The Political Economy of Open Borders
Theory and Evidence on the role of Electoral Rules*

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December 6, 2021

Abstract

Institutions matter for the political choice of policies. We study, theoretically and empirically, how different electoral systems affect the immigration policy of a country or city, zooming on the labor market as the main source of heterogeneous economic preferences on immigration. The general result is that a polity is more open to immigration the less likely it is that policymaking can be determined by a single group of voters constituting a plurality winning party but not holding an absolute majority. There is evidence for this result at all levels in terms of correlations, and we establish causality via regression discontinuity design for the Italian case.

Keywords: Electoral Rules, Immigration, Occupational Choice. *JEL Classification codes:* D72, J24, J61, R23

*We wish to thank Massimo Anelli, David Austen-Smith, Jonathan Bendor, Anindya Bhattacharya, Federico Boffa, Massimo Bordignon, Tommaso Colussi, Edoardo Di Porto, Valerio Dotti, Giovanni Facchini, Tim Feddersen, James Fearon, Dana Foarta, Olle Folke, Gloria Gennaro, Andrea Ichino, John Londregan, Moritz Osnabruegge, Daniele Paserman, Nicola Persico, Pasqual Restrepo, Johanna Rickne, Tom Romer, Marco Tabellini, Federico Trombetta, Riccardo Turati; also, seminar participants at Boston University, Princeton University, Bocconi University, Stanford GSB, University of York, Institut d'Economia de Barcelona (IEB), Catholic University of Milan, and workshop organizers and participants in Capri, Priorat, Alghero, Petralia, Washington PECO, Kellogg workshop on immigration policies, Immigration in OECD Countries Conference, PSPE conference in Toulouse 2021, Econometric Society, Economics of Migration webinar, OPESS webinar, and the Fifth International Conference Understanding Voluntary and Forced Migration in Lille. Special thanks to Antonella Ciccarese from Istat for the 2011 Census data. Matteo Gamalerio acknowledges the research fundings from projects RTI2018-097271-B-I00 (Ministerio de Educacion y Ciencia), and 2017SGR796 (Generalitat de Catalunya). The usual disclaimer applies.

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1 Introduction

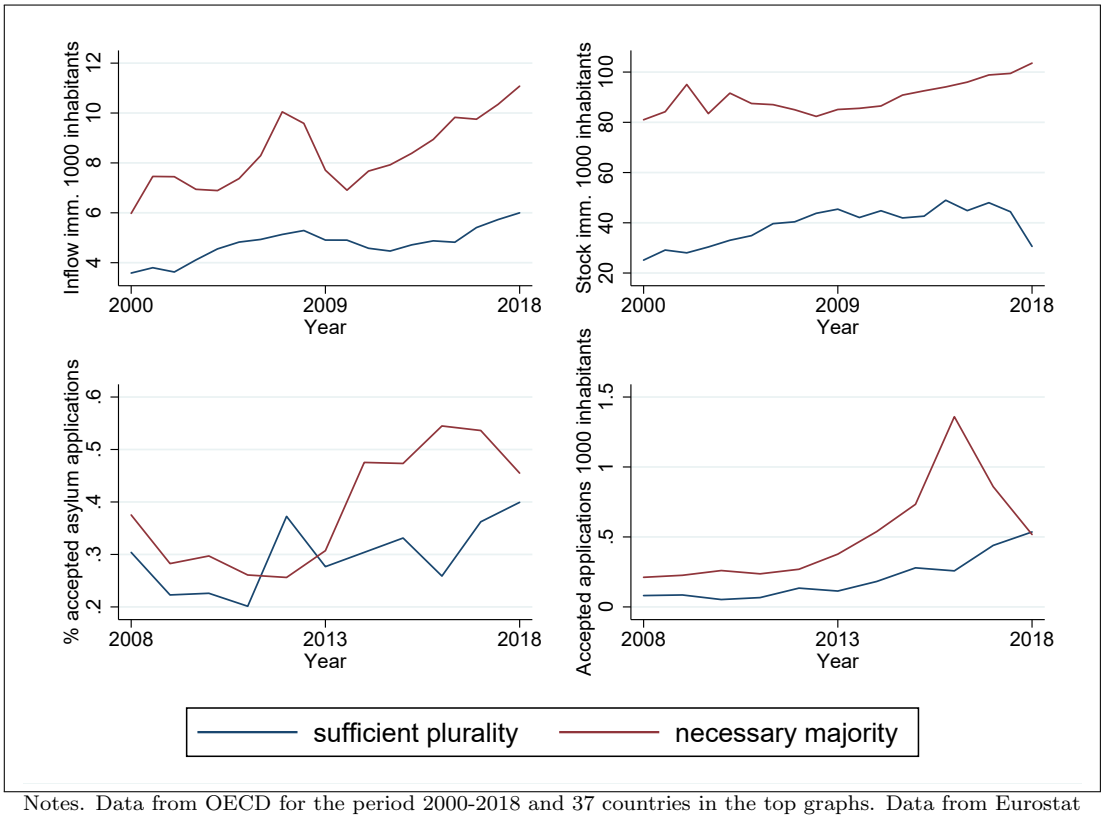
Among the determinants of policies in a democracy, the preferences of the different classes of voters are a fundamental component. The influence that such preferences have on the policy making process depends, however, on the polity's institutional system. The electoral system, the separation of powers, and all institutions affecting accountability, may be crucial factors for a policy outcome. This paper studies the interplay of preferences and institutions for the determination of immigration policies, which are now salient in many countries and divide the electorate even in cities and regions.

Political economists often focus on median voter preferences, and this choice limits the ability to evaluate the role of institutions. A country with an electoral system like plurality rule and a country using proportional representation, for example, could have median income voters with exactly the same preference on the salient policy dimension, and yet the two countries may implement different policies. In this paper, we divide the electoral systems into two categories, and we study if and how they can lead to the implementation of different immigration policies. The *sufficient plurality* category (SP) includes all systems where a plurality of votes may be sufficient to elect a winner or to form a government. The main example of systems in this category is First-Past-The-Post – see e.g. Riker (1982) for a classic study of this in political science. In the second category, which we call *necessary majority* (NM), we include systems that require an absolute majority of the votes to be in support of the government. Proportional representation systems constitute the main example. However, electoral rules involving run-offs also belong to this category, since they require the winner to receive an absolute majority of votes in the first round or to form alliances or implicit coalitions in the second round. Looking at the variation across countries in terms of electoral rules and in terms of the openness of their borders, an interesting observation can be made: countries with NM electoral systems appear to exhibit more openness towards migrants than countries with SP electoral systems. Figure 1 displays four measures of openness to immigration for countries with NM electoral systems and countries with SP electoral systems. The two top graphs show the flow and stock of immigrants per 1000 inhabitants for the years 2000-2018. In the bottom row, we report the share of accepted asylum applications and the number of accepted asylum applications per 1000 inhabitants for the years 2008-2018.[1] For

[1]We use data and information from the OECD, Eurostat, the Quality of Government Institute and the World Bank Database of Political Institutions. Table A1 provides a description of the political and electoral systems used across the 37 OECD countries. It also indicates the classification of the electoral systems distinguishing between SP and NM. For countries with a presidential or a semi-presidential system, we focus on the electoral system used to elect the president.

all the four measures, countries with NM electoral systems appear to be more open compared to countries that use SP electoral systems. The difference is particularly strong for recent years, during which the salience of the migration issue has increased.

Figure 1: Cross-countries evidence: sufficient plurality vs necessary majority



Notes. Data from OECD for the period 2000-2018 and 37 countries in the top graphs. Data from Eurostat for the period 2008-2018 and 24 countries in the bottom graphs. The four graphs compare countries with (NM) electoral systems with countries with (SP) electoral systems . The top-left graph provides evidence of the total inflow of immigrants every 1000 inhabitants. The top-right graph provides evidence on the stock of immigrants every 1000 inhabitants. In the bottom-left graph, evidence on the share of accepted asylum applications over the total number of applications. In the bottom-right graph, evidence on the number of accepted asylum applications every 1000 inhabitants.

In this paper we claim that the explanation of this variation may relate to the labor market, and hence we address this "stylized fact" using a political economy model with endogenous occupational choice, inspired by Austen-Smith (2000). If immigrants are expected to compete more on the supply side of the labor market than on the demand side,[2] native voters with high productivity who expect to occupy managerial or entrepreneurial positions

[2]Looking at the 2011 Italian Census data, this seems to be the case for Italian municipalities. Specifically, we find that approximately 98 % of the employed adult non-EU migrants compete on the supply side of the labor market, while only around 2 % of them occupy managerial or entrepreneurial positions.

tend to favor immigration. On the other hand, the fear of competition or substitution intuitively creates, ceteris paribus, a more likely preference for closed borders within the working class. In addition, there is an important and often neglected third class of voters, namely those who are out of the labor force – the *out-class* henceforth. This class includes pensioners and those citizens who are discouraged or in any case inactive on the labor market. Since these voters are not active on the labor market, their stances on immigration policies are not affected directly by wage and employment considerations, but crucially depend on the immigrants' impact on welfare spending. Since the impact of immigration on welfare spending affects all classes, the economy-driven preferences of the average member of the out-class for openness of borders are shown to be intermediate, in between the more positive preferences of the managerial class and the more negative preferences of the working class.[3]

Given this, we can now give the reader the most important intuition about the mechanism that links electoral rules to immigration policies in a world where immigration is the most salient issue: if a country uses a SP system (for example, First-Past-the-Post), the most likely decision maker is the working class (through whichever party(ies) represent their interests), because the working class constitutes the plurality among the three classes almost everywhere. Under a SP system, a labor party could get the absolute majority of seats even if it only had just above 1/3 of votes in each constituency. On the other hand, if an institutional system requires absolute majority representation in a government (as, for example, proportional representation or run-off systems), then the working class alone cannot call the shots, and the often neglected out-class is pivotal because of the intermediate position just mentioned. It should now be clear that, even if two countries both have a worker as median-income voter, a net positive evaluation of openness by the out-class can suffice to determine open borders in any system where the government has to be supported by an absolute majority of voters.[4]

[3]The labor market analysis that we focus on is not the only possible source of an ordering of preferences for open borders that sees the managerial class on top and the working class at the bottom. For example, education heterogeneity and the knowledge of the correlation between education and openness can generate this pattern as well. Our results on the implications for this type of preference ordering for the determination of the role of the electoral system for immigration openness are the same regardless of whether the main source of this preference pattern is the labor market or education, but we will also see that survey data supports the significance of the labor market factor even controlling for the complementary heterogeneity in education.

[4]For this intuition about our mechanism and for the formal model, we are implicitly assuming that voters vote for parties or candidates that compete to best represent the interests of the three classes of citizens on the immigration dimension alone, or that immigration policy is one of the most salient ones so that it matters significantly for the choice of whom to vote for. To see evidence of the global increase of migration pressures, see e.g. the UN international migration report of 2017. The topic of immigration policy has risen to the top in most countries' issue importance rankings, in political campaigns, rhetoric, debates and actions. In the 2015 edition of the Pew Research Center's annual policy priorities survey, 52 percent of Americans

We propose a model that formalizes the above general intuition, obtaining an equilibrium characterization fully consistent with the suggestive evidence of Figure 1 on economic migrants. We also adjust the model to study openness to refugees, and obtain once again an equilibrium characterization fully consistent with the suggestive evidence in Figure 1 on asylum seekers. In both versions of the model the preferences of the out-class are indeed pivotal in a NM system, determining the potentially different outcome with respect to SP systems.

The labor market argument at the heart of our mechanism implies that voters' economy-driven preferences on immigration should display a J pattern: putting the labor productivity of citizens on the horizontal axis and an indicator of openness attitude on the vertical axis, such an indicator should first decrease, find a minimum for a value of labor productivity corresponding to the typical working class member who fears substitution from immigrants, and then increase again to a higher value than the initial one, corresponding to the typical member of the managerial class. Using data from a survey run by the Italian National Election Studies (ITANES) association in 2011, we provide descriptive evidence in favor of the J-shaped relation, decreasing from out-class to working class and then increasing quite a bit when moving to the managerial class.

In order to establish causality of our mechanism, we abandon the cross-country observations and focus on a quasi-natural experiment, using data from Italian municipalities. We exploit two institutional features of Italian municipalities. First, we take advantage of the refugee allocation policy developed by the Italian Home Office through "The Protection System for Asylum Seekers and Refugees" (SPRAR) system. The main feature of SPRAR is that municipal governments decide whether to submit a bid to open a refugee center or not on the occasion of calls issued by the Home Office. Winning municipalities host refugees and asylum seekers and receive fiscal grants from the central government (Gamalerio and Negri, 2021). Second, we exploit the fact that the electoral system in Italian municipalities changes from plurality rule (a SP system) to dual ballot (a NM system) when the municipal population is above 15,000 inhabitants (Bordignon et al., 2016). This allows us to implement a regression discontinuity design (RDD) analysis to study the effect of different electoral systems on the

rated immigration a "top priority for the President and Congress." (Pew Research Center, 2015), and since then the salience of immigration has further increased in Europe as well. Note also that all issues related to globalization have increased their salience as well, and on such issues the class preferences for openness can be shown to be very similar to those on immigration. The likelihood of pivotal role for the out-class has been increasing steadily given the increased salience of immigration and globalization issues. On the contrary, when redistributive politics was more salient than globalization and immigration, the working class was the median class and was therefore pivotal under both electoral systems.

probability of opening a refugee center.

The results of the RDD analysis confirm the prediction of the theoretical model. The probability of opening a SPRAR center is approximately 14 percentage points higher for NM municipalities than for SP municipalities. Moreover, consistent with our mechanism, we show that the result is entirely driven by the subsample of municipalities where the working class is the plurality class but does not have the absolute majority, so that the difference between SP and NM municipalities is in terms of which one is the pivotal class. Conversely, the complementary subsample of municipalities where the working class constitutes the absolute majority, or does not even have the plurality of votes, does not display any significant difference between SP and NM towns, exactly as our theory suggests.

An additional heterogeneity analysis further reinforces our central theoretical intuition. The difference between the two systems is sharper in the sample in which NM municipalities needed to go to the second round to elect the mayor, where the pivotal class is more likely to be different across the two systems, and where natives and immigrants are more likely to compete for the same occupations. We also provide evidence that the cultural and compositional amenities channel and potentially different levels of education across the three classes do not seem to drive our results. Our results are robust to the use of different bandwidths, are not due to random chances, and are not driven by other mechanisms studied in the literature on electoral systems.[5]

The remainder of the paper is organized as follows. Section 2 places our paper in the context of existing literature. In Section 3, we describe the Italian context. Sections 4 and 5 contain our general model and our main results, respectively. We introduce our empirical evidence in Section 7. Section 8 concludes.

2 Related Literature

Our theory focuses exclusively on the *economic* preferences of the three main classes of citizens, and the survey evidence in section 7.3.1 shows that indeed the J-shaped relation between productivity and preferences for openness holds exclusively on the domain of economic preferences. Cultural attitudes, on the other hand, have the out class often at the bottom of the openness preference ranking. Our analysis of the Italian quasi-natural experiment highlights the importance of economic drivers in the overall political positioning of the relevant classes

[5]For example, the role of extreme political parties and the number of candidates (Bordignon et al., 2016), the presence of populist parties (Bordignon and Colussi, 2020), total fiscal grants (Bracco and Brugnoli, 2012; Ferraresi et al., 2015; Cipullo, 2021), and electoral turnout (Barone and De Blasio, 2013).

of voters. When it is the case that cultural concerns dominate the economic concerns, then the electoral system should play no role. Hence the fact that we find that electoral rules do matter supports the idea that the economic factors play a significant role, regardless of whether they win or lose in a hypothetical horse-race with culture. For evidence on the economic and noneconomic factors that drive attitudes towards migration, see Mayda (2006), Facchini and Mayda (2009), Dustmann and Preston (2007), Card et al. (2012).

For papers that have studied how individual attitudes influence policy outcomes see Benhabib (1996), Dolmas and Huffman (2004), Facchini and Mayda (2008), Facchini et al. (2011), and Tabellini (2020). For evidence on the relationship between immigration and anti-immigrant attitudes and voting behavior, the literature has produced conflicting results: some papers have found a positive effect of immigration on anti-immigrant attitudes and voting (e.g., Barone et al., 2016; Tabellini, 2020), other papers have provided evidence of a negative effect (Vertier, Viskanic, and Gamalerio, 2021; Gamalerio et al., 2021), and other papers evidence of a mixed effect (Dustmann et al., 2019; Steinmayr, 2020; Mayda et al., 2020). In our model the evaluations of the pros and cons of immigration by individual citizens is mediated also by their subjective probability of finding a job, hence political preferences can also be influenced by misperceptions about the impact that immigrants can have on the reduction of such a subjective probability or on the wage, in line with the findings of Alesina et al. (2019).

The literature on the economic consequences of migration suggests, in line with our model, that the losers are more likely to be the low-skilled native workers that fear the competition from migrants in the labor market (Dustmann et al., 2013; Borjas, 2014; Borjas and Monras, 2017; Monras, 2019; Clemens and Hunt, 2019; Edo et al., 2019; Mayda et al., 2020), and that may have the largest misperceptions about immigrants (Alesina et al., 2019).

For other papers studying the role of electoral systems for different types of economic and political outcomes, see Lizzeri and Persico (2001), Morelli (2004), Pagano and Volpin (2005), Iversen and Soskice (2006), Persson, Tabellini, and Trebbi (2003), Persson, Roland and Tabellini (2007), Galasso and Nunnari (2019), Genicot, Bouton, and Castanheira (2020), Gulino (2020). Russo and Salsano (2019) develop a different model about how electoral rules can influence openness.

3 The Italian Context

3.1 Italian municipalities: general features and electoral systems

In Italy today there are around 8000 municipalities. They manage a series of essential services, such as garbage collection, water supply, infrastructure, transport, welfare, housing, and municipal police. Municipal governments fund these services through a mix of local taxes and grants from higher levels of government. Mayors are the most crucial figures within municipal governments, especially after Law 81/1993 introduced their direct election.[6] The electoral term of a mayor lasts five years, and second-term mayors cannot run for a third consecutive election. Law 81/1993 introduced the current electoral rules for Italian municipalities. Before 1993, municipalities below 5,000 inhabitants were using a plurality system with panachage, while municipalities above 5,000 inhabitants were using a party-list proportional system (Gulino, 2020). The new electoral rules introduced in 1993 established that municipalities below the 15,000 inhabitants threshold elect the mayor and the municipal council using a plurality system with a single round;[7] on the other hand, municipalities above 15,000 inhabitants use a dual ballot electoral system.[8] As described below, the identification strategy used in this paper exploits this sharp change in the electoral rules at the 15,000 inhabitants threshold to implement a regression discontinuity design.

3.2 Refugee reception in Italy

In Italy, the system for hosting refugees and asylum seekers has two levels of reception: at the first level there are centers for first aid and hospitality (CPSA), hospitality centers (CDA), reception centers for asylum seekers (CARA) and centers for extraordinary reception (CAS,

[6] An example of the mayors' power is that they can freely choose the municipal government's ministries. Besides, if the municipal Council wants to dismiss the mayor, it needs to call for new elections.

[7] In this system, mayoral candidates receive the support of only one list for the municipal council, and voters can express only one preference for the mayor and the list. The mayoral candidate who attracts the greatest share of votes is elected mayor. The system assigns a majority of 2/3 of the council seats to the list connected to the winning candidate. The remaining seats are distributed proportionally.

[8] Under this system, every mayoral candidate can receive the support of more than one list for the municipal council. In the first round, voters vote for the mayoral candidate and the municipal councilors, and the two votes can be disjoint. The mayoral candidate who at the first round gets more than 50 percent of the votes is elected mayor. If no candidate gets more than 50 percent of the votes, the first two candidates go to the second round, where they can be supported also by the lists associated with the mayoral candidates excluded from the second round. During the second round, voters vote only for the mayoral candidates. The candidate who gets the biggest shares of votes is elected mayor. The dual ballot system assigns 60 percent of the seats of the municipal council to the lists connected to the winning candidate, while the remaining seats are distributed proportionally.

from 2014).[9] At the second level of reception, we find the so called "Protection System for Asylum Seekers and Refugees" (SPRAR), introduced in 2002 by Law 189/2002. The focus of our empirical analysis are these SPRAR centers, since they have longer term aims compared to first-level reception centers. The purpose of SPRAR centers is to host refugees and asylum seekers arriving from first-level reception centers and to help them integrate into the society, by providing services such as Italian language courses and job market orientation. Over the period studied in this paper, SPRAR and CAS centers have represented the two main types of refugee centers diffused on the Italian territory.[10]

The SPRAR refugee centers are also the only type of refugee centers that are managed directly by the municipalities, and hence offer us the necessary variation for our analysis. When the Home Office needs to allocate refugees and asylum seekers in new SPRAR centers, it issues a tender, calling for competition among municipalities interested in opening a new center. The tender indicates the period during which municipalities can submit the bids, the rules of the competition, and the total funds available. Municipal governments decide whether to participate to the tender by submitting a bid, in which they provide details on the management costs, the location of the center, the number of places, the services provided, and the cooperatives or firms that will provide these services. The Home Office evaluates the bids submitted by the municipalities and creates a ranking that indicates which municipalities will receive the grants for covering the costs, the exact amount of money they will get, and which bids are instead rejected.

Depending on the tender, fiscal grants transferred from the central government cover between 80% and 100% of the costs of the SPRAR centers within a municipality.[11] A small share of these grants is assigned directly to the refugees and asylum seekers for small personal expenses (the so called "pocket money").[12] A significant share of the grants is instead used to fund the activities of the SPRAR centers, such as teaching Italian, providing job market

[9]These centers receive asylum seekers who have just arrived in Italy: they identify them, provide medical assistance, and collect applications for asylum. The Italian central government manages them directly or through the provincial offices (prefetture) of the internal affairs ministry. Between 2011-2013, the Italian government opened another type of temporary center (ENA, Emergency North Africa) to deal with migrants coming from North Africa following the Arab Spring.

[10]From the "Atlante SPRAR", total available places in 2018 in SPRAR centers have been 35,881, which have allowed SPRAR centers to host 41,113 refugees and asylum seekers over the year.

[11]Municipalities usually cover their part of the costs figuratively, like, for example, using municipal buildings and flats to host refugees or asking municipal employees to dedicate some hours to the refugee center. Also, municipalities demand cooperatives and firms that manage the center to cover these costs. Hence, these costs do not usually represent a monetary expense for municipalities.

[12]The estimate is that the total daily cost for hosting one refugee is, on average, 35 euros. The "pocket money" is, on average, 2.5 euros per day.

orientation, and health support.

The opening of SPRAR centers can generate positive spillovers for various reasons. First, the grants received represent a source of income for firms, health and social professionals, and cooperatives that provide services to the reception center. Second, SPRAR centers typically use flats to host refugees. The owners of these flats may be residents who can benefit from renting out their property. Third, the money spent to buy goods and services for refugees and asylum seekers represents revenues for local shops and services providers (e.g., food, clothes, local transport). Besides, the social and health services provided to refugees and asylum seekers can also benefit the local population, as they can complement and reinforce the local welfare system.[13] Fourth, Law 225/2016 introduced an additional yearly bonus of approximately 500-700 euros per refugee hosted that municipalities can freely spend in other services and goods. The direct effects on the labor market are significant: municipalities sometimes employ refugees and asylum seekers hosted in SPRAR centers in public utility works and, thanks to the job orientation services provided by SPRAR centers, refugees and asylum seekers may end up being hired by local firms.[14]

4 Model

We begin by constructing a general model that explains the cross-country evidence shown in Figure 1. In Section 6, we will adapt the model and its conclusions to the Italian case described above, and derive testable predictions from it.

We consider two countries that are identical in every aspect, except for the electoral system they use. Both countries have a mass one of native individuals. Each country faces the potential entrance of $q \in (0, 1)$ migrants and must decide whether to close its borders or keep them open. We denote by $Q \in \{0, q\}$ the number of migrants allowed endogenously in a country, with $Q = q$ if the country allows migrants to enter and $Q = 0$ otherwise.

[13] For information on the services provided by SPRAR centers, the relationship with local socio-economic actors and the types of accommodation used, see the various editions of the "Atlante SPRAR" published over the years in the SPRAR webpage.

[14] For example, the 2018 "Atlante SPRAR" indicates that, in that year, 9845 refugees and asylum seekers hosted by SPRAR centers attended at least one professional training course. In the same year, 5363 refugees and asylum seekers hosted by SPRAR centers found a job. The main sectors of employment were catering/food services, agriculture, and industry. In terms of regulation, since the introduction of Decree-Law 142/2015, asylum seekers can work after 60 days they have applied for asylum. Before Decree-Law 142/2015, they had to wait for six months from the application.

4.1 Endogenous Occupational Choices

All individuals (native or immigrant) are characterised by a type $\theta \in (0, \bar{\theta})$, representing their productivity on the labor market. The distribution of types in the population of natives is assumed to be uniform on the support. The set of immigrants is sampled from a distribution $h(\theta)$, with $\theta h(\theta)$ non-decreasing in θ.

Individuals can decide to work or to remain out of the labor force (the out class, o). If they decide to work, they can choose to look for a job within the managerial class (e) or the working class (l). We think of the managerial class as containing both entrepreneurs and managers of larger companies, and we ignore the distinction between the two sub-groups. Similarly, the working class includes both employees and autonomous workers.[15] All individuals looking for a job (independently of whether they are in the managerial or working class) have to pay a cost of searching $c > 0$. An individual of type θ finds a job in their chosen occupation with probability $\pi(\theta)$. We assume $\pi'(\theta) > 0$, for all θ.

If an individual of type θ finds a job in the managerial class, she can employ L units of labor to produce an amount $F(L, \theta)$ of consumption good, which is assumed to be the only good consumed in the economy and whose price is normalized to one. The function $F(\cdot, \cdot)$ is at least twice differentiable, strictly increasing in both arguments, strictly concave in L and strictly convex in θ. Furthermore, we also assume that $\partial^2 F / \partial\theta\partial L > 0$ for all $\theta > 0$. Letting w be the wage paid for each unit of labor, the individual's gross income is

$$y_e(L, w, \theta) = F(L, \theta) - wL.$$

If an individual finds a job within the working class, she inelastically provides θ units of labor and receives a gross income

$$y_l(w, \theta) = \theta w.$$

Gross income is taxed at a rate $\tau \in [0, 1]$ and all individuals receive an equal amount of benefits $b(Q)$, independently of whether they work or not. For example, one could think of benefits as being financed by tax revenues. Migrants would then affect them through two channels: on the one hand, they would increase tax revenues by being employed in a country; on the other hand, their very presence would reduce the amount of resources to be redistributed to natives (both because they would be entitled to benefits and because of

[15] It is not hard to show that, fixing productivity, autonomous workers must earn in equilibrium the same occupation utility as when employed as dependent labor because of competition, as in Banerjee and Newman (1993).

additional expenses to support their arrival and integration). The only relevant assumption for our results is that benefits depend on the level of immigration in the country. Hence, we do not formally describe the channel through which immigrants affect benefits and do not specify a functional form for $b(Q)$. The (expected) net income $x_j(\cdot, \theta)$ of a native individual of type θ in occupational class $j \in \{e, l, o\}$ is then

$$x_e(L, w, Q, \theta) = (1 - \tau)\pi(\theta)y_e(L, w, \theta) + b(Q) - c$$

$$x_l(w, Q, \theta) = (1 - \tau)\pi(\theta)y_l(w, \theta) + b(Q) - c$$

$$x_o(w, Q, \theta) = b(Q)$$

For any wage level w and any type θ, let $L(w, \theta)$ denote the amount of labor that maximizes $x_e(L, w, Q, \theta)$. Given the assumptions on the production function, $L(w, \theta)$ is strictly decreasing in w and strictly increasing in θ. Since from now on we will only consider the optimal amount of labor demanded by employers, we will sometimes simplify notation by using L instead of $L(w, \theta)$.

For a given immigration level Q in the country, and for any tax level τ and wage w, let $\lambda_j(w, Q)$ be the set of types choosing occupational class $j \in \{e, l, o\}$. Notice that, for $j \in \{l, e\}$, λ_j represents the set of individuals *aiming to* find a job in the managerial or working class. Definition 4.1 adapts the concept of *sorting equilibrium* contained in Austen-Smith (2000) to our framework. More precisely, our definition takes into account the uncertainty faced by individuals when looking for a job. An *expected sorting equilibrium* is a wage rate at which expected labor demand equals expected labor supply, when all agents act rationally.

Definition. *For any fixed tax rate $\tau \in [0, 1]$ and number of immigrants $Q \in \{0, q\}$, an expected sorting equilibrium is a wage rate $w^* = w^*(Q)$ such that*

$$\int_{\lambda_e(w^*,Q)} \pi(\theta)L(w^*, \theta)\left[\frac{1}{\bar{\theta}} + Qh(\theta)\right] d\theta = \int_{\lambda_l(w^*,Q)} \pi(\theta)\theta\left[\frac{1}{\bar{\theta}} + Qh(\theta)\right] d\theta$$

and for all $\theta \in (0, \bar{\theta})$, for all $j, j' \in \{e, l, o\}$, $\theta \in \lambda_j(w^*, Q)$ implies $x_j(\cdot, \theta) \geq x_{j'}(\cdot, \theta)$.

In the remainder of the paper, we make the following assumptions

Assumption 1. *For all C,*

a) $\left[\int_{\lambda_e(w^*,Q)} \frac{\theta}{\bar{\theta}} d\theta\right]_{Q=0} < 1/3.$

b) The distribution of immigrant types $h(\theta)$ is such that

$$\left[\int_{\lambda_l(w^*,Q)} \pi(\theta)\theta h(\theta)d\theta - \int_{\lambda_e(w^*,Q)} \pi(\theta)L(w^*,\theta)h(\theta)d\theta\right]_{Q=q} \geq 0$$

The first item in Assumption 1 states that the set of individuals hoping to find a job in the managerial class when no immigrant enters the country is never the relative majority (plurality) in society. The second item imposes more structure on the distribution of immigrant types, $h(\theta)$: it states that the immigrants moving to a country contribute relatively more to the supply side of the labor market. It is important to remark that for the purposes of our model, what actually matters is that native individuals *believe* that $h(\theta)$ satisfies this assumption.

4.2 Class Voting

The decision to admit the migrants or not is made by majority rule within a country's Parliament. We assume there exist three parties in the country, representing the three different occupations. We denote by $\mathcal{E}$ the party representing the managerial class, by $\mathcal{L}$ the party of the working class and by $\mathcal{O}$ the party of the out class. Each party wants to maximize the average utility of the native individuals in the class it represents. That is,

$$u_{\mathcal{E}}(w^*,Q) = (1-\tau)\hat{y}_e(L,w^*,Q) + b(Q) - c$$

$$u_{\mathcal{L}}(w^*,Q) = (1-\tau)\hat{\theta}_l(w^*,Q)w^* + b(Q) - c$$

$$u_{\mathcal{O}}(w^*,Q) = b(Q)$$

where

$$\hat{y}_e(L,w^*,Q) = \frac{\int_{\lambda_e(w^*,Q)} \pi(\theta)y_e(L,w^*,\theta)d\theta}{\int_{\lambda_e(w^*,Q)} d\theta}$$

$$\hat{\theta}_l(w^*,Q)w^* = \frac{\int_{\lambda_l(w^*,Q)} \pi(\theta)\theta d\theta}{\int_{\lambda_l(w^*,Q)} d\theta}w^*$$

are the average gross income within the managerial and working classes, respectively.

Assumption 2.

a) $\frac{\partial \hat{y}_e(L,w^*,Q)}{\partial w} < 0$

b) $\frac{\partial}{\partial w}[\hat{\theta}_l(w^*, Q)w^*] > 0$

The assumption states that average expected income in the managerial class is decreasing in wage, while average expected income in the working class is increasing.

Natives vote for the party representing their occupation before any immigration decision is taken (migrants have no voting rights). In a SP country, obtaining the plurality of votes is enough for a party to form a single-party government and fully control immigration decisions. In a NM country, the government can only be formed with the support of at least 50% of the population. If one party receives the absolute majority of the votes, it will be able to independently determine the immigration policy, as in country SP. If no party passes that threshold, borders will be kept open (closed) if at least two parties, whose vote shares sum to more than 50%, support (oppose) immigration. The two countries correspond to the *sufficient plurality* and *necessary majority* systems that we described in the introduction.

5 Theoretical Results

We begin by proving the existence and uniqueness of an expected sorting equilibrium and by characterizing it. Lemma 1 is an adaptation of the equivalent proposition in Austen-Smith (2000). Its proof can be found in the Appendix.

Lemma 1. *For all* $\tau \in [0, 1)$ *and* $Q \in \{0, q\}$*, there exists a unique expected sorting equilibrium,* $w^* = w^*(Q)$*. The equilibrium is characterized by an ordered pair of types* $\theta^1 = \theta^1(w^*, Q)$ *and* $\theta^2 = \theta^2(w^*, Q)$*, such that*

$$\begin{aligned} \lambda_o(w^*, Q) &= (0, \theta^1) \\ \lambda_l(w^*, Q) &= [\theta^1, \theta^2] \\ \lambda_e(w^*, Q) &= (\theta^2, \bar{\theta}). \end{aligned}$$

An individual of type θ^1 is indifferent between remaining out of the labor force and trying to find a job in the working class. The type satisfies

$$\pi(\theta^1)(1 - \tau)\theta^1 w^* = c \tag{1}$$

An individual of type θ^2 is indifferent between joining the working class or the managerial class. This type is implicitly defined by

$$F(L(w^*, \theta^2), \theta^2) - w^* L(w^*, \theta^2) = w^* \theta^2 \tag{2}$$

Lemma 2. $\frac{\partial \theta^1}{\partial w} < 0$ *and* $\frac{\partial \theta^2}{\partial w} > 0$.

We are now in a better position to comment on Assumption 2. An increase in the wage rate increases labor costs and therefore decreases expected profits for members of the managerial class. This decreases average expected profits within the class. At the same time, higher wages make the working class more attractive, inducing low types within the managerial class to change occupation (i.e. $\partial\theta^2/\partial w > 0$, in Lemma 2). Since these types make lower expected profits, the average profit increases. Assumption 2.a requires the first effect to be stronger than the second.

Turning to Assumption 2.b, when the wage rate increases, labor income increases for all members of the working class. Moreover, when low types from the managerial class move to the working class, average expected income increases. At the same time, higher wages attract lower types of individuals, who would otherwise decide to remain out of the labor force ($\partial\theta^1/\partial w < 0$, in Lemma 2). The expected income earned by these individuals has a negative effect on the average within the class. Assumption 2.b requires this last effect to be small enough. The assumption is equivalent to imposing the following upper bound on the elasticity of θ^1 with respect to the wage rate:

$$\left|\frac{\partial \theta^1}{\partial w}\frac{w}{\theta^1}\right| < \frac{\theta^2 - \theta^1}{\theta^1}.$$

The assumption that immigrants contribute more to the supply side of the labor market (Assumption 1.b) implies

Lemma 3. $w^*(q) < w^*(0)$.

Letting $\underline{w}^* := w^*(q)$ and $\bar{w}^* := w^*(0)$, then, Lemmas 2 and 3 imply

$$\theta^1(\bar{w}^*, 0) < \theta^1(\underline{w}^*, q) < \theta^2(\underline{w}^*, q) < \theta^2(\bar{w}^*, 0).$$

We now turn to parties' positions on the immigration policy. Party $\mathcal{O}$ will not oppose immigration whenever migrants have a (weakly) positive effect on the net benefits they receive. That is, whenever

$$b(q) - b(0) \geq 0 \tag{3}$$

The equivalent conditions for parties $\mathcal{L}$ and $\mathcal{E}$ are

$$b(q) - b(0) \geq (1-\tau)[\hat{\theta}_l(\bar{w}^*, 0)\bar{w}^* - \hat{\theta}_l(\underline{w}^*, q)\underline{w}^*] \tag{4}$$

and

$$b(q) - b(0) \geq (1-\tau)[\hat{y}_e(L, \bar{w}^*, 0) - \hat{y}_e(L, \underline{w}^*, q)], \tag{5}$$

respectively. By Assumption 2, the right-hand side of (4) is positive, while the right hand-side of (5) is negative. The effect of immigration on benefits impacts all classes in the same way.[16] In addition to that, the wage drop due to intensified competition on the labor market harms the working class and benefits the managerial class. This creates a J-shaped relationship between the average productivity within an occupational class and its position on immigration: the out class (represented by party $\mathcal{O}$) will always be more open to immigration than the working class (represented by party $\mathcal{L}$) and less open to immigration than the managerial class (represented by party $\mathcal{E}$).

For any wage w and immigration level Q, let $\sigma_{\mathcal{P}}(w, Q)$ denote the vote share of party $\mathcal{P}$, so that

$$\sigma_{\mathcal{O}}(w, Q) = \frac{\theta^1}{\bar{\theta}} \qquad \sigma_{\mathcal{L}}(w, Q) = \frac{\theta^2 - \theta^1}{\bar{\theta}} \qquad \sigma_{\mathcal{E}}(w, Q) = \frac{\bar{\theta} - \theta^2}{\bar{\theta}}$$

Proposition 1. *There exists no scenario in which country SP is more open to immigration than country NM: either the two countries choose the same immigration policy, or country SP closes its borders while country NM keeps them open. The latter happens when party $\mathcal{O}$ favors immigration, party $\mathcal{L}$ opposes it and $\sigma_{\mathcal{O}}(\bar{w}^*, 0) \leq \sigma_{\mathcal{L}}(\bar{w}^*, 0) < 1/2$.*

An important element is the pivotal role played by party $\mathcal{O}$ in country NM. In terms of preferences for immigration, this party sits in between the other two. When no party has the absolute majority of votes, then, $\mathcal{O}$ will always find the support of another party to implement its preferred immigration policy. More formally, whenever (3) holds, (5) must hold too, so that both $\mathcal{O}$ and $\mathcal{E}$ will support an open border policy. If (3) does not hold, instead, (4) must be violated too and party $\mathcal{L}$ will support party $\mathcal{O}$'s decision to close the borders. The main implication of this is that party $\mathcal{O}$ will be the key-decision maker in country NM whenever the working class does not constitute the absolute majority in the population. This is in contrast with what happens in country SP, where party $\mathcal{L}$ only needs the plurality of votes to form a government. Then, when the working class constitutes the relative, but not absolute, majority in the population, immigration policy in the two countries will be dictated by two different parties, $\mathcal{O}$ in country NM and $\mathcal{L}$ in country SP. The difference in the two parties' positions on immigration then drives the result in the proposition.

[16] The equal benefit assumption is only for simplicity, and, in fact, if one considers that if anything the out-class should take a larger share of benefits, the J-shaped relation between productivity and openness preferences is strengthened.

A standard example of NM systems is proportional representation. With this system, the need of post-election government coalition formation is well known: in a hypothetical three-seat parliament, any proportional representation system is likely to assign one seat to each class. Hence, if the out-class prefers open borders, a 2/3 majority in coalition with the managerial class is the most likely outcome when immigration is the most salient issue.

If the out class and the managerial class were able to strategically support each other against the working class in a SP country, they would be able to keep the borders open exactly as in municipality NM. Allowing for such a strategic behavior might therefore reduce the likelihood that the two systems will implement different immigration policies, but it can never overturn our results on the relative openness of the two countries. Furthermore, we claim that, in practice, the probability that country SP is strictly less open to immigration than country NM must remain positive, since a strategic behavior would require a high level of coordination among classes. Take for example a country using single-member district plurality elections. In order to defeat the working class, the other two classes would need to coordinate their votes in a number of electoral districts. In presence of local interests, this might be difficult to achieve.

Our emphasis in the model was on the effect of immigrants on wages. However, we could obtain the same predictions by allowing immigrants to affect a native's probability to find a job in a given occupational class. Suppose that, in addition to the individual's type, $\pi(\cdot)$ depended also on the share of individuals looking for a job in the same class as the one chosen by the individual. Then, since more migrants (are expected to) look for a job in the working class than in the managerial class, the effect on the average expected income in the two classes would be equivalent to the one produced by a decrease in wage, and the degree of openness of the three classes would still show the J-shaped pattern we discussed above. Focusing on the wage rather than the probability of finding a job simply keeps the analysis more tractable and allows us to exploit some of the results of Austen-Smith (2000).

An important component of the out class in the data are the pensioners. This subclass is not directly generated in the model, since adding age would unnecessarily complicate the analysis. However, since θ in our model is a measure of productivity on the labor market, one could set $\theta = 0$ for all individuals in the retirement age, and let $\pi(0) = 0$. The J-shape pattern shown by class preferences over immigration could then be also explained by education, if one thinks of the working class as the least educated group, the managerial class as the most educated one, and pensioners as a mix between the two. We think of this explanation as complementary to ours. Section 7.3.1 provides evidence in support of

our claim that occupation related preferences play an important role, over and above the potentially correlated preferences deriving by correlated education differentials.

Our results predict that, when immigration is the salient policy, politicians are more likely to pander to the preferences of the working class when they are elected under SP systems. To see the robustness of the mechanism underlying the importance of electoral systems in shaping politicians' policy-making, in the appendix we show that a similar pandering differential is predicted when fiscal policies are the salient ones. In particular, if one divides fiscal spending in two categories, namely the set of policies more *targeted* to the interests of the working class vs the set of policies with *broad* appeal in the whole population, the same prediction should hold: targeted policies are expected to materialize more likely under SP systems.

Proposition 1 provides an explanation for the cross-country evidence shown in the introduction. Given that in order to establish causality we will use a within-country experiment, the next section connects our general model to the specific Italian scenario.

6 Electoral Rules and SPRAR centers

In this section, we re-interpret SP and NM as municipalities, which only differ in terms of the electoral system used to elect their mayor. We now let q represent the immigrants that would move to municipality $M \in \{SP, NM\}$ if a SPRAR center is opened there. The location of the SPRAR center is decided through a first price sealed bid auction. Each municipality M can submit a bid to the central government. Submitting a bid is costless. The municipality that submits the lowest bid receives transfers equal to its bid in exchange for opening the center on its territory (ties are broken by a coin toss). The other municipality receives nothing.

We denote by C the total cost of opening and managing a SPRAR center (with all its associated services) and by $s(Q)$ a monetary measure of the positive spillovers generated by it, which were described in Section 3.2. We set $s(q) > s(0) = 0$. Cost and benefits are born and accrued uniformly across the native population.[17] The transfers received by the central government are primarily used to cover the cost C, and any remaining sum is equally distributed across the population. Denoting by γ the (winning) bid submitted by a municipality, the benefits received by native individuals in the municipality are $b(q) = s(q) + \gamma - C$ if the SPRAR center is open, $b(0) = 0$ otherwise.

[17]For the purposes of our theoretical results, what matters is that they do not alter the relative position of the three occupations on the matter of immigration.

The bid submitted by each municipality is decided by its elected mayor. We assume all parties ($\mathcal{E}$, $\mathcal{L}$ and $\mathcal{O}$) have active branches in both municipalities and have one candidate running for mayor. Natives vote for the party representing their occupation before any SPRAR center is open.[18] In municipality SP, the mayor is elected by plurality rule. In municipality NM, the mayor is elected with a dual ballot system: if one candidate obtains more than 50% of the votes, he/she will be elected. If no candidate reaches the threshold, the two candidates with the largest share of votes will compete by majority rule in a second round. In the second round, the excluded candidate transfers his/her votes to the competing candidate that guarantees the highest expected payoff. We assume ties are resolved in favor of party $\mathcal{L}$. It might be worth pausing at this point to stress again how a dual ballot system matches the definition of *necessary majority* given in the general model. In this system, a mayor needs the votes of at least 50% of the population to be elected. If the votes of his/her own party (or equivalently of the class he/she represents) are not enough to meet that threshold, the mayor needs the electoral support of another party (class). In practice, this means that when no party has the absolute majority of the votes, any decision must have the approval of at least two parties to be implemented.

The timing is as follows: first, mayors are elected. Then, each elected mayor decides whether to participate to the auction and which bid to submit. All decisions are taken simultaneously and a mayor cannot observe whether the other has entered the auction before submitting the bid. Finally, the SPRAR center is opened and transfers are implemented. Unless differently specified, all assumptions and definitions made in Section 4 are maintained.

Our main conclusions in the previous section stand on two observations. First, the out class (represented by party $\mathcal{O}$) is more open to immigration than the working class (represented by party $\mathcal{L}$) and less open than the managerial class (represented by party $\mathcal{E}$). To adapt the observation to the Italian context considered here, define by $\underline{\gamma}_{\mathcal{P}}$ the minimum bid that party $\mathcal{P}$ would be willing to submit to open a SPRAR center on its territory. This is the bid that would make a party indifferent between winning the auction or not.

$$\begin{aligned}
\underline{\gamma}_{\mathcal{O}} &= C - s(q) \\
\underline{\gamma}_{\mathcal{L}} &= C - s(q) + (1-\tau)[\hat{\theta}_l(\bar{w}^*, 0) - \hat{\theta}_l(\underline{w}^*, q)] \\
\underline{\gamma}_{\mathcal{E}} &= C - s(q) + (1-\tau)[\hat{y}_e(L, \bar{w}^*, 0) - \hat{y}_e(L, \underline{w}^*, q)]
\end{aligned}$$

[18] The opening of the SPRAR center depends on the outcome of the auction and is therefore an uncertain event in the eyes of voters. Voters are assumed to base their voting decisions on their status quo occupations. Qualitatively, our results would not change if we assumed forward looking voters. In this case, the conditions in Lemma 4 and Proposition 2 should be reformulated in terms of occupational choices when the SPRAR center is open.

Assumption 2 implies $\underline{\gamma}_{\mathcal{E}} < \underline{\gamma}_{\mathcal{O}} < \underline{\gamma}_{\mathcal{L}}$, as the bid for party $\mathcal{E}$ and party $\mathcal{L}$ consider the economic losses and gains generated by the arrival of migrants to the labor market. Given the competition generated by the auction, we expect that a municipality led by party $\mathcal{O}$ (or $\mathcal{E}$) always submit a lower bid than a municipality led by party $\mathcal{L}$, and should therefore be more likely to open a SPRAR center on its territory.

The second important observation is that party $\mathcal{L}$ has less chances to control the decision making process under a *necessary majority* system than under a *sufficient plurality* one. When a second round is reached in the dual ballot system, party $\mathcal{O}$ plays a similar pivotal role as in the general model. If the party is a contestant in the second round, it always wins with the support of the excluded party. If the party is not a contestant in the second round, it determines the electoral result by supporting party $\mathcal{E}$. Then, party $\mathcal{L}$ decides on the size of the submitted bid only when the working class constitutes the absolute majority in the population. Proving the result requires to consider parties' anticipation of the outcome of the auction under different winners of the second round, and is therefore slightly less straightforward than the equivalent result in the general model. We show the full proof in the appendix.

The two observations, combined, imply that the bid submitted by municipality NM never exceeds the one submitted by municipality SP, and there are cases in which it can be strictly lower.

Lemma 4. *The equilibrium bids submitted by the two municipalities are*

$$\begin{cases} (\underline{\gamma}_{\mathcal{L}}, \underline{\gamma}_{\mathcal{L}}) & \text{if } \sigma_{\mathcal{L}}(\bar{w}^*, 0) \geq \frac{1}{2} \\ (\underline{\gamma}_{\mathcal{L}}, \underline{\gamma}_{\mathcal{L}} - \epsilon), \epsilon \to 0 & \text{if } \sigma_{\mathcal{O}}(\bar{w}^*, 0) \leq \sigma_{\mathcal{L}}(\bar{w}^*, 0) < \frac{1}{2} \\ (\underline{\gamma}_{\mathcal{O}}, \underline{\gamma}_{\mathcal{O}}) & \text{if } \sigma_{\mathcal{L}}(\bar{w}^*, 0) < \sigma_{\mathcal{O}}(\bar{w}^*, 0) \end{cases}$$

The first and third cases in Lemma 4 correspond to scenarios in which the same party ($\mathcal{L}$ and $\mathcal{O}$, respectively) is elected in both municipalities. By a race to the bottom argument *à la Bertrand*, the two mayors will undercut their bids up to the point in which they are both indifferent between submitting a bid or not. In this case, each municipality will win the auction with probability one-half. In the second case, party $\mathcal{L}$ has the relative majority of votes and is therefore elected in municipality SP. However, since it does not have the absolute majority, in country NM it will be defeated by a "coalition" between the other two parties, who will support each other in the second round. In this case, municipality NM can submit a bit just below the minimum bid of municipality SP, securing the opening of the

SPRAR center. This matches exactly the result stated in the second part of Proposition 1. Its testable implications are summarized in the following proposition.

Proposition 2. *Among the municipalities satisfying*

$$\sigma_{\mathcal{O}}(\bar{w}^*, 0) \leq \sigma_{\mathcal{L}}(\bar{w}^*, 0) < 1/2 \tag{6}$$

a NM municipality is strictly more open (lower fiscal transfer bid required) than a SP municipality. There are no parameter configurations where the opposite strict openness ranking can happen. Hence a NM municipality is overall more likely to open a SPRAR center.

Proposition 2 is the within-country analogue of Proposition 1, and in the next section we provide empirical evidence that confirms its predictions. In the appendix, we show that the main mechanism behind our results extends to fiscal policy decisions, whenever this dimension is salient enough.

7 Empirical evidence

7.1 Empirical strategy

We use a sharp regression discontinuity design (RDD) to test the effect of different electoral systems on the probability of opening a SPRAR refugee center. We exploit the institutional feature introduced by the Italian government in 1993 (see Law 81/1993), such that municipalities with less than 15,000 inhabitants elect the mayor and the municipal council using a single round plurality electoral system, while cities above the threshold use a dual ballot electoral system. This institutional set up represents an interesting framework already exploited in the literature (Bordignon et al., 2016), which enables us to estimate the following specification:

$$Y_{it} = \rho_0 + \rho_1 POP^*_{it} + \beta_0 DB_{it} + \beta_1 DB_{it} * POP^*_{it} + \varepsilon_{it} \tag{7}$$

where the dependent variable Y_{it} captures the probability of opening a SPRAR refugee center for municipality i at time t. Specifically, in line with the bidding mechanism described by the theoretical model, in the initial dataset Y_{it} is a dummy variable equal to 1 if municipality i successfully opens a SPRAR center during a tender at time t, which happens when the municipality submits a bid and wins the auction. The treatment variable DB_{it} is equal to 1 for municipalities with more than 15,000 inhabitants (i.e., dual ballot municipalities) and 0 for

towns below the threshold (i.e., plurality municipalities). The running variable POP^*_{it}, which we obtain subtracting 15,000 from the population of the municipalities measured from the most recent census (i.e., either the 2001 or the 2011 Censuses), determines the assignment to treatment. At the threshold $POP^*_{it} = 0$ the electoral system sharply changes from a plurality to a dual ballot electoral system.

Following Gelman and Imbens (2018), we estimate the coefficient of interest β_0 by local linear regression (LLR). In practice, we run equation 7 on the subsample $POP^*_{it} \in [-h, +h]$ around the 15,000 inhabitants threshold, where the optimal bandwidth h is obtained using the Calonico, Cattaneo and Titiunik (2014) and Calonico, Cattaneo and Farrell (2018) MSE-optimal bandwidth selector. In all the tables, we report conventional RDD estimates with a conventional variance estimator (Conventional), bias-corrected RDD estimates with a conventional variance estimator (Bias-corrected), and bias-corrected RDD estimates with a robust variance estimator (Robust). We cluster standard errors at the local labor-area level.[19]

7.2 Data, descriptive statistics, and balance tests

Our dataset contains information on municipal socio-economic features, the characteristics of the elected mayors, and SPRAR refugee centers opened by Italian towns. The source of the data on municipal socio-economic characteristics is the Italian Statistical Office (Istat), and more specifically, 1991, 2001, and 2011 Censuses. Data on the balance sheets of Italian municipalities comes from the Aida PA dataset (Bureau van Dijk). The Italian Home Office provides data on the characteristics of the elected mayors. Finally, Gamalerio and Negri (2021) built the dataset on SPRAR tenders and refugee centers, collecting the data from different sources such as the Italian Home Office, the official webpage of the SPRAR program, and the "Briguglio archive," an online archive with migration documents. Table A2 describes the variables in the dataset, and the sources used, while Table A3 provides a brief description of the tenders studied in this paper.[20]

We implement the RDD analysis using data from the 2010-2017 period and all municipalities between 10,000 and 30,000 inhabitants.[21] We keep municipalities between 10,000

[19]Local labor-areas are sub-regional areas formed by groups of municipalities that share common socio-economic characteristics. In our dataset, we could identify 268 local labor-areas taking the information from the 2011 Census.

[20]Starting from 2017, the Italian Home Office has started to accept SPRAR centers' bids on a rolling basis (see Ministerial Decree 10 August 2016, n. 200). We treat all the bids submitted in 2017 as submitted to one single tender.

[21]As Cipullo (2021) explains, up until 2010, municipalities with more than 15,000 inhabitants could

and 30,000 inhabitants to avoid overlapping with other population thresholds at which other policies change (Bordignon et al., 2016).[22] We also drop municipalities from three Special Statute Regions (i.e., Trentino-Alto Adige, Valle d'Aosta, and Friuli-Venezia Giulia) because electoral rules are different in these regions.[23] Finally, we keep observations for which we do not have missing values in the dependent and independent variables used in the empirical analysis. We work with data collapsed at the municipality and electoral term levels.[24] The sample used contains information on 685 municipalities and 875 observations. Table A4 reports the descriptive statistics of all the variables in the sample.

As indicated by Lemma 4 and Proposition 2, our analysis must distinguish between municipalities in which the working class (l) is the biggest group, but not the absolute majority, and municipalities in which either the working class represents more than 50% of the adult population, or it does not even constitute the plurality. To distinguish between these two groups of municipalities, we use data from the 2011 Census to calculate the shares of the managerial (e), working (l), and out (o) classes over the municipal adult population composed of natives and EU nationals (i.e., those who can vote at municipal elections). More in detail, we calculate the share of the out class (o) as the sum of pensioners and inactive persons who do not look for a job divided by the municipal adult population. We use the occupations reported in the 2011 Census to calculate the working and managerial classes' shares. As described by Table A5, the Census divides the occupations into 10 categories. For every category, we observe the total number of adults employed in a job in the category, distinguishing between employee and self-employed, and between natives, EU nationals, and non-EU nationals. In the managerial class (e), we include entrepreneurs and managers from

nominate a CEO (Direttore Generale) at the top of the administrative bureaucracy. Municipalities below the threshold did not have such a prerogative. Excluding the period before 2010 from our analysis enables us to avoid the overlap with other institutional differences.

[22]As described by Bordignon et al. (2016), the closest policy population thresholds are 10,000 (the threshold where the wage of the mayor, the size of the council, and the municipal government change) and 30,000 (where the wage of the mayor and the size of the council change).

[23]For the Special Region Sicilia, we drop electoral mandates outside the period 2011-2016, during which different electoral rules applied. We drop electoral terms from 2012 for the Special Region Sardegna because a different electoral law applied from this year.

[24]As described above, the population from the most recent Census (i.e., 2001 or 2011) determines the assignment of a municipality to one of the two electoral systems and the value of the running variable POP^*_{it}. The municipal population from the 2001 Census assigned a specific electoral law to the municipalities for elections up to 2012, the population from the 2011 Census assigned the electoral law for elections since 2013. For a few observations, for which the election's date falls between the initial and the final date of a tender, and for which the population used is different from the one of the previous election, it is not clear whether to use the 2001 or 2011 Census to calculate the running variable POP^*_{it} and the treatment DB_{it}. Therefore, before collapsing the data, we have dropped these observations to deal with this measurement error issue. Keeping these cases leaves the results quantitatively and qualitatively unchanged.

category 9 and self-employed professionals (e.g., lawyers) from category 8. The working class (l) is the sum of employees and self-employed from the other categories plus unemployed actively looking for a job over the municipal adult population.[25] We use these shares to split the samples in the two groups indicated by Lemma 4 and Proposition 2. As we can see from Panel B of Table A4, 59% of the observations in our sample enter in the first group satisfying (6), which we call henceforth the *strict difference* sample, and the remaining observations form the other group, labeled here *no strict difference* sample.

In the theoretical model, we assume that the share of individuals hoping to enter the managerial class (e) when no immigrants enter the country is never the plurality in society (Assumption 1.a). Panel B of Table A4 reports the shares of managerial (e), working (l), and out (o) classes in our data.[26] As we can see, the managerial class (e) is at most 9% of the adult population in our data. Also, in the model, the three classes are ordered following the parameter $\theta \in (0, \bar{\theta})$. In column 1 of Table A6, we regress the log of the municipal income per capita measured in 2011 on the shares of the three classes to verify that our classification is consistent with the sorting equilibrium in the model. We use the out class as the default category, such that the coefficients can be interpreted as a percentage change in per capita income following a 1 percent increase in the share of the working class or the managerial class, compensated by an equivalent reduction in the out class share. Consistent with the model, the coefficient in column 1 of Table A6 suggests that the out class represents the poorer class, the working class the intermediate one, and the managerial class the richer one.

The empirical strategy used in this paper relies on two main identification assumptions. First, pre-treatment municipal characteristics need to behave continuously across the 15,000 inhabitants threshold. We test this assumption in Panel A of Table A7, which shows that municipal characteristics taken from the 2001 Census do not change discontinuously across the threshold. Besides, we repeat the balance test for the predicted probability of opening a SPRAR center based on the pre-treatment municipal characteristics used in Panel A. This measure has the advantage of capturing the potential discontinuities of all municipal

[25] As a robustness check, we check what happens to the results if we calculate the shares of the three classes in alternative ways. First, we remove the military and police category from the working class (l). Second, we remove the inactive persons from the out class (o). Third, we include the entire category 8 (i.e., both employee workers like teachers and self-employed like lawyers) within the working class (l). Finally, we include the entire category 8 in the managerial class (e). In all cases, the results are robust to these changes. Results can be made available upon request.

[26] The shares of managerial (e), working (l), and out (o) classes do not sum up to 1 in all municipalities. The reason is that we do not consider in our analysis students and homeworkers, occupations for which our theoretical model does not have clear and unambiguous predictions regarding preferences over migration policies. For this reason, we exclude them from the analysis.

characteristics at once (Anelli, 2020). Columns 1 of Panel B of Table A7 shows that this measure does not behave in a discontinuous way at the threshold. Second, there must not be sorting of municipalities across the 15,000 inhabitants threshold, i.e., municipalities must not manipulate their population numbers to self-select on their preferred side of the threshold. The manipulation test (Cattaneo, Jansson, and Ma, 2018) in Figure A1 shows that this is not the case, given that the density of the running variable does not change discontinuously at the threshold.

7.3 Results

We divide the main results of our empirical analysis in four parts. First, we present results from survey data, which provide evidence in line with the policy preferences of the three occupations described in the theoretical model. Second, we describe the main results of the RDD analysis. Third, we develop a heterogeneity analysis that shows how the RDD results are driven by the mechanism suggested by the theoretical model. Finally, we perform robustness checks.

7.3.1 Survey evidence on the J-shaped relationship

An important feature of our theoretical model is that the relationship between the three occupations' productivities and their average position on immigration policies is J-shaped due to labor market concerns. This J-shaped relationship is such that the out class will be more open to immigration than the working class and less open to immigration than the managerial class. This section provides descriptive evidence on the J-shaped relationship between openness preferences and productivity using a survey run by Italian National Election Studies (ITANES) association in 2011.[27] We use this survey because it has the nice feature that respondents are asked about the expected impact of immigration on natives' employment and culture.[28] Besides, it is possible to find in the survey the respondents' occupation, so that we can distinguish individuals from the out, working and managerial classes in the same way we do with the Italian municipalities data.[29]

[27] We replicate the analysis also using the cross-countries 2017 European Values Study Survey, obtaining similar results. These results can be made available upon request.

[28] Five waves compose the 2011 ITANES survey. We focus on the first wave, which is when the respondents were asked these specific questions on migration. During this first wave, 2313 individuals answered both questions on immigration's expected impact on natives' employment and culture.

[29] More in detail, we use the information collected by ITANES to build dummy variables for individuals in the out class (i.e., pensioners and inactive individuals not looking for a job or unable to work), in the managerial class (i.e., entrepreneurs, professionals, and managers), and in the working class (i.e., employees

Table 1: Descriptive evidence on J-shaped relationship

	(1)	(2)	(3)	(4)
	2011 ITANES survey			
Dependent variables	Immigrants are a threat for natives jobs		Immigrants are a threat for natives culture	
Possible answers	1 = strongly agree, 2 = agree 3 = disagree, 4 = strongly disagree			
Out class	0.121**	0.145**	0.055	0.111
	(0.056)	(0.074)	(0.058)	(0.075)
Managerial class	0.374***	0.211*	0.291***	0.171
	(0.094)	(0.116)	(0.096)	(0.122)
University degree		0.566***		0.491***
		(0.069)		(0.071)
Constant	2.770***	2.306***	2.877***	2.980***
	(0.047)	(0.304)	(0.042)	(0.320)
Observations	2,313	2,313	2,313	2,313
Mean outcome	2.734	2.734	2.835	2.835
Covariates	No	Yes	No	Yes

Notes. 2011 ITANES survey data. Independent variables: a) out class = 1 if respondent is part of the out class; b) managerial class = 1 if respondent is part of the managerial class; c) the working class is the default category. Covariate added in all columns: dummy =1 for the residual classes (i.e., students, homeworkers and no occupation reported). Covariates added in columns 2 and 4: dummy variable for educational qualification (=1 for university degree), log of age, dummy variables for number of children, dummy variable for gender, local labor area fixed effects. Standard errors clustered at local labor area level in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

The results of this analysis are in Table 1. In columns 1-2, we report the results relative to the question in which the respondents need to state whether they agree with the sentence "Immigrants are a threat for natives jobs". As we discussed earlier in the paper, considering immigrants' effects on wages and on natives' probability of finding a job go in the same direction, hence this question captures the same economic concerns as those described in the model.[30] In columns 3-4, the sentence of reference is "Immigrants are a threat for natives

and self-employed from remaining occupations, and unemployed individuals actively looking for a job). We also build a dummy variable for the residuals classes (i.e., students, homeworkers, and cases who did not report the occupation).

[30]Ideally, to produce evidence strictly connected with the theoretical model, it would be better to work with a more subjective measure of immigration's labor market impact. An example would be a survey question asking whether immigrants threaten the respondent's job or wage. Unfortunately, the surveys that we considered typically contain questions about immigrants' general impact on different aspects of the respondents' country. However, the fact that we could find differences in answers from respondents of different occupations suggests that individuals are likely to consider immigration's impact on their economic position (i.e., their job and wage) when answering these objective questions.

culture". The possible answers go from 1 to 4, where 1 means that the respondent strongly agrees with the sentence and 4 that she/he strongly disagrees. The reported coefficients refer to two dummy variables. The first dummy variable is equal to 1 if the individual is part of the out class, while the second is equal to 1 if the individual is part of the managerial class. The default category is the working class. Hence, the coefficients reported indicate how the out and managerial classes' average opinions differ from those of the individuals in the working class. Given the structure of the dependent variables used, higher values of the coefficients indicate a relatively more positive opinion toward immigrants' potential impact. We estimate the coefficients in columns 1 and 3 without additional covariates. We control for covariates and local labor area fixed effects in columns 2 and 4.

Two main indications emerge from Table 1. First, individuals in the managerial class appear to be the ones with the most positive opinions about migration along both dimensions. Second, differences between individuals in the out class and the working class emerge in relation to the labor market. At the same time, we find no differences between them for what concerns the cultural impact. Consistent with our model, we find evidence of a J-shaped relationship in relation to concerns about the labor market: the average respondent from the working class has a more negative opinion compared to the average respondent from the out class. The results in the regressions in which we add covariates and local labor area fixed effects go in the same directions.

Even though the data displayed above show that labor market concerns are an important driver of individuals' preferences over immigration and produce a J-shaped relationship in line with our theoretical prediction, it is important to notice that our results would go through even with slightly different relative preferences across the different classes. The only key feature we require is that the working class should be relatively more averse to immigration than the other two. Any other channel that drives the preferences in this direction would be complementary to the labor market effect we highlight here. For example, education could also be an important driver: since openness to immigration is positively correlated to individuals' level of education, one could interpret the managing class as the most educated class, the working class as the least, and the out class as a mix between the two (following the interpretation of this class as the class of pensioners, as discussed before). Importantly, since our covariates in Table 1 include individuals' level of education, this reassures us that this channel cannot be the only one driving the results, and that economic considerations do play an important role.[31] In immigration economics, the welfare magnet theory (see e.g.

[31]Indeed, as shown in Table 1, since our covariates include individuals' level of education, this reassures

Borjas, 1999), is the idea that countries with more generous welfare states might attract more (low skilled) migrants. In turn, this might raise crowding out concerns on natives, and in particular on those who contribute more to the welfare system through taxes, like the managing class, or those who depend more on it, like the out class. This channel would produce an effect that goes in the opposite direction to the economic effect we consider in the paper, with the working class being relatively more open to immigration than the other two. The fact that our survey evidence is in line with the J-shaped preferences that we predict in the model seems to indicate that, even if such a welfare magnet effect existed, it would not be enough to counteract the labor market effect we emphasize, or the complementary education effect.

We now turn to the main task of establishing the causal impact of electoral systems on the openness of immigration policies, and how this seems to be driven by differences in opinions regarding immigration's potential labor market impact.

7.3.2 RDD analysis: main results

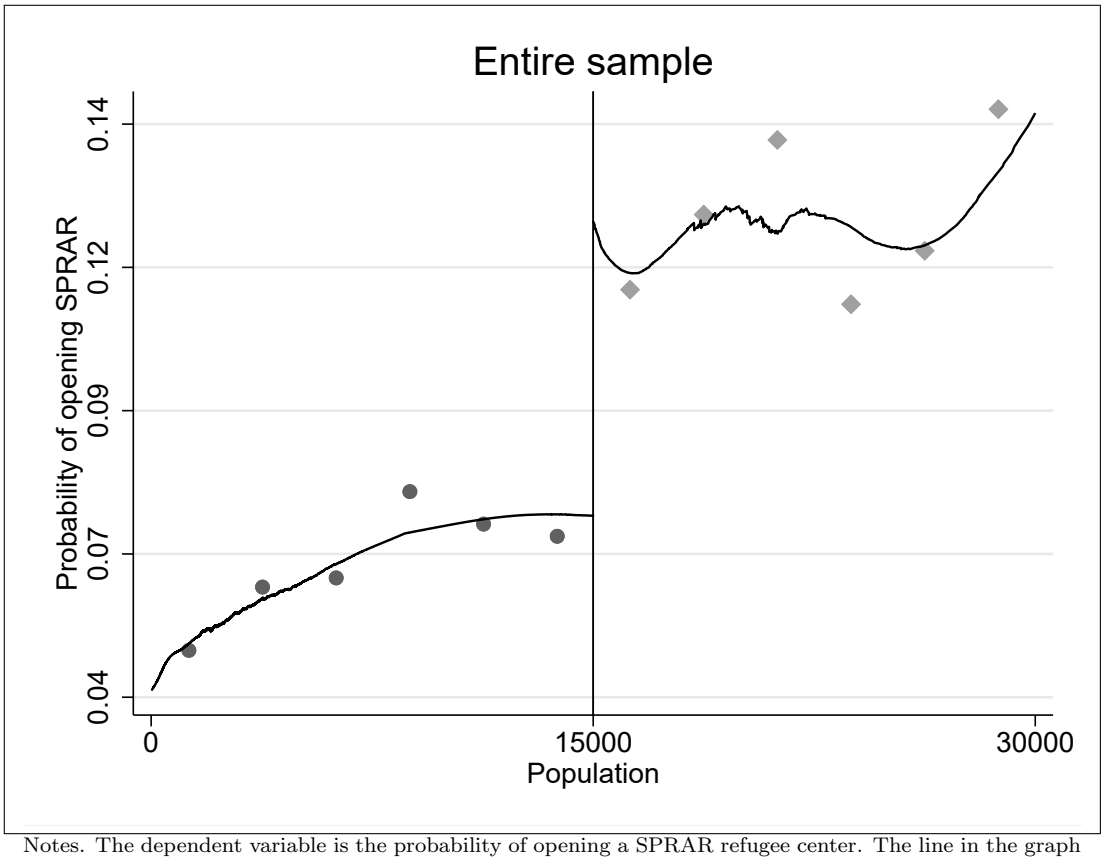
We test Proposition 2 by running the RDD model (7), to estimate the coefficient of interest β_0. In the initial dataset, the dependent variable is a dummy variable equal to 1 if a municipality successfully opens a SPRAR center during one of the tenders issued by the Italian Home Office within the period we consider.[32] To implement the analysis, we collapse all the variables in the dataset at municipal and electoral mandate levels. Before running model (7), we graphically investigate how the probability of opening a SPRAR center evolves across the 15,000 inhabitants threshold, at which the electoral system for the election of mayors changes. If the theoretical model's predictions are correct, we should observe a discontinuity at the 15,000 inhabitants threshold. We provide evidence on this in Figure 2. Consistent with the model, the relationship presents a discontinuity at the population threshold at which the electoral system changes.

We estimate β_0 by local linear regression (LLR), using the Calonico, Cattaneo and Titiunik (2014) and Calonico, Cattaneo and Farrell (2018) MSE-optimal bandwidth selector. We

us that economic considerations are an important driver of preferences over immigration, even if potentially combined with other channels like education.

[32]Some municipalities open SPRAR centers together, through municipalities' unions, which are local institutions introduced by groups of towns that want to provide local public goods jointly. For these situations, we have assigned the dependent variables' values to all municipalities in the union. When possible, we have verified which towns within the union effectively opened the SPRAR center, using sources from the web. For these cases, we have assigned the dependent variable' values only to the municipalities that effectively opened the SPRAR center. Besides, in the analysis below, we add as a control a dummy variable equal to 1 for municipalities that open SPRAR centers jointly.

Figure 2: Probability of opening a SPRAR refugee center and municipal population



Notes. The dependent variable is the probability of opening a SPRAR refugee center. The line in the graph is a local polynomial regression and specifically a LOWESS (locally weighted scatterplot smoothing). Scatter points are averaged over 2500-inhabitants intervals.

implement the analysis using three samples. First, the entire sample of municipalities between 10,000 and 30,000 inhabitants. Second, municipalities satisfying (6) – the *strict difference* sample. Third, the residual municipalities in the *no strict difference* sample, i.e., not satisfying (6). By Lemma 4, the municipalities in the *no strict difference* sample should submit the same bid and thus have the same probability of opening a SPRAR center. We report the main results in Table 2. We run regressions in odd columns without covariates. In even columns, we repeat the analysis controlling for municipal and mayoral characteristics.[33]

The results in columns 1-2 of Table 2 confirm the predictions of our theoretical model. Municipalities that elect the mayor using a dual ballot electoral system are more likely to open a SPRAR refugee center. Specifically, municipalities with a dual ballot electoral system have a probability of opening a SPRAR center approximately 14 percentage points higher than municipalities with a plurality electoral system. The effect is positive and statistically significant for both the entire sample of municipalities (columns 1-2 of Table 2) and towns in the strict difference sample (columns 3-4 of Table 2). As predicted by the model, we do not find statistically significant results for municipalities outside the strict difference sample (columns 5-6 of Table 2).

7.3.3 Heterogeneity analysis

The main explanation for the results in Table 2 provided by the theoretical model is that, under plurality rule, the working class can decide the policies alone, even without representing the majority of the population. Conversely, with an electoral system like a dual ballot or proportional representation, which require the winner to receive a majority of votes, the working class alone cannot call the shots. The theoretical model suggests that we should observe strict differences when the working class is the most hostile to receiving migrants

[33]Recent literature has studied the differential impact of the dual ballot and plurality electoral systems on a series of outcomes, such as the quality of the local political class (Barone and De Blasio, 2013; Galasso and Nannicini, 2017; De Benedetto, 2018), fiscal grants (Bracco and Brugnoli, 2012; Ferraresi et al., 2015; Cipullo, 2021), electoral turnout (Barone and De Blasio, 2013), the number of candidates (Bordignon et al., 2016), and the presence of populist parties (Bordignon and Colussi, 2020). Adding these outcomes as covariates to our analysis enables us to exclude their potential influence on our dependent variables. Besides, to exclude the potential role of other types of refugee centers managed by the Italian Central Government, we also add two dummy variables for the first level centers (CPSA, CDA, and CARA) and centers for extraordinary reception (CAS and ENA). Also, in column 2 of Panel B of Table A7, we show that the predicted probability of opening a SPRAR center based on these outcomes and pre-determined municipal characteristics behaves in a continuous way across the threshold. This result allows to rule out the influence of the potential discontinuities in all these characteristics at once (Anelli, 2020). Finally, in columns 3-5 of Panel B of Table A7, we show that the shares of the managerial (e), working (l), and out (o) classes from the 2011 Census behave continuously at the cutoff. We also add these shares as covariates in the RDD analysis.

Table 2: The effect on SPRAR refugee center: plurality vs dual ballot

	(1)	(2)	(3)	(4)	(5)	(6)
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear
Covariates	No	Yes	No	Yes	No	Yes
Sample	Entire sample	Entire sample	Strict difference sample	Strict difference sample	No strict difference sample	No strict difference sample
Dependent variable: the probability of opening a SPRAR center						
Conventional	0.126*	0.128**	0.203*	0.163**	0.011	-0.009
	(0.074)	(0.055)	(0.116)	(0.068)	(0.046)	(0.024)
Bias-corrected	0.145*	0.145***	0.237**	0.194***	-0.005	-0.022
	(0.074)	(0.055)	(0.116)	(0.068)	(0.046)	(0.024)
Robust	0.145*	0.145**	0.237*	0.194**	-0.005	-0.022
	(0.088)	(0.065)	(0.137)	(0.083)	(0.056)	(0.030)
Observations	875	875	517	517	358	358
BW Loc. Poly. (h)	1284	1196	1219	1366	1725	1752
Effective Observations	171	164	105	112	87	87

Notes. The estimated coefficients capture the effect of a dual ballot electoral system, compared to a plurality electoral system. Estimates reported: conventional RD estimates with a conventional variance estimator (Conventional), bias-corrected RD estimates with a conventional variance estimator (Bias-corrected), and bias-corrected RD estimates with a robust variance estimator are reported (Robust). The sample includes municipalities in the period 2010-2017 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the cut-off of 15,000 residents. The outcome variable is the probability that a mayor opens a SPRAR refugee center. Covariates in columns 2, 4 and 6: share of children (<=19), share elderly (>=65), share of graduate, area (sq km), share of foreign population, altitude, macro-regions dummy variables, number of firms, dummy for special regions, age of the mayor, dummy for female mayor, dummy for graduate mayor, dummy variables for left-wing, right-wing and Five-Stars Movement mayors, transfers per capita, electoral turnout, # candidates, dummy for CAS/ENA refugee centers, dummy for first level reception center, dummy for sprar centers opened by union of municipalities, % working class, % out class, % employers. Standard errors clustered at local labor area level in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

due to economic concerns, specifically the fear of competition in the labor market, and such a class does not reach absolute majority status. In Table 3, we use the observations in our strict difference sample (i.e., the sample driving the results in Table 2) to provide evidence that further corroborates the validity of the proposed mechanism.

Table 3 presents the results obtained by splitting the strict difference sample in various ways. First, in columns 1-2 of Panel A, we run the RDD regressions by distinguishing between dual ballot municipalities that during the election did not go to the second round (column 1) and dual ballot municipalities that went to a second round (column 2), and we compare them to plurality towns. Suppose the story in our model is correct. In that case, we should expect municipalities that did go to the second round (i.e., where the winner is more likely to need the support of more than one class and where the out class is more likely to be pivotal) to behave differently than municipalities with a plurality system (i.e., where the working class is more likely to be the pivotal class). Conversely, we can expect the pivotal class to be

Table 3: Heterogeneity analysis
Strict difference sample only

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: the probability of opening a SPRAR center						
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear
Covariates	Yes	Yes	Yes	Yes	Yes	Yes
Panel A: main mechanism						
Sample	No second round	Went to second round	< median share out class	> median share out class	< median overlapping occupations index	> median overlapping occupations index
Conventional	-0.009	0.185**	0.004	0.212**	-0.093	0.109**
	(0.029)	(0.081)	(0.023)	(0.096)	(0.072)	(0.054)
Bias-corrected	-0.026	0.225***	0.008	0.253***	-0.059	0.122**
	(0.029)	(0.081)	(0.023)	(0.096)	(0.072)	(0.054)
Robust	-0.026	0.225**	0.008	0.253**	-0.059	0.122*
	(0.043)	(0.094)	(0.029)	(0.119)	(0.090)	(0.065)
Observations	334	426	257	260	258	259
BW Loc. Poly. (h)	801.5	1385	1472	1468	1378	1655
Effective Observations	48	98	48	68	52	69
Panel B: alternative mechanisms						
Sample	< median children	> median children	< median graduates	> median graduates	< median foreign	> median foreign
Conventional	0.172*	0.142***	0.077**	0.142***	0.146**	0.087***
	(0.102)	(0.052)	(0.038)	(0.036)	(0.070)	(0.030)
Bias-corrected	0.195*	0.195***	0.129***	0.148***	0.204***	0.092***
	(0.102)	(0.052)	(0.038)	(0.036)	(0.070)	(0.030)
Robust	0.195*	0.195***	0.129**	0.148***	0.204**	0.092***
	(0.116)	(0.063)	(0.052)	(0.046)	(0.091)	(0.035)
Observations	258	259	257	260	258	259
BW Loc. Poly. (h)	1242	1458	1240	1232	1253	1616
Effective Observations	55	57	61	44	55	66

Notes. The estimated coefficients capture the effect of a dual ballot electoral system, compared to a plurality electoral system. Estimates reported: conventional RD estimates with a conventional variance estimator (Conventional), bias-corrected RD estimates with a conventional variance estimator (Bias-corrected), and bias-corrected RD estimates with a robust variance estimator are reported (Robust). The sample includes municipalities in the period 2010-2017 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the cut-off of 15,000 residents. The outcome variable is the probability that a mayor opens a SPRAR refugee center. Covariates in all columns: share of children (<=19), share elderly (>=65), share of graduate, area (sq km), share of foreign population, altitude, macro-regions dummy variables, number of firms, dummy for special regions, age of the mayor, dummy for female mayor, dummy for graduate mayor, dummy variables for left-wing, right-wing and Five-Stars Movement mayors, transfers per capita, electoral turnout, # candidates, dummy for CAS/ENA refugee centers, dummy for first level reception center, dummy for sprar centers opened by union of municipalities, % working class, % out class, % employers. Standard errors clustered at local labor area level in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

the same (i.e., the working class) in dual ballot municipalities that did not go to the second round and municipalities with a plurality system.[34] Columns 1-2 in Panel A of Table 3 show that this is indeed the case.

Second, in columns 3-4 in Panel A of Table 3, we further demonstrate that the effect arises because different classes can be pivotal under different electoral systems. According to the intuition in the model, in the strict difference sample we should expect the working class to be pivotal in plurality municipalities and the out class in dual ballot towns. Moreover, we can expect the out class to be more (less) likely to be pivotal in dual ballot municipalities where its size is above (below) the median, i.e. where the out class is big (small). In line with our theoretical model, the effect is stronger and statistically significant in the subsample in column 4, in which the out class is more likely to be pivotal in municipalities above the 15,000 inhabitants threshold.

Third, as we have shown both theoretically and through survey data, the J-shaped pattern in the level of openness to immigration for the three classes emerges because of economic considerations linked to the fear of competition in the labor market. Hence, we should expect the difference between the two systems to emerge more strongly in municipalities where natives can expect to compete for jobs with immigrants. To test this hypothesis, we build an index that indicates how much natives and immigrants overlap in the same occupations. More specifically, using the data from the 2011 Census, we calculate for all the occupations described in Table A5 the absolute value of the difference between the share of natives and EU national employed in the occupation and the share of non-EU national. Then, we calculate the weighted average of all these differences, using as weights the share of natives and EU nationals employed in every occupation. The overlapping index is equal to 1 minus this weighted average. This index goes from 0 to 1, where bigger values indicate that natives and immigrants are more likely to be employed in the same occupations. To test the labor market hypothesis, we split the municipalities in the strict difference sample between municipalities with values of this index below the median and municipalities with values above the median. Suppose the results in Table 2 were due to labor market concerns by part of the working class. In that case, we should expect these results to be driven by municipalities with the overlapping index above the median. Columns 5-6 in Panel A of Table 3 confirm that this is the case.[35]

[34] Consistent with this intuition, the evidence in Table A6 (columns 2-3) shows that, in dual ballot municipalities, an increase in the share of the working class compared to the out class and the managerial class is negatively correlated with the probability of going to the second round in an election.

[35] A potential threat to the labor market channel is that many people may live and vote in one municipality and work in another. If this was the case, voters might not consider labor market issues when electing the

Lastly, in Panel B of Table 3, we investigate three potential alternative mechanisms. First, while the survey evidence in Table 1 shows that individuals in the working class are those more concerned about the economic implication of migration, the members of this class may also worry about the potential effect on compositional amenities, and, in particular, the education sector (Halla, Wagner, and Zweimüller, 2017).[36] If concerns about the educational sector were driving our results, we should expect the distance in terms of openness between plurality and dual ballot municipalities to be bigger in areas with a share of children above the median. However, the evidence in columns 1-2 in Panel B of Table 3 shows that this is not the case. This evidence is consistent with the evidence provided by Gamalerio et al. (2021), which shows that the opening of SPRAR centers allowed local governments to repopulate municipalities with a declining population and continue to provide public services like schools that otherwise they would have to cancel. Hence, the results by Gamalerio et al. (2021) indicate a positive impact of SPRAR centers on compositional amenities, ruling out the possibility that concerns about such amenities could drive our results.

Second, it is possible that the three classes considered in the analysis present different educational levels. For example, the working class may be the less educated, the out class the intermediate one, and the managerial the one with the highest level of education. If this were the case, differential levels of education might explain our results. To investigate this possibility, in columns 3-4 in Panel B of Table 3, we split the sample between municipalities with a share of university graduates in the population below and above the median. The evidence in columns 3-4 in Panel B of Table 3 suggests that potentially different levels of education do not seem to drive our results. Third, the results in columns 5-6 of Panel A of Table 3 could be explained by a more intense contact between natives and migrants in municipalities where the two groups are more likely to be employed in the same occupations. To rules this potential contact theory story (Allport, 1954), we repeat the analysis distinguishing between municipalities with a pre-existing share of legal migrants below the median (i.e., municipalities with low contact) and municipalities with a share above the median (i.e.,

mayor. These cases may be widespread in municipalities around big metropolitan areas, in which it is frequent to commute to the biggest city in the area to work. To rule out this possible threat, we collect information on an urbanization index built by the Italian Statistical Office (Istat), which divides municipalities into densely populated (i.e., closer to large cities), intermediate municipalities, and sparsely populated (rural) municipalities. Besides, we build a dummy variable equal to one for municipalities located in one of the 14 Italian metropolitan cities, the biggest and more important metropolitan areas in Italy. We can show that our results are robust if we drop densely populated municipalities or municipalities in one of the 14 metropolitan cities. Results can be made available upon request.

[36]We expect the group of parents worried about the potential negative effect of immigration on schools to correlate more with the working class rather than the out class, which is composed mostly of pensioners.

municipalities with high contact). The results in columns 5-6 of Panel B of Table 3 rule out this alternative explanation.

In appendix, we confirm that our economic mechanism on the role of electoral systems applies in our data also to the choice between targeted and broad appeal policies. Following Cipullo (2021), we distinguish between types of municipal expenditures that affect the economy (and therefore the labor market) and those that can be thought to have a broader impact on the population. In line with our intuition that SP systems provide stronger incentives to pander towards the interest of the working class, we find that municipalities using plurality rule allocate more funds to the first type of spending. Most importantly, the results are driven by the subset of municipalities that are in our *strict difference* sample, while we find no effect in the *no strict difference* one.

7.3.4 RDD analysis: robustness checks

In this subsection, we describe the results of a series of robustness checks. First, we show how the RDD coefficients change if we use different bandwidths. Specifically, Figure A2 provides evidence of the "bias-variance trade-off" (Cattaneo, Idrobo, Titiunik, 2019) that usually characterizes RDD estimates: when we consider smaller bandwidths, both the coefficients and the standard errors become bigger. The evidence in Figure A2 is reassuring, as it indicates that our results are robust to the choice of the local bandwidths around the 15,000 inhabitants threshold. Second, in Figure A3, we show that our results are not due to random chances. More in detail, we run a series of RDD regressions at 500 fake thresholds below the 15,000 inhabitants cut-off and 500 fake thresholds above the cut-off (i.e., thresholds between 13,500 and 14,000 inhabitants and between 16,000 and 16,500 inhabitants). Figure A3 reports the c.d.f. of the t-statistics from these regressions. Most of the t-statistics lie in the interval (-2,2). This result suggests that it is not possible to find statistically significant coefficients at these fake thresholds.

Third, a potential alternative version of the dependent variable Y_{it} is a dummy variable equal to 1 for all municipalities that submit a bid at time t, including those that did not win the auction and did not open a SPRAR center. This version is less consistent with our theoretical model because it assigns a positive probability of opening a SPRAR center to municipalities that did not open a refugee center, precisely because they submitted a less competitive bid. However, Table A8 shows that we get similar results if we use this dependent variable in the analysis. Fourth, in municipalities below 15,000 inhabitants, the majority of the mayors are supported by civic lists, for which we do not observe the political orientation.

In contrast, in municipalities above the threshold, 83% of the mayors are associated with national political parties. A potential explanation for this evidence is that a more complex electoral system like the runoff, which requires the formation of political coalitions, may push mayoral candidates to seek national parties' electoral machine support. In the regressions above, we control for dummy variables capturing mayors' political orientation and affiliation, which enable us to exclude that these differences across the threshold drive our main results. Moreover, in Table A9 we show that our results remain unchanged if we drop from the analysis all the mayors from civic lists.

Finally, Bordignon et al. (2016) show that fiscal policy volatility is lower in dual ballot municipalities than in plurality ones. More specifically, they find that the time and cross-sectional variances of the municipal business property tax is lower in dual ballot municipalities. They interpret this result as a consequence of the smaller influence of extreme political parties under dual ballot. To rule out this alternative mechanism, we run model 7 using the time and cross-sectional variance of the probability of opening a SPRAR center. If the mechanism indicated by Bordignon et al. (2016) was driving our results, we should observe a lower variance of these dependent variables in dual ballot municipalities. The results in Table A10 exclude this possibility, given that the dual ballot system has a positive or no effect on the two dependent variables.[37]

8 Concluding Remarks

Different institutions can affect policy outcomes on immigration through the effects that they may have on election outcomes and on the relative influence of different groups on policy decisions. This paper explains *how* and *how much* different electoral rules can affect policy decisions on immigration. The theory (explaining the how) as well as the empirical analysis (explaining the how much) are the novel contributions of the paper. The key insight is that different occupations generate different preferences on immigration policies, and different electoral rules give different relative power to such different occupational groups.

The paper's general theoretical result is that a polity is more open when the electoral

[37]We could explain this positive effect in two ways. First, it may be a mechanical consequence of the fact that municipalities above the threshold have a higher probability of opening a SPRAR refugee center. Second, it could be because a higher number of political parties influence the decision over the refugee policy in dual ballot municipalities than in plurality towns. If true, the second explanation would be consistent with our theoretical model, in which two parties decide over the refugee policy in dual ballot municipalities. In contrast, in towns below the threshold, only one class is responsible for the decision. In any case, the mechanism described by Bordignon et al. (2016) does not seem at play for refugee policies.

system is such that the policy decision is more likely to be supported by an absolute majority of voters. We provide empirical evidence on the paper's theoretical insights. Countries with a system that requires absolute majority representation (the NM group) appear to be more open toward migration than countries where the plurality of votes is sufficient to form a government (the SP group). We show that the difference between SP and NM systems exists also when looking at Italian municipalities, with a clear causality that we establish using regression discontinuity design.

We conjecture that SP and NM systems may have similar and equally relevant differential implications for other policy dimensions when salient. Considering for example that in the post-2008 years in OECD countries the populism wave is typically connected to complementary anti-globalization and anti-immigration sentiments (see e.g. Rodrik, 2018), it is conceivable that we may find results similar to ours when replacing the openness to immigrants dependent variables with indeces of open market preferences or, conversely, preferences for protectionism. If the J-shaped relation between class productivity and openness preferences are confirmed in this setting, then the predictions of our model can indeed extend to this case.

Even though in the recent years the immigration and globalization concerns have surpassed in salience the traditional left-right divide (see e.g. Nouri and Roland, 2020), an interesting question could still be what happens to our predictions if we consider a situation where redistributive politics comes back to a high salience status. It is possible to establish that if we consider fiscal policy together with immigration policy the results of this paper continue to hold, and can actually be even stronger: as established in Austen-Smith (2000), one feature of proportional representation systems (or any other system in the NM category) is that there is an endogenous level of fiscal redistribution higher than in a SP system. This implies that in a NM system the working class tends to be ceteris paribus smaller, and this enlarges the set of cases in which the pivotal class is the out-class. Thus, the theoretical results definitely hold, and even stronger, in the presence of endogenous redistributive politics.

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Appendix A1 - Tables and Figures

Table A1: Majority vs. Plurality in OECD countries

(1)	(2)	(3)	(4)
Country	Political system	Electoral system	Sufficient plurality (SP) or Necessary Majority (NM)
Australia	Parliamentary	Instant-runoff voting (IRV)	SP
Austria	Parliamentary	Proportional	NM
Belgium	Parliamentary	Proportional	NM
Canada	Parliamentary	FPTP	SP
Chile	Presidential	Dual ballot	NM
Colombia	Presidential	Dual ballot	NM
Czech Republic	Parliamentary	Proportional	NM
Denmark	Parliamentary	Proportional	NM
Estonia	Parliamentary	Proportional	NM
Finland	Parliamentary	Proportional	NM
France	Presidental	Dual ballot	NM
Germany	Parliamentary	Proportional	NM
Greece	Parliamentary	Proportional with 50 seats plurality bonus	SP
Hungary	Parliamentary	Parallel voting (mix FPTP and proportional)	SP
Iceland	Parliamentary	Proportional	NM
Ireland	Parliamentary	Proportional	NM
Israel	Parliamentary	Proportional	NM
Italy	Parliamentary	75% FPTP and 25% proportional up to 2001 elections Proportional with plurality bonus up to 2013 37% FPTP and 61% proportional since 2018 election	SP up to 2013 elections, NM since 2018 election
Japan	Parliamentary	Parallel voting (mix FPTP and proportional)	SP
Korea	Presidential	Plurality	SP
Latvia	Parliamentary	Proportional	NM
Lithuania	Semi-presidential	Dual ballot	NM
Luxembourg	Parliamentary	Proportional	NM
Mexico	Presidential	Plurality	SP
Netherlands	Parliamentary	Proportional	NM
New Zealand	Parliamentary	Mix member proportional (MMP)	NM
Norway	Parliamentary	Proportional	NM
Poland	Presidential	Dual ballot	NM
Portugal	Parliamentary	Proportional	NM
Slovak Republic	Parliamentary	Proportional	NM
Slovenia	Parliamentary	Proportional	NM
Spain	Parliamentary	Proportional	NM
Sweden	Parliamentary	Proportional	NM
Switzerland	Parliamentary	Proportional	NM
Turkey	Parliamentary	Proportional	NM
United Kingdom	Parliamentary	FPTP	SP
USA	Presidential	FPTP	SP

Notes. OECD countries.

Table A2: Variables definition and sources

Variable	Definition	Sources
	SPRAR and refugee reception variables	
SPRAR center	probability municipality opens SPRAR center	Gamalerio and Negri (2021)
Union	=1 if SPRAR centers openend by union of municipalities	
First level reception	=1 for municipalities that hosted a first level reception center	Italian Home Office
CAS/ENA	=1 for municipalities that hosted a CAS/ENA refugee centers	Openpolis
	Mayoral characteristics	
Postgraduate	= 1 if mayor has a college degree	Italian Home
Age	age of mayor	Office (*anagrafe amministratori locali)*
Female	= 1 if mayor is a woman	
Center-left	= 1 if mayor is from center-left coalition	
Center-right	= 1 if mayor is from center-right coalition	
Five stars movement	= 1 if mayor is from five stars movement	
Civic List	= 1 if mayor is independent	
# candidates	# candidates at municipal elections	
	Municipal characteristics	
% foreign	% foreign population living in the municipality	Italian Statistical Office (ISTAT)
Altitude	altitude of the municipality	2001 Census
Area	municipal area in square kilometers	
% graduate	% graduate municipal population	
# firms	# firms at municipal level	
% children	% municipal population < 19	
% elderly	% municipal population > 65	
Population	municipal population at the beginning of electoral term	
North	=1 for municipalities in the north Regions	
center	=1 for municipalities in the central Regions	
South	=1 for municipalities in the south Regions	
Special region	=1 for municipalities in Special Statute Regions	
Turnout	electoral turnout = ratio between valid ballots casted during the first round and adult municipal population	Italian Home Office (*archivio elezioni)*
# candidates	number of candidates during municipal elections	
Transfers	current + capital per capita transfers from higher levels of government	Aida Pa (Bureau van Dijk)
	Shares occupations	
% out class	pensioners and inactives as a share adult population	Italian Statistical Office (ISTAT)
% working class	working class as a share adult population	2011 Census
% managerial class	managerial class as a share adult population	

Table A3: SPRAR tenders

(1)	(2)	(3)	(4)	(5)	(6)
Tender	Year	Date starts	Date ends	Date opens	Years active
1	2010	30/09/2010	30/10/2010	21/01/2011	2011-2013
2	2013	04/09/2013	19/10/2013	29/01/2014	2014-2016
3	2015	23/05/2015	22/07/2015	04/12/2015	2016
4	2015-2016	14/10/2015	14/02/2016	31/05/2016	2016-2017
5	2016	27/08/2016	30/10/2016	19/01/2017	2017-2019
6	2017	-	-	-	2017-2020

Notes. Sources: Home Office, SPRAR, and Gamalerio and Negri (2021). Description columns: 1) In column 1, Tender is the number assigned by this paper; 2) In column 2, Year is the year in which the tender is issued by the Home Office; 3) The starting date of the tender in column 3 (Date starts); 4) The deadline for application to the tender is in column 4 (Date ends); 5) The date of opening of the refugee center is in column 5 (Date opens); 6) If municipality i participates to the tender, then the refugee center remains active for the years indicated in column 6 (Years active). The last row (i.e., tender 6) refers to year 2017, during which the Italian Home Office accepted bids for SPRAR centers on a rolling basis (see Ministerial Decree 10 August 2016, n. 200).

Table A4: Descriptive statistics

	(1) Obs.	(2) Mean	(3) St. dev.	(4) min	(5) max
Panel A: SPRAR and refugee reception variables					
Sprar center	875	0.09	0.19	0.00	1.00
CAS/ENA	875	0.27	0.45	0.00	1.00
First level reception	875	0.00	0.03	0.00	1.00
Union	875	0.10	0.29	0.00	1.00
Panel B: Shares occupations					
% working class	875	0.49	0.05	0.34	0.61
% managerial class	875	0.04	0.01	0.02	0.09
% out class	875	0.31	0.04	0.19	0.43
Strict diff sample	875	0.59	0.49	0.00	1.00
Panel C: Municipal characteristics					
% children	875	0.20	0.04	0.12	0.34
% elderly	875	0.17	0.04	0.06	0.29
% graduate	875	0.05	0.02	0.01	0.16
Area	875	54.35	55.64	2.00	342
% foreign	875	0.02	0.02	0.00	0.11
Altitude	875	157.69	164.56	0.00	1049
North	875	0.47	0.50	0.00	1.00
center	875	0.19	0.39	0.00	1.00
South	875	0.33	0.47	0.00	1.00
# firms	875	1129	505.58	340	3373
Special Region	875	0.01	0.09	0.00	1.00
Total transfers	875	296.22	169.33	104.62	2460
Turnout	875	0.69	0.08	0.03	0.92
# candidates	875	4.45	1.52	2	11
Panel D: Mayoral characteristics					
Age	875	50.39	9.55	28	77.40
Female	875	0.11	0.32	0.00	1.00
Postgraduate	875	0.61	0.49	0.00	1.00
center-left	875	0.32	0.47	0.00	1.00
center-right	875	0.20	0.40	0.00	1.00
Five stars movement	875	0.01	0.10	0.00	1.00
Civic List	875	0.48	0.50	0.00	1.00

Notes. Municipalities between 10,000 and 30,000 inhabitants. Electoral terms between 2010 and 2017.

Table A5: Occupations from 2011 Census

Category	Occupations
1) Unskilled labor or service work	Agricultural worker, Janitor, Construction worker, Domestic worker, Porter, Hospital attendant, Stable attendant
2) Employee in fixed production plants, machinery, assembly lines or vehicle management	Forklift driver, Electrical appliance assembly worker, Truck driver, Taxi driver, Rolling mill operator
3) Skilled worker activity	Bricklayer, Mechanic, Shoemaker, Tailor, Carpenter, Blacksmith, Upholsterer
4) Cultivation of plants and / or breeding of animals	Farmer, Fruit farmer, Cattle farmer, Fish farmer, Gardener, Fisherman
5) Sales to the public or service to people	Shop operator, Hairdresser, Cook, Waiter, Flight attendant, Baby sitter, Carer, Sales clerk
6) Executive office work	Post office operator, switchboard operator, administrative operator, counter clerk
7) Technical, administrative activity with medium qualification	Nurse, Accountant, Surveyor, Electronic Technician, Computer Technician, Sales Representative, Insurance Agent
8) Specialized organizational, technical, intellectual, scientific activity	Teacher, General practitioner, University professor, Engineer, Chemist, Architect, Lawyer, Pharmacist
9) Management of a company or management of complex public or private organizational structures	Entrepreneur, manager in the public sector, company manager, court president
10) Military and police	Chief Marshal, policeman

Table A6: Comparison different classes on income and second round elections

	(1)	(2)	(3)
Dependent Variables	Log income	Went to second round	Went to second round
Working class	0.016***	-0.053**	-0.053**
	(0.002)	(0.023)	(0.022)
Managerial class	0.042***	-0.012	
	(0.007)	(0.083)	
Observations	685	79	79
BW Loc. Poly. (h)	-	1385	1385

Notes. OLS estimates. Dependent variables: 1) log income = log of municipal income per capita; 2) went to second round = 1 for dual ballot municipalities that went to the second round of the election. Independent variables: a) working class = share of the working class at muncipal level; b) managerial class = share of the managerial class at municipal level; c) the out class is the default category. Control variables added in all columns: share of the residual classes (i.e., students and homeworkers), share of children (<=19), share of graduate, area (sq km), share of foreign population, altitude, macro-regions dummy variables, dummy for special regions. Additional contol variables added in columns 2-3: electoral turnout, # candidates, year of election fixed effects. Standard errors clustered at local labor area level in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A7: Balance tests on municipal covariates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel A: pre-determined municipal covariates											
Dependent Variables	Children	Elderly	Graduate	Area	Foreign Pop.	Altitude	North	center	South	# firms	Special Region
Conventional	0.013	0.001	-0.006	22.872	0.000	0.936	-0.177	-0.030	0.134	-66.128	0.054
	(0.012)	(0.011)	(0.005)	(18.123)	(0.004)	(40.366)	(0.151)	(0.108)	(0.141)	(79.122)	(0.052)
Bias-corrected	0.016	-0.002	-0.007	25.960	0.000	-4.077	-0.209	-0.063	0.189	-81.164	0.069
	(0.012)	(0.011)	(0.005)	(18.123)	(0.004)	(40.366)	(0.151)	(0.108)	(0.141)	(79.122)	(0.052)
Robust	0.016	-0.002	-0.007	25.960	0.000	-4.077	-0.209	-0.063	0.189	-81.164	0.069
	(0.014)	(0.013)	(0.006)	(21.686)	(0.005)	(48.551)	(0.178)	(0.124)	(0.163)	(93.102)	(0.067)
Observations	875	875	875	875	875	875	875	875	875	875	875
BW Loc. Poly. (h)	1838	2148	1860	1985	1658	1840	1815	1622	1952	1827	2345
Effective Observations	244	291	246	268	218	244	242	216	263	242	313
Panel B: predicted probability of opening a SPRAR center and share occupations											
Dependent Variables	Predicted SPRAR 1	Predicted SPRAR 2	Share working class	Share out class	Share managerial class						
Conventional	-0.010	0.001	0.001	0.001	-0.004						
	(0.013)	(0.023)	(0.013)	(0.012)	(0.003)						
Bias-corrected	-0.009	0.001	0.001	-0.002	-0.004						
	(0.013)	(0.023)	(0.013)	(0.012)	(0.003)						
Robust	-0.009	0.001	0.001	-0.002	-0.004						
	(0.015)	(0.027)	(0.015)	(0.014)	(0.004)						
Observations	875	875	875	875	875						
BW Loc. Poly. (h)	1924	2302	1871	2251	1588						
Effective Observations	256	307	246	298	210						

Notes. The estimated coefficients capture the effect of a dual ballot electoral system, compared to a plurality electoral system. Estimates reported: conventional RD estimates with a conventional variance estimator (Conventional), bias-corrected RD estimatesc with a conventional variance estimator (Bias-corrected), and bias-corrected RD estimates with a robust variance estimator are reported (Robust). The sample includes municipalities in the period 2010-2017 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the cut-off of 15,000 residents. Outcome variables in Panel A: share of children (<=19), share elderly (>=65), share of graduate, area (sq km), share of foreign population, altitude, dummy for North regions, dummy for center regions, dummy for South regions, number of firms, dummy for special regions. Outcome variables in Panel B: 1) predicted SPRAR 1 = predicted value obtained regressing the probability of opening a SPRAR center on the pre-determined muncipal characteristics described in Panel A; 2) predicted SPRAR 2 = predicted value obtained regressing the probability of opening a SPRAR center on the pre-determined muncipal characteristics described in Panel A, plus the following variables: age of the mayor, dummy for female mayor, dummy for graduate mayor, dummy variables for left-wing, right-wing and Five-Stars Movement mayors, total transfers, electoral turnout, # candidates, dummy for CAS/ENA refugee centers, dummy for first level reception center, dummy for sprar centers opened by union of municipalities; 3) shares of working class, out class and managerial class. Standard errors clustered at local labor area level in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A8: The effect on bidding for a SPRAR: plurality vs dual ballot

	(1)	(2)	(3)
Polynomial	Linear	Linear	Linear
Covariates	Yes	Yes	Yes
Sample	Entire sample	Strict difference sample	No strict difference sample
Dependent variable: probability of bidding for a SPRAR			
Conventional	0.117**	0.117*	-0.004
	(0.051)	(0.068)	(0.022)
Bias-corrected	0.129**	0.143**	-0.014
	(0.051)	(0.068)	(0.022)
Robust	0.129**	0.143*	-0.014
	(0.062)	(0.081)	(0.027)
Observations	875	517	358
BW Loc. Poly. (h)	1388	1534	1769
Effective Observations	182	120	88

Notes. The estimated coefficients capture the effect of a dual ballot electoral system, compared to a plurality electoral system. Estimates reported: conventional RD estimates with a conventional variance estimator (Conventional), bias-corrected RD estimates with a conventional variance estimator (Bias-corrected), and bias-corrected RD estimates with a robust variance estimator are reported (Robust). The sample includes municipalities in the period 2010-2017 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the cut-off of 15,000 residents. The outcome variable is the probability that a mayor submit a bid for a SPRAR center. Covariates in all columns: share of children (<=19), share elderly (>=65), share of graduate, area (sq km), share of foreign population, altitude, macro-regions dummy variables, number of firms, dummy for special regions, age of the mayor, dummy for female mayor, dummy for graduate mayor, dummy variables for left-wing, right-wing and Five-Stars Movement mayors, total transfers, electoral turnout, # candidates, dummy for CAS/ENA refugee centers, dummy for first level reception center, dummy for sprar centers opened by union of municipalities, % working class, % out class, % employers. Standard errors clustered at local labor area level in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A9: Drop civic lists: plurality vs dual ballot

	(1)	(2)	(3)
Polynomial	Linear	Linear	Linear
Covariates	Yes	Yes	Yes
Sample	Entire sample	Strict difference sample	No strict difference sample
Dependent variable: the probability of opening a SPRAR center			
Conventional	0.168***	0.191***	0.008
	(0.049)	(0.059)	(0.036)
Bias-corrected	0.182***	0.190***	-0.000
	(0.049)	(0.059)	(0.036)
Robust	0.182***	0.190***	-0.000
	(0.059)	(0.068)	(0.042)
Observations	459	273	186
BW Loc. Poly. (h)	1676	1592	1765
Effective Observations	106	61	45

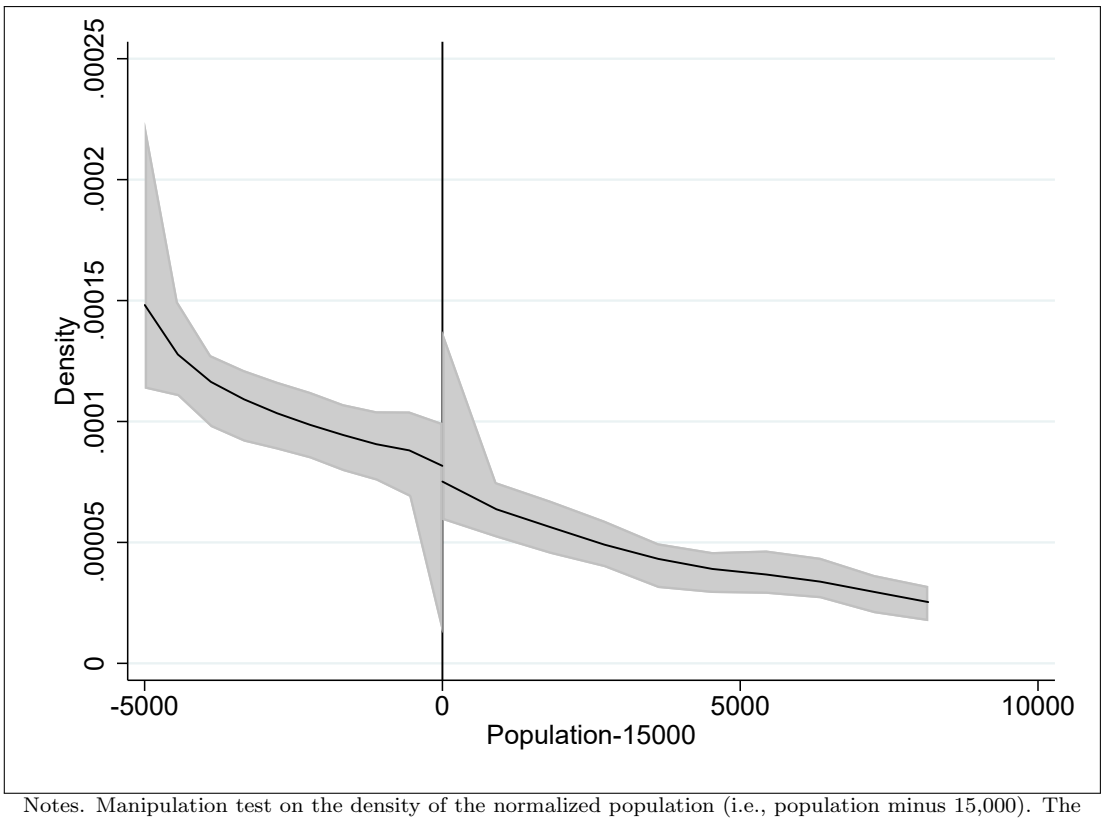
Notes. The estimated coefficients capture the effect of a dual ballot electoral system, compared to a plurality electoral system. Estimates reported: conventional RD estimates with a conventional variance estimator (Conventional), bias-corrected RD estimates with a conventional variance estimator (Bias-corrected), and bias-corrected RD estimates with a robust variance estimator are reported (Robust). The sample includes municipalities in the period 2010-2017 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the cut-off of 15,000 residents. The outcome variable is the probability that a mayor opens a SPRAR refugee center. Covariates in all columns: share of children (<=19), share elderly (>=65), share of graduate, area (sq km), share of foreign population, altitude, macro-regions dummy variables, number of firms, dummy for special regions, age of the mayor, dummy for female mayor, dummy for graduate mayor, dummy variables for left-wing, right-wing and Five-Stars Movement mayors, total transfers, electoral turnout, # candidates, dummy for CAS/ENA refugee centers, dummy for first level reception center, dummy for sprar centers opened by union of municipalities, % working class, % out class, % employers. Standard errors clustered at local labor area level in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Table A10: Alternative stories: the effect on policy volatility

	(1)	(2)
Dependent	Time variance	Cross-sectional variance
Variables	SPRAR center	SPRAR center
Conventional	0.062	0.125***
	(0.039)	(0.045)
Bias-corrected	0.072*	0.148***
	(0.039)	(0.045)
Robust	0.072	0.148***
	(0.046)	(0.054)
Observations	875	99
BW Loc. Poly. (h)	1455	1131
Effective Observations	178	23

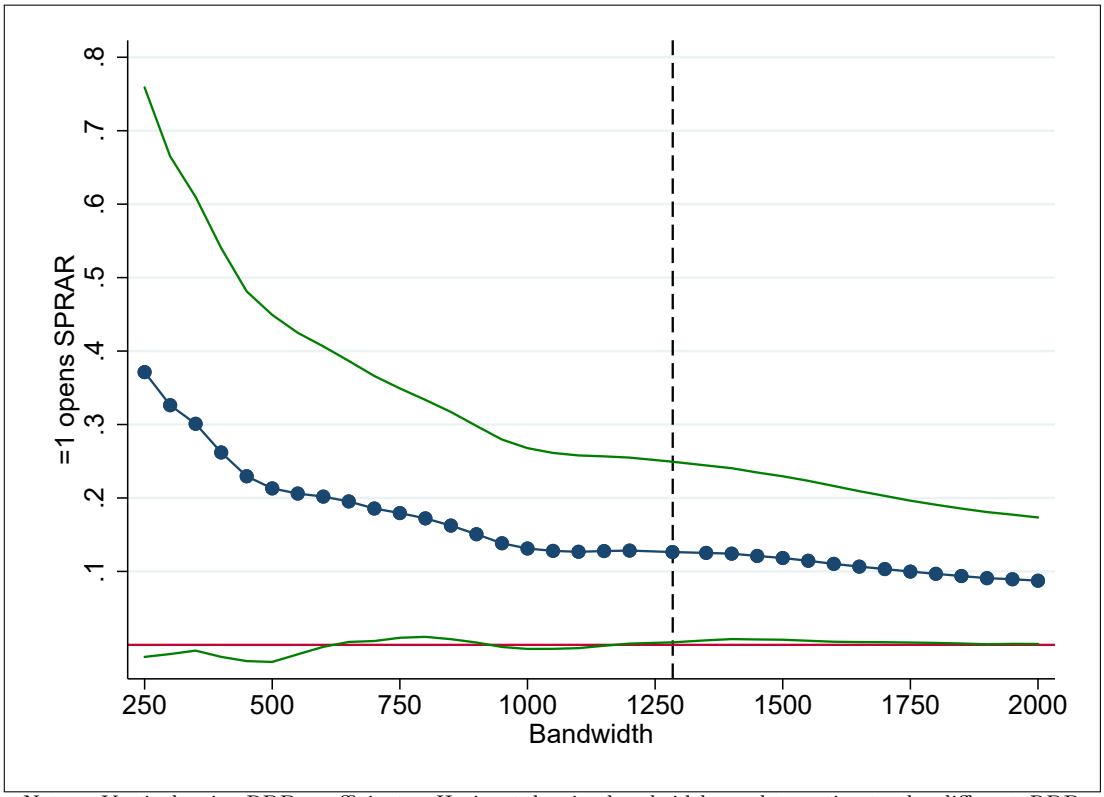
Notes. The estimated coefficients capture the effect of a dual ballot electoral system, compared to a plurality electoral system. Estimates reported: conventional RD estimates with a conventional variance estimator (Conventional), bias-corrected RD estimatesc with a conventional variance estimator (Bias-corrected), and bias-corrected RD estimates with a robust variance estimator are reported (Robust). The sample includes all municipalities from ordinary statute regions in the period 2010-2017 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the cut-off of 15,000 residents. The dependent variables are: 1) in Column 1, the variance of the probability of opening a SPRAR center over time within municipalities and electoral terms; 2) in Column 2, the variance of the probability of opening a SPRAR center across municipalities averaged over bins of 100 inhabitants. Standard errors clustered at local labor area level in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Figure A1: Manipulation test on the density of running variable



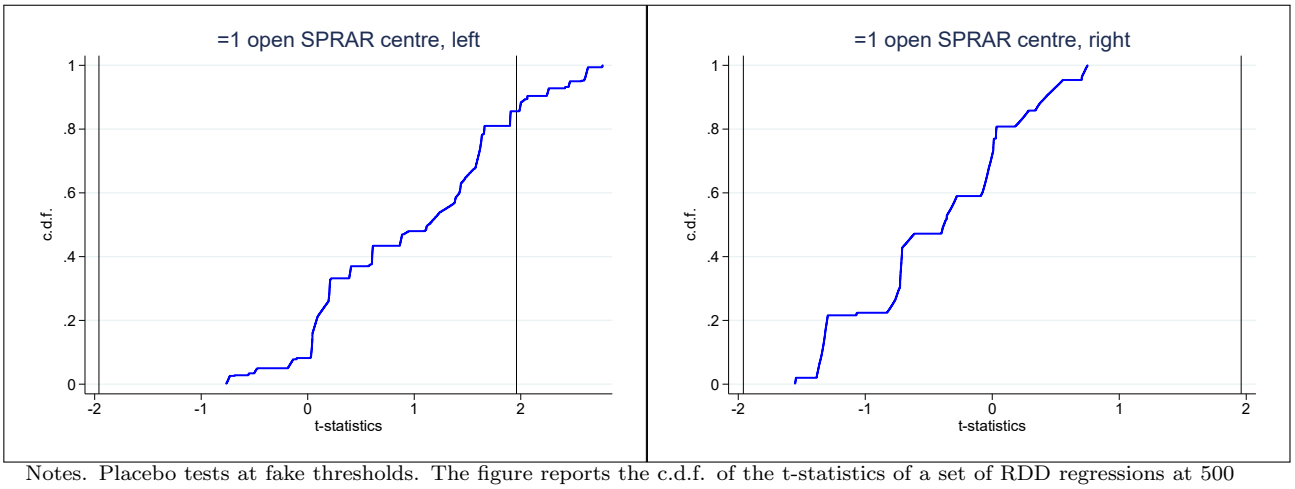
Notes. Manipulation test on the density of the normalized population (i.e., population minus 15,000). The manipulation test uses the procedure developed by Cattaneo, Jansson, and Ma (2018). T-statistics: the conventional test statistics is -0.3221, while the robust one is 1.4018.

Figure A2: RDD estimates with different bandwidths



Notes. Vertical axis: RDD coefficients. Horizontal axis: bandwidth used to estimate the different RDD coefficients. The dashed vertical line represents the CCT optimal bandwidth. The central blue line represents the estimates. The green lateral lines capture the 90% confidence interval.

Figure A3: Placebo tests at fake thresholds



Notes. Placebo tests at fake thresholds. The figure reports the c.d.f. of the t-statistics of a set of RDD regressions at 500 fake thresholds below and 500 fake thresholds above the 15,000 inhabitants threshold (i.e. thresholds from 13,500 to 14,000, and from 16,000 to 16,500). The RDD model is run using a local linear regression. The vertical lines indicate t-statistics of -2 and 2. The graphs report the c.d.f. of the t-statistics for the SPRAR center dependent variable (respectively to the left and to the right of the 15,000 threshold).

Appendix A2 - Proofs

Proof of Lemma 1. The proof closely follows the proof of Proposition 1 in Austen-Smith (2000). We begin by showing that, at any sorting equilibrium, the set of types must be partitioned as described in the statement of the proposition. Suppose w is a sorting equilibrium. Since $x_d(w, Q, \theta)$ is constant in θ,

$$\frac{\partial x_l(w, Q, \theta)}{\partial \theta} = (1 - \tau)[\pi'(\theta)\theta w + \pi(\theta)w] > 0$$

and $x_l(w, Q, 0) = b(Q) - c < x_d(w, Q, 0)$, there must exist a type $\theta^1 = \theta^1(w, Q)$ such that $x_l(w, Q, \theta^1) = x_d(w, Q, 0)$. This type is uniquely defined by (1).

Now notice that $x_l(w, Q, \theta) \geq x_e(w, Q, \theta)$ if and only if

$$(1 - \tau)y_e(L, w, \theta) + b(Q) - c \geq (1 - \tau)\theta w + b(Q) - c$$

These are the incomes of a member of the managerial class and of a member of the working class, respectively, as considered by Austen-Smith (2000). Then, by Proposition 1 in the paper, there exists a unique type $\theta^2 = \theta^2(w, Q)$ such that $x_l(w, Q, \theta^2) \leq x_e(w, Q, \theta^2)$, for all $\theta \leq \theta^2$ and $x_l(w, Q, \theta^2) \geq x_e(w, Q, \theta^2)$ for all $\theta \geq \theta^2$.[1] This type is implicitly defined by (2). Finally, as in Austen-Smtih (2000), the fact that w is a sorting equilibrium implies that $\theta^1 < \theta^2$. Then,

$$\begin{aligned} \lambda_o(w^*, Q) &= (0, \theta^1) \\ \lambda_l(w^*, Q) &= [\theta^1, \theta^2] \\ \lambda_e(w^*, Q) &= (\theta^2, \bar{\theta}). \end{aligned}$$

as stated in the proposition. We now show that a sorting equilibrium exists and is unique. For any wage level w, expected labor demand now can be written as

$$\int_{\theta^2}^{\bar{\theta}} \pi(\theta) L(w, \theta) \left[\frac{1}{\bar{\theta}} + Qh(\theta)\right] d\theta.$$

Differentiating with respect to w we get

$$\int_{\theta^2}^{\bar{\theta}} \pi(\theta) L_w(w, \theta) \left[\frac{1}{\bar{\theta}} + Qh(\theta)\right] d\theta - \pi(\theta^2) L(w, \theta^2) \left[\frac{1}{\bar{\theta}} + Qh(\theta^2)\right] \frac{\partial \theta^2}{\partial w}$$

[1] Austen-Smith (2000), proof of Proposition 1, page 1258.

As proven in Austen-Smith (2000),[2]

$$\frac{\partial \theta^2}{\partial w} = \frac{L(w,\theta^2)+\theta^2}{F_\theta(L(w,\theta^2),\theta^2)-w} > 0$$

and, since $L_w(w,\theta) < 0$, expected labor demand must be decreasing in w. Consider labor supply now. Using the results above, this can be written as

$$\int_{\theta^1}^{\theta^2} \pi(\theta)\theta \left[\frac{1}{\bar{\theta}} + Qh(\theta)\right] \theta.$$

As before, differentiating with respect to w gives

$$\pi(\theta^2)\theta^2 \left[\frac{1}{\bar{\theta}} + Qh(\theta^2)\right] \frac{\partial \theta^2}{\partial w} - \pi(\theta^1)\theta^1 \left[\frac{1}{\bar{\theta}} + Qh(\theta^1)\right] \frac{\partial \theta^1}{\partial w} \tag{8}$$

Using (1), we get

$$\frac{\partial \theta^1}{\partial w} = -\frac{\pi(\theta^1)\theta^1}{w[\pi'(\theta^1)\theta^1 + \pi(\theta^1)]} < 0,$$

which in turn implies that (8) is positive. Then, expected labor supply is increasing in the wage rate. Finally, since $\lim_{w\to 0}\theta^1 = \bar{\theta}$, $\lim_{w\to\infty}\theta^1 = 0$ and $\lim_{w\to\infty}\theta^2 = \bar{\theta}$, expected labor demand must be larger than expected labor supply at $w = 0$, while the contrary must hold for w large enough. Then, the two functions must cross at one unique sorting equilibrium wage w^*.

□

Proof of Lemma 3. The wage rates $w^*(0)$ and $w^*(q)$ are implicitly defined by

$$\int_{\theta^2(w^*(0),0)}^{\bar{\theta}} \pi(\theta)L(w^*(0),\theta)\frac{1}{\bar{\theta}}d\theta - \int_{\theta^1(w^*(0),0)}^{\theta^2(w^*(0),0)} \pi(\theta)\theta\frac{1}{\bar{\theta}}d\theta = 0$$

and

$$\int_{\theta^2(w^*(q),q)}^{\bar{\theta}} \pi(\theta)L(w^*(q),\theta)\left[\frac{1}{\bar{\theta}} + qh(\theta)\right]d\theta - \int_{\theta^1(w^*(q),q)}^{\theta^2(w^*(q),q)} \pi(\theta)\theta\left[\frac{1}{\bar{\theta}} + qh(\theta)\right]d\theta = 0$$

[2]AS, Proof of Proposition 1, page 1258.

respectively. Taking the difference between the two equations and rearranging terms, we get

$$\left[\int_{\theta^1(w^*(q),q)}^{\theta^2(w^*(q),q)} \pi(\theta)\theta q h(\theta)d\theta - \int_{\theta^2(w^*(q),q)}^{\bar{\theta}} \pi(\theta)L(w^*(q),\theta)qh(\theta)d\theta\right] + \frac{1}{\bar{\theta}}\left[\int_{\theta^2(w^*(0),0)}^{\bar{\theta}} \pi(\theta)L(w^*(0),\theta)d\theta - \int_{\theta^2(w^*(q),q)}^{\bar{\theta}} \pi(\theta)L(w^*(q),\theta)d\theta\right] - \frac{1}{\bar{\theta}}\left[\int_{\theta^1(w^*(0),0)}^{\theta^2(w^*(0),0)} \pi(\theta)\theta d\theta - \int_{\theta^1(w^*(q),q)}^{\theta^2(w^*(q),q)} \pi(\theta)\theta d\theta\right] = 0 \quad (9)$$

Because of Assumption 1.b, the first term in square brackets is positive. By Lemma 2 and since employers' labor demand is a decreasing function of the wage rate, the functions

$$\int_{\theta^2(w,0)}^{\bar{\theta}} \pi(\theta)L(w,\theta)d\theta$$

and

$$\int_{\theta^1(w,0)}^{\theta^2(w,0)} \pi(\theta)\theta d\theta$$

are decreasing and increasing in w, respectively. If $w^*(q) > w^*(0)$, the second term in square brackets in (9) would be positive and the third would be negative, leading to a contradiction. □

Proof of Proposition 1. We begin by proving the second part of the statement. Suppose that party $\mathcal{O}$ favors immigration, party $\mathcal{L}$ opposes it and $\sigma_{\mathcal{O}}(\bar{w}^*, 0) \leq \sigma_{\mathcal{L}}(\bar{w}^*, 0) < 1/2$. Since party $\mathcal{L}$ has the relative majority of votes, it will be able to form a single party government in country S and close its borders. Since no party has the absolute majority of votes, instead, a coalition government will be formed in country C. If party $\mathcal{O}$ favors immigration, so must party $\mathcal{E}$ (formally, (3) implies (5)). Then, the two parties will form a coalition to support an open border policy.

Let us now consider all other possible scenarios, to show that the two countries will always implement the same immigration policy. Suppose first that party $\mathcal{L}$ favors immigration. Then, all parties must also support an open border policy (formally, (4) implies (3), which in turn implies (5)) and immigrants will be admitted in both countries. Suppose instead that party $\mathcal{O}$ opposes immigration. Then, the $\mathcal{E}$ is the only party that might favor of immigration. By Assumption 1.a, its electoral support is too small to form a single-party government, and no other party will be willing to form a coalition with it. Then, both countries will close their

borders. Finally, suppose that party $\mathcal{L}$ opposes immigration and party $\mathcal{O}$ favors it (which in turn implies that party $\mathcal{E}$ favors immigration too). If $\mathcal{L}$ has the absolute majority of votes ($\sigma_{\mathcal{L}}(\bar{w}^*, 0) \geq 1/2$) it will form a single-party government and close the borders in both countries. If instead $\mathcal{O}$ has the relative majority of votes ($\sigma_{\mathcal{L}}(\bar{w}^*, 0) < \sigma_{\mathcal{O}}(\bar{w}^*, 0)$), then it will form a single-party government in S and a single-party government or coalition government (with $\mathcal{E}$) in country C. In both cases, borders will be kept open. □

Proof of Lemma 4. We decompose the proof of the proposition in two parts. First, we look elected mayors' decisions at the moment of participating to the auction. The results are stated in Lemma 5

Lemma 5. *In equilibrium, mayors always participate to the auction. Moreover,*

- *If the mayors elected in the two municipalities belong to the same party $\mathcal{P}$, then $\gamma_M = \underline{\gamma}_{\mathcal{P}}$ for all M.*
- *If a mayor from party $\mathcal{P}$ is elected in municipality M, a mayor from party $\mathcal{P}' \neq \mathcal{P}$ is elected in municipality M' and $\underline{\gamma}_{\mathcal{P}} > \underline{\gamma}_{\mathcal{P}'}$, then $\gamma_M = \underline{\gamma}_{\mathcal{P}}$ and $\gamma_{M'} = \underline{\gamma}_{\mathcal{P}} - \epsilon$, with $\epsilon \to 0$.*

Proof of Lemma 5. If the mayor of municipality M does not participate to the auction, the mayor of municipality M' wants to participate and bid the highest possible bid, so there can be no equilibrium where no mayor submits a bid. If a mayor in municipality M' submits a bid γ, then the mayor in municipality M wants to submit a bid $\gamma - \epsilon$. When this is not feasible and municipality M does not participate to the auction, γ must be sub-optimally low. Then, there can be no equilibrium where only one municipality participate to the auction.

Suppose both elected mayors belong to party $\mathcal{P}$. Since bidding is costless, there always exists an equilibrium where both mayors submit a bid $\underline{\gamma}_{\mathcal{P}}$ and are indifferent between participating to the auction or not. By a race to the bottom argument *à la Bertrand*, this equilibrium is also unique, as whenever one submits a bid $\gamma > \underline{\gamma}_{\mathcal{P}}$, the other wants to undercut the bid.

Suppose now that a mayor from party $\mathcal{P}$ is elected in municipality M and a mayor from party $\mathcal{P}' \neq \mathcal{P}$ is elected in municipality M'. Further, let $\underline{\gamma}_{\mathcal{P}} > \underline{\gamma}_{\mathcal{P}'}$. If municipality M submits a bid $\underline{\gamma}_{\mathcal{P}}$, municipality M' best responds by submitting a bid $\underline{\gamma}_{\mathcal{P}} - \epsilon$, with $\epsilon \to 0$. Municipality M cannot undercut the bid further, and any bid higher than $\underline{\gamma}_{\mathcal{P}}$, or not participating to the auction at all, would be as good as bidding $\underline{\gamma}_{\mathcal{P}}$. By the same race to the bottom argument used above, this equilibrium is unique. □

The second step in the proof of the proposition is to identify the winning mayors in each municipality. The result then follows from Lemma 5.

When the working class constitutes the absolute majority in the population (first case in the proposition) party $\mathcal{L}$ wins the election in both municipalities.

If the working class only constitutes the relative majority (second case in the proposition), party $\mathcal{L}$ will win in municipality SP. In municipality NM, party $\mathcal{L}$ will compete in a second round with one of the other two parties. Since $\underline{\gamma}_{\mathcal{E}} < \underline{\gamma}_{\mathcal{O}} < \underline{\gamma}_{\mathcal{L}}$, Lemma 5 implies that if either the candidate of party $\mathcal{O}$ or the one of party $\mathcal{E}$ are elected, municipality NP will win the auction with a bid slightly below $\underline{\gamma}_{\mathcal{L}}$. If the candidate of party $\mathcal{L}$ wins, instead, then the two municipalities will win the auction with probability one-half. Anticipating this, parties $\mathcal{O}$ and $\mathcal{E}$ will always support each other in the second round.

Lastly, consider the third case in the proposition. Because of Assumption 1.a, party $\mathcal{O}$ must win the election in municipality SP. In municipality NM, two possible scenarios can occur. First, the out class could constitute the absolute majority in the population. In this case party $\mathcal{O}$ wins in municipality NM too. In the second scenario, the out class is only the relative majority. Then, party $\mathcal{O}$ competes in the second round with another party. If this party is $\mathcal{L}$, party $\mathcal{O}$ receives the support of party $\mathcal{E}$ and wins the election. This is a direct consequence of Lemma 5 as before. If the other party competing in the second round is $\mathcal{E}$, the winner will be determined by the support of party $\mathcal{L}$. If $\mathcal{E}$ wins, then by Lemma 5 municipality NM will win the auction with a bid $\underline{\gamma}_{\mathcal{O}} - \epsilon < \underline{\gamma}_{\mathcal{L}}$. If $\mathcal{O}$ wins, then the two municipalities will submit a bid $\gamma_{\mathcal{O}}$ and each will win with probability one-half. The second scenario guarantees a higher expected utility to party $\mathcal{L}$ (i.e. a lower expected loss) so the party will support party $\mathcal{O}$. □

Appendix A3 - Composition of public spending

The basic idea behind our results on the effect of electoral systems on immigration policy is that SP systems provide more incentives to pander towards the working class than NM systems. In this section, we show that this mechanism extends beyond immigration policies. We focus our attention on fiscal policy, and in particular on the allocation of spending by municipalities. Taxation in Italy is mostly decided at the national level. Besides, most of the fiscal powers in the hands of Italian mayors concentrate on the taxation of properties (Bordignon et al., 2016; Bordignon et al., 2020). In addition, the existing literature (Cipullo, 2021) shows how differences in terms of fiscal policies between single round and dual ballot electoral systems emerge more in terms of expenditures than taxes. For these reasons, our analysis does not allow us to say much about tax composition at the municipal level.

However, it can be informative about the composition of public spending. In what follows, we first propose an extension of our model and then show empirical evidence supporting our theoretical results. Although we will refer to municipalities, the new theoretical setting applies to the general model in the same way.

Let T denote the total amount of funding available in a municipality. This can originate from taxes or transfers from the central government, and is exogenously set. Suppose public spending can be allocated to broad transfers b or to targeted investments I, in such a way that $b + I = T$. Broad transfers work exactly as benefits in the main model and represent forms of spending that benefit all the classes in the population in the same way. Targeted investments instead only benefit the working class. We model this by assuming they increase the wage rate, and set $w = w(I)$ with $w'(I) > 0$. For example, I could represent spending on economic activities that lead to the creation of jobs. Class preferences over b and I then are

$$u_{\mathcal{E}}(w^*) = (1-\tau)\hat{y}_e(L, w^*) + b - c$$

$$u_{\mathcal{L}}(w^*) = (1-\tau)\hat{\theta}_l(w^*)w^* + b - c$$

$$u_{\mathcal{O}}(w^*) = b$$

where $w^* = w^*(I)$ denotes the expected sorting equilibrium wage (the dependance on immigration is omitted in this section as it is not relevant).

Let $b^*_{\mathcal{P}}$ denote amount of broad transfers that maximizes party $\mathcal{P}$'s preferences. Since average gross income within the managerial class is decreasing in the wage rate (Assumption 2), it is immediate to check that $b^*_{\mathcal{E}} = b^*_{\mathcal{O}} = T$. The working class faces a tradeoff between better labour market conditions and higher transfers. As long as

$$\left[(1-\tau)\frac{\partial w^*}{\partial I}\frac{\partial}{\partial w}[\hat{\theta}_l(w^*)w^*]\right]_{I=0} > 1 \tag{10}$$

the optimal amount of broad transfers for this class will be $b^*_{\mathcal{L}} < T$.

Let b_0 and I_0 denote the status quo distribution of spending and let $w^*_0 = w^*(I_0)$. We assume that the party winning the plurality of votes in SP systems can set a new composition of spending. In NM systems, a single party can unilaterally decide the new composition of spending if and only if it represents the absolute majority of voters. When no party reaches this threshold, the new b and I must be agreed by at least two parties (whose vote shares sum to more than 50%) in order to be implemented. As before, $\sigma_{\mathcal{P}}(w)$ denotes the share of individuals in class $\mathcal{P}$. Given this setting, it is immediate to prove the following proposition

Proposition 3. *There exists no scenario in which municipality SP provides more benefits and less investments than municipality NM: either the two municipalities choose the same composition of spending, or country SP chooses lower benefits and higher investments than country NM. The latter happens* $\sigma_{\mathcal{O}}(w_0^*) \leq \sigma_{\mathcal{L}}(w_0^*) < 1/2$ *and condition* (10) *holds.*

As in the main model, the only situation when the two countries are ruled by different parties (and hence adopt different distributions of spending) is when the working class is the relative but not absolute majority, as described in the proposition. In this scenario, the working class governs country SP and therefore implements $b_{\mathcal{L}}^*$, while country NM must be governed by a coalition that supports the allocation of all spending to broad transfers. When (10) holds, $b_{\mathcal{L}}^* < T$ and the two countries implement strictly different distributions of spending.

To test this extension of the model, we collect data on the balance sheets of Italian municipalities. The Italian Ministry of Economy and Finance (MEF) provides this data through the open data of public administrations (OpenBDAP) webpage. The data collected covers the years up to 2015. We collect data on the ex-post accrual accounting expenditures ("Impegni") for current and capital expenditures. In the data, we can observe expenditures in 12 different competencies: administrative expenditures, justice, municipal police, education (e.g., schools), culture, sport, tourism, roads and transports (e.g., roads, lighting, public transport), territory and environment (e.g., urban planning, construction), welfare, economic development (e.g., trade, industry, agriculture), and services.

Ideally, the best way to confirm the robustness of our mechanism across policies would be to have an index attached to each type of policy measuring how broad or how targeted such a policy is to the working class. If such an index existed, we could do the usual check calling targeted the policies with an index below median (if the index is index of broadness) and vice versa. Unfortunately, such an index does not exist. To circumvent this limitation and identify expenditures that proxy the investments I and broad transfers b in the model, we follow the categorization of expenditures used by Cipullo (2021), who identifies four types of expenditures that directly affect the economy and, thus, the labor market. More in detail, we include in this group the expenditures for tourism, roads and transports, territory and environment, and economic development. We label this category "Economy". We can interpret the expenditures in this category as a proxy for I in the model. We group the remaining competencies in the "non-Economy" category. This category includes expenditures on general administration, services, culture and education, and welfare that broadly affect all the classes in the population, and we therefore interpret it as a proxy for b. We build the

two categories by summing up both capital and current expenditures, and we calculate for both categories their share over total expenditures.

The results of this empirical test are in Table A11. As the two categories are mutually exclusive, the two shares sum up to one. Hence, we use only the share of the "Economy" municipal expenditures as the dependent variable, given that the coefficient for the "non-Economy" category would be the same with the opposite sign. The coefficients in column 1 refer to the entire sample, the coefficients in column 2 to the *strict difference* sample, the ones in column 3 to the *no strict difference* sample. Suppose the predictions of the model are correct. In that case, we should observe a negative (positive) effect on the share of the "Economy" ("non-Economy") municipal expenditures and that municipalities in the *strict difference* sample should drive the effect. Conversely, we should not expect any difference in the *no strict difference* sample. The empirical evidence in Table A11 confirms these predictions.

Table A11: Composition of public expenditures

	(1)	(2)	(3)
Polynomial	Linear	Linear	Linear
Covariates	Yes	Yes	Yes
Sample	Entire sample	Strict difference sample	No strict difference sample
Dependent variable: share of "Economy" municipal expenditures			
Conventional	-0.047**	-0.075***	0.002
	(0.020)	(0.019)	(0.018)
Bias-corrected	-0.052***	-0.089***	0.008
	(0.020)	(0.019)	(0.018)
Robust	-0.052**	-0.089***	0.008
	(0.024)	(0.023)	(0.022)
Observations	726	423	303
BW Loc. Poly. (h)	1354	1257	1177
Effective Observations	150	88	52

Notes. The estimated coefficients capture the effect of a dual ballot electoral system, compared to a plurality electoral system. Estimates reported: conventional RD estimates with a conventional variance estimator (Conventional), bias-corrected RD estimates with a conventional variance estimator (Bias-corrected), and bias-corrected RD estimates with a robust variance estimator are reported (Robust). The sample includes municipalities in the period 2010-2015 within the optimal bandwidth selected by one common MSE-optimal bandwidth selector (Calonico et al., 2017) around the cut-off of 15,000 residents. The outcome variable is the share of municipal expenditures in the "Economy" cateogory over total municipal expenditures. Covariates in all columns: share of children (<=19), share elderly (>=65), share of graduate, area (sq km), share of foreign population, altitude, macro-regions dummy variables, number of firms, dummy for special regions, age of the mayor, dummy for female mayor, dummy for graduate mayor, dummy variables for left-wing, right-wing and Five-Stars Movement mayors, total transfers, electoral turnout, # candidates, dummy for CAS/ENA refugee centers, dummy for first level reception center, dummy for sprar centers opened by union of municipalities, % working class, % out class, % employers. Standard errors clustered at local labor area level in parentheses, *** p<0.01, ** p<0.05, * p<0.1.