
Municipality	No	Yes	Yes	No
Year	No	Yes	Yes	No
Municipality X Year	No	No	No	Yes

Source: Norwegian Population Register. Individuals in the age group 24-63 and we pool 3 election years 2007, 2011 and 2015. Standard errors are reported in brackets.

Note: Each regression also includes age dummies for immigrants and natives, education dummies for immigrants and natives marital status, employment status dummies. Share of immigrants is computed at the municipality and year level. Immigrant is an immigrant dummy.

Table A.2: Probability to run for office: marginal effects, different interactions

	All candidates		
	(1)	(2)	(3)
<i>Natives</i>			
High school	0.0051*** (0.0001)	0.0051*** (0.0001)	0.0051*** (0.0001)
College	0.0170*** (0.0001)	0.0171*** (0.0001)	0.0174*** (0.0001)
Postgraduate	0.0191*** (0.0002)	0.0191*** (0.0002)	0.0199*** (0.0002)
Female	-0.0053*** (0.0001)	-0.0053*** (0.0001)	-0.0053*** (0.0001)
<i>Immigrants</i>			
High school	-0.0061*** (0.0002)	-0.0061*** (0.0002)	-0.0050*** (0.0002)
College	-0.0128*** (0.0002)	-0.0128*** (0.0002)	-0.0129*** (0.0002)
Postgraduate	-0.0150*** (0.0003)	-0.0151*** (0.0003)	-0.0167*** (0.0003)
Female	0.00491*** (0.0001)	0.00490*** (0.0001)	0.00560*** (0.0001)
Other controls	Yes	Yes	Yes
R-Squared	0.041	0.042	0.043
Observations	7,427,645	7,427,645	7,427,645
<i>Fixed Effects</i>			
Municipality	Yes	No	No
Year	Yes	No	No
Municipality X Year	No	Yes	No
Municipality X Year X Immigrant	No	No	Yes

Source: Norwegian Population Register. Individuals in the age group 24-63 and we pool 3 election years 2007, 2011 and 2015. ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Note: Each regression also includes age dummies for immigrants and natives, marital status, employment status dummies and -columns 1 and 2- an immigrant dummy.

Table A.3: Wage regression

	Log hourly wages
<i>Experience</i>	0.025*** (0.00023)
<i>Experience</i> ²	-0.00071*** (0.00001)
<i>Experience</i> ³	0.000006*** (0.000)
<i>Experience</i> × <i>Immigrant</i>	0.005*** (0.0006)
<i>Experience</i> ² × <i>Immigrant</i>	-0.0006*** (0.00003)
<i>Experience</i> ³ × <i>Immigrant</i>	0.00001*** (0.000)
Immigrant	-0.075 (0.054)
R-squared	0.32
Observations	5,250,893
<i>Fixed Effects</i>	
Municipality × Year	Yes
<i>Average log hourly wages</i>	
Natives	5.38
Immigrants	5.30

Source: Norwegian Population Register. Individuals in the age group 24-63 and we pool 3 election years 2007, 2011 and 2015. ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Note: Each regression also includes age dummies, education dummies, female dummy and marital status.

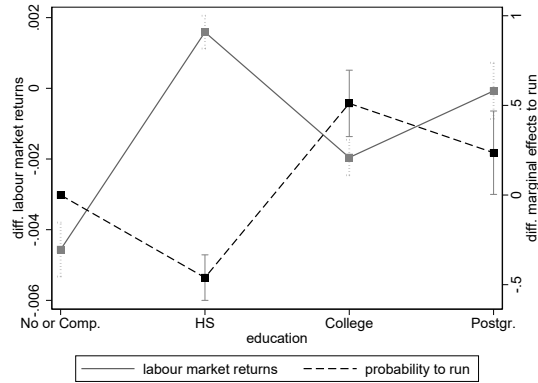
Table A.4: The direct returns to a political career

	(1) No Oslo	(2) Top 2 excl.	(3) Top 3 excl.	(4) Top 4 excl.
A. All Candidates				
Relative FT politician wage	0.026 (0.019)	0.030 (0.019)	0.030 (0.019)	0.029 (0.019)
Prob. to become FT politician	0.604*** (0.088)	0.557*** (0.078)	0.529*** (0.073)	0.511*** (0.071)
Observations	5,376,527	4,972,944	4,696,823	4,504,369
B. Bolded Candidates				
Relative FT politician wage	0.0088** (0.0044)	0.0092** (0.0044)	0.0092** (0.0045)	0.0091** (0.0045)
Prob. to become FT politician	0.200*** (0.029)	0.193*** (0.029)	0.189*** (0.029)	0.185*** (0.029)
Observations	5,290,369	4,888,147	4,613,222	4,421,774
Other controls	Yes	Yes	Yes	Yes
<i>Fixed Effects</i>				
Municipality	Yes	Yes	Yes	Yes
Year	No	Yes	Yes	Yes

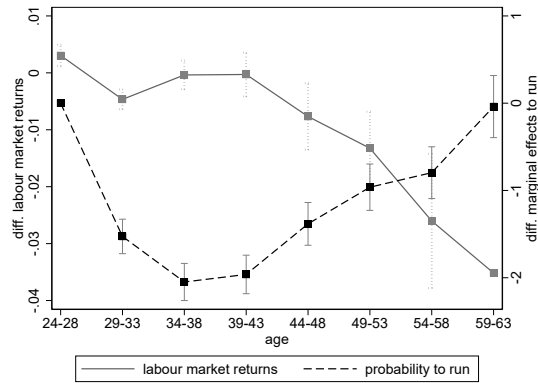
Source: Norwegian Population Register. Individuals in the age group 24-63 and we pool 3 election years 2007, 2011 and 2015. Standard errors are clustered at the municipality level. ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Notes: Variables are standardized using national mean and standard deviation for each election year. Other controls include dummies for immigrant status, education, gender, age, marital status, employment and municipality size. Top n excluded refers to the number of largest cities (population-wise) excluded from the regression following this order: 1. Oslo, 2. Bergen, 3. Trondheim, 4. Stavanger, 5. Borum. Probability to run rescaled between 0 and 100. The estimated coefficients are the marginal effects of each variable FT politician stands for full-time politician.

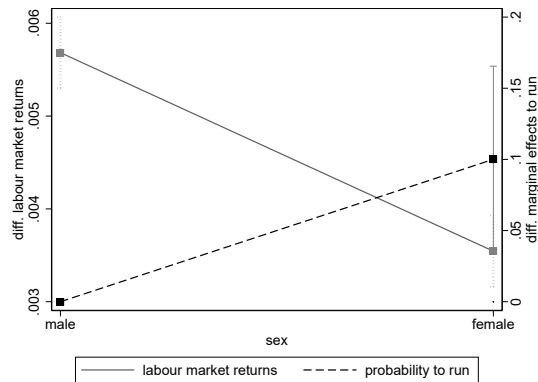
Figure A.2: Returns to experience and likelihood to run for office: observations in the common support



(a) Education



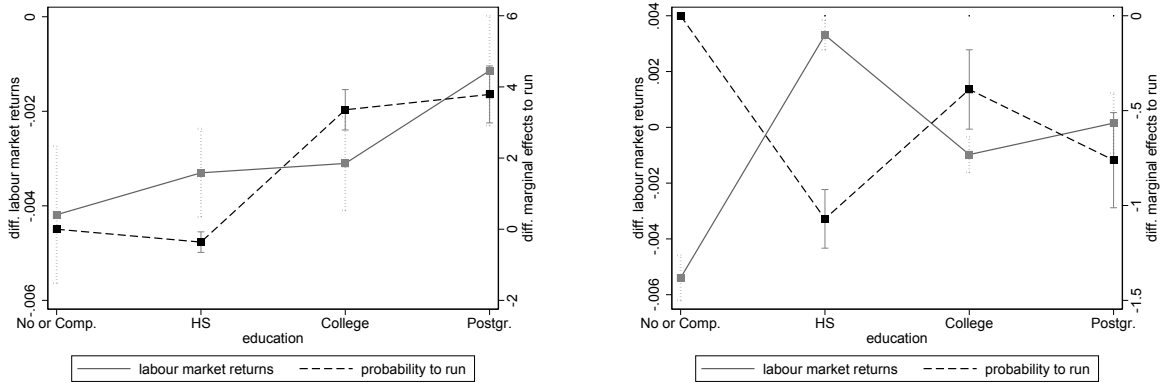
(b) Age



(c) Gender

The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives by education. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015), immigrants and natives that have common support. Source: Norwegian Population Register.

Figure A.3: Returns to labour market experience and likelihood to run for office: gaps by country of education

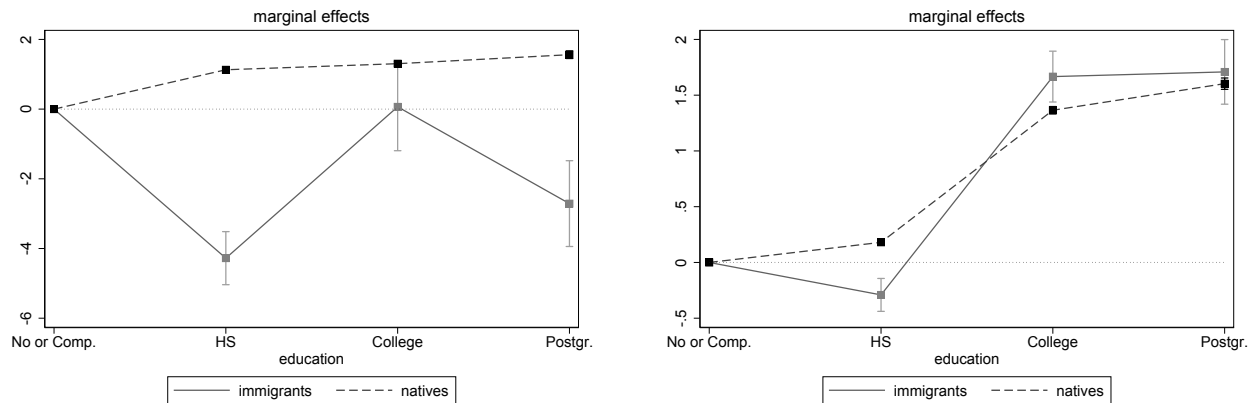


(a) Educated in Norway

(b) Educated abroad

The figure reports on the left axis the difference in the returns to an additional year of Norwegian labour market experience between immigrants and natives by education. The right axis measures instead the difference between immigrants and natives in the percentage increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63, and we pool 3 elections (2007, 2011 and 2015). Source: Norwegian Population Register.

Figure A.4: Probability of running for office by party

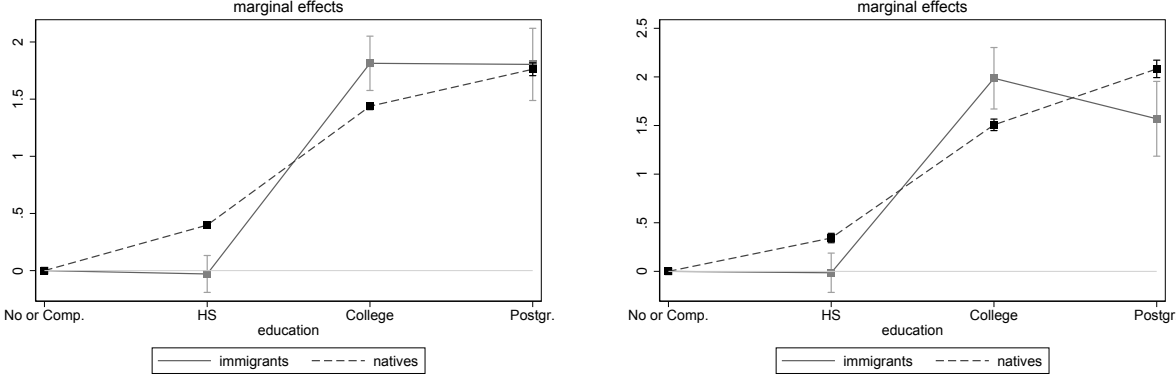


(a) Centre Party

(b) Other parties

Source: Norwegian Population Register. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63 and pool 3 elections (2007, 2011 and 2015). The figure shows the % increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education, separately for immigrants and natives.

Figure A.5: Probability of running for office by education: Rural vs. urban municipalities



(a) Rural municipalities

(b) Urban municipalities

Source: Norwegian Population Register. Immigrants are foreign-born children of immigrant parents, excluding Nordic immigrants. We include only individuals in the age group 24-63 and pool 3 elections (2007, 2011 and 2015). The figure shows the % increase in the probability of running for office for each education group, relative to the baseline of at most compulsory education, separately for immigrants and natives.