Taxation with Representation: The Political Economy of Foreigners' Voting Rights

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Abstract

This paper examines natives' decision to grant political rights to foreign residents based on their contribution to a redistribution mechanism that finances a private and a public good. We propose a model where agents' redistributive preferences are determined by their skill level and their cultural beliefs about public spending, which vary by skill and nationality. Contrary to a commonly held view in the political economy literature, we show that low-skill natives are willing to enfranchise relatively skilled foreigners as long as these foreigners have sufficiently liberal beliefs towards public spending. Moreover, we establish that the political rights that low-skill natives are prepared to grant to foreign residents is a non-monotonic function of immigration's skill level and cultural support for public expenditure. In particular, low-skill natives favor greater political integration for less-skilled or more liberal foreigners if and only if these foreigners' average relative preferences for the private and the public good are sufficiently close to their own. We provide empirical support for some of the theoretical predictions of the model using an original municipality-level dataset of Swiss referenda about non-citizen voting rights. Our results indicate that municipalities where a higher share of natives received social transfers were more likely to support immigrant voting and that this effect was greater where foreigners were poorer and emigrated from less economically conservative countries.

JEL Classification: H41, H53, J68, D72

1. Introduction

Recent history suggests that immigration plays a crucial role in the politics of modern welfare states. An important, yet commonly overlooked aspect of this matter regards the consequences of foreigners' political participation on redistribution policies. As foreigners gain the right to vote in their host countries, they also have the potential of directly shaping the future tax and transfer systems chosen by governments, which in turn face key political decisions about the voting rights of non-citizen residents. Against this backdrop, a quick look at the data reveals that a growing number of states have enfranchised foreign residents at the local level over the past decades[1] and that a handful of them grant foreigners the right to vote in national elections under some residence requirements.[2] National governments also implement naturalization policies which can vary significantly across states. For instance, the minimum number of years of residence to become eligible for naturalization amongst OECD countries ranges from 3 years in Canada to 15 in Lithuania. In a context of rising immigration, foreigners' political participation is therefore improving from a historical perspective, but remains an area of weakness for integration policy as immigrants still have few opportunities to inform and influence the political decisions that affect them.

This paper hopes to inform the debates on immigration by looking at the consequences of foreign political rights on redistribution and the economic motivations that fuel natives' resistance to the political integration of foreigners. Several works of political economy already provide a rich insight into the relationship between natives' fiscal concerns and immigrants' political participation (See for instance Razin, 2002; Dolmas, 2004; Mayr, 2007; Ortega, 2010). However, this literature suffers from two main caveats. First, they assume that the implications of foreigners' political rights are limited to matters of income redistribution and therefore fail to account for the fact that political choices may reflect individual preferences about both the size and the composition of public spending. Indeed, public social spending and income redistribution - individual cash benefits, direct in-kind provision of goods and services, and tax breaks with social purposes - represent less than 40% of EU government expenditures on average, while a more significant share of these expenditures finances public goods and services that benefit the society as a whole, or large parts of society. In this paper, we choose to distinguish between public spending on private and public goods to understand how the enfranchisement of foreign residents can influence a country's spending policy. A second major assumption of our theoretical analysis which is absent from those previous studies is that individuals' redistributive preferences are largely determined by cultural beliefs about public spending. The literature has showed that economic welfare alone cannot explain individual preferences for redistribution and that culture plays a very significant part in driving these preferences (Alesina and Angeletos,

[1] In spite of considerable variation in the content of these voting rights (Earnest, 2015), over 60 countries in the world granted local voting rights to their non-citizen residents as of 2012. This figure includes the enfranchisement of EU-citizens in EU member countries under the Treaty of Maastricht.

[2] These countries are Uruguay New-Zealand, Chile, and Malawi

2005; Tirole and Benabou, 2006). In particular, immigrants' views about public spending are strongly affected by preferences in their country of birth, regardless of the economic context and sometimes decades after individuals emigrated to their residence country (Luttmer, 2011). In this context, we believe that a political economy approach to the concession of voting rights to foreign-born residents should account for the redistributive implications of immigrants' cultural beliefs[3].

In our model, we therefore account for both economic and cultural drivers of preferences for redistribution and examine the incentives for domestic voters to support foreigners' political rights in an environment where the voting outcome reflects preferences for welfare transfers and the provision of the public good. The paper contains two main results.
First, our theoretical model analyzes the consequences of foreigners' political rights on income redistribution and public good provision and how this affects natives' attitudes towards enfranchisement. We find that low-skill natives are more likely to grant political rights to foreign residents when these foreigners are poorer and have greater cultural preferences for public spending. In particular, contrary to the commonly held view that low-skill natives would only support the enfranchisement of foreigners if they are poorer than natives on average, we show that they are willing to enfranchise relatively skilled foreigners as long as these foreigners have sufficiently liberal beliefs towards public spending. Moreover, we establish that the level of political integration that low-skill natives are prepared to grant to foreign residents is a non-monotonic function of immigration's skill level and cultural support for public expenditure. Rather, low-skill natives prefer to grant fewer political rights to less-skilled or more liberal immigrants when those immigrants' relative redistributive preferences are too different from their own.
The second part of the paper tests the implications of the model using an original municipality-level dataset of Swiss referenda about non-citizen voting rights. We proxy the skill level of natives and foreigners using the share of welfare-dependent individuals and predict foreigners' cultural beliefs about public spending at the municipal level with the average preferences in their country of origin. We show that, consistently with the model's predictions, municipalities where a greater share of natives received social transfers were more likely to support immigrant voting, and that this effect was greater where foreigners were poorer and emigrated from less economically conservative countries.

Our paper therefore contributes to the political economy literature by proposing a new the-

[3]More generally, cultural proximity between natives and foreigners is also a powerful enabler of integration. In many countries, naturalization tests assess the desire to assimilate and the extent to which candidates to naturalization respect and sometimes espouse the views and traditions of their country of residence. At the European level, Portugal, the UK, and Spain have signed bilateral agreements with countries that they consider culturally close to them and grant foreign residents from these countries the right to vote in local elections - Brazil and Portugal, Spain and various Latin American countries, as well as England with several members of the Commonwealth -. Such positive discrimination holds more generally across Europe under Article 22 of the European Union, which grants exclusive local voting rights to citizens from fellow EU member countries.

oretical framework and supporting empirical evidence to explore natives' attitudes towards foreigners' enfranchisement. It should be stressed that our approach represents only one possible way to sketch conflicting political preferences between natives and foreign residents when addressing the issue of foreign political participation. Also, we are aware that most immigrants often self-select into naturalization or political integration, and that these policies can sometimes lead to sizable economic perturbations which affect immigrants' productivity and skill level. We leave those as well as non-economic considerations outside of the model. In spite of these shortcomings, our paper is the first to propose a theory of enfranchisement which simultaneously builds on a two-dimensional, realistic approach of redistribution, and accounts for cultural divergence in individual preferences for redistribution.

This paper is related to three strands of literature. First, it contributes to the theoretical political economy literature on redistribution pioneered by Metzler and Richard (1981). Recent work in this field presents various models linking immigration and income redistribution. In some of these models, redistribution is endogenously determined while immigration is taken as exogenous. Immigrants then influence redistributive outcomes through economic channels such as labour market competition or fiscal leakage, and by adding to the size of different interest groups, changing the political constituency of the native population (See Razin et al., 2002; Dolmas and Huffman 2004; Roemer and Van der Straeten, 2006). For example, the median voter model developed by Dolmas and Huffman finds that admitting poor immigrants that can vote does not necessarily imply higher redistribution and may lead to a lower tax rate if the fiscal leakage effect dominates the political effect on the position of the median voter in the income distribution. A more recent strand of this literature studies the effect of varying political institutions and citizenship rules in a setting where immigration is endogenous. Ortega (2010) presents a dynamic model where voters choose the degree of income redistribution in addition to immigration policy under three citizenship regimes, and find that income redistribution can be sustained indefinitely under permanent migration and *jus soli*. Romero et al. (2016) investigates the attitudes of natives with different skill level towards immigrants based on their impact on wages, tax collection and the quality of the public good. They find that the higher the political weight of the rich, the less tolerant the poor and the middle-class are toward immigration and the more demanding toward increasing public spending. Closer to our work, two papers analyze more specifically the economic drivers of naturalization policies and the incentives for native citizens to grant political rights to foreigners. Mayr (2007) examines the effect of immigration on income redistribution via majority voting where the skill composition of immigrants is endogenous and depends negatively on the income tax. She finds that natives are at best indifferent towards immigrant voting and may be opposed to it when the native majority is not too strong. On the other hand, Mariani (2013) inquires about the timing of naturalization policies for immigrants whose values and political preferences are different from natives.

Our work is also related to the broader political economy literature studying enfranchisement. The issue of franchise extension has received considerable attention, with theoretical contri-

butions by Acemoglu and Robinson (2000), Lizzeri and Persico (2004), Llavador and Oxoby (2005), and Jack and Lagunoff (2006). An interesting empirical counterpart to these works is Bertocchi and Strozzi (2010), in which the authors assemble a large, comprehensive cross-country panel of citizenship laws and estimate the determinants of whether a country grants citizenship based on bloodline (*jus sanguinis*), birth place (*jus soli*), or has a mixed regime. Within this body of research, our paper is most related to the recent attempts to measure the consequences of enfranchisement on redistribution and the size of the welfare state. In this regard, recent work by Bertocchi (2011) finds that women's suffrage increased the size of government over the 1870-1930 period in non-catholic countries. Abrams and Settle (1999) show that women suffrage raised the overall size of the Swiss government, and that this occurred through welfare spending but not government consumption. As our paper deals not only with the size but also the composition of public spending, we should also mention the empirical work of Funk and Gathmann (2005). They find larger differences regarding the scope rather than the size of government at the cantonal level in Switzerland as a result of gender-specific preferences for redistribution. To the best of our knowledge, few empirical papers investigate the causes and consequences of franchise extension towards foreigners. One exception is Vernby (2013), who shows that the effect of local enfranchisement of non-citizens on public spending policy was large, causing spending on education and social and family services to increase substantially in Swedish municipalities where foreigners made up a significant share of the electorate. Another notable work by Stutzer and Slotwinski (2019) looks at power-sharing in the Swiss cantons of Grisons and Zurich. They show that enfranchisement is less likely in municipalities with larger shares of resident foreigners and a large language or cultural minority. We are also aware of a recent unpublished manuscript by Koukal et al. (2019) which studies the willingness of natives to enfranchise foreigners at the municipal level based on the same data on Swiss referenda as we use in our paper. However, our focus is different since we are using this data to test specific economic hypotheses based on a redistribution mechanism for which we provide theoretical intuition.

Third, our paper is related to the empirical literature studying the role of immigration in politics. A first strand of this literature explores individual attitudes towards immigration based on theories of labour market competition (Mayda, 2006; Scheve and Slaughter, 2001; Hainmueller and Hiscox, 2007) and fiscal leakage (Facchini and Mayda, 2009; Hanson et al., 2007). It provides mixed evidence for both of these theories and suggests that the relative skill level of immigrants does not necessarily plays out in the direction predicted by political economy models. Another series of papers focus on the effect of the size and the skill level of immigration flows on the political landscape of developed countries in terms of electoral behaviour (Otto and Steinhardt (2014), Barone et al. (2016), Brunner and Kuhn (2018), Edo et al. (2017)). While their findings varies according to specific national contexts, a recent paper by Moriconi et al. (2019) generalizes voting responses to immigration at the European level and finds that larger inflows of highly educated immigrants are associated with European citizens shifting their votes toward parties that favor expansion of the welfare state while immigration of low skilled individuals pushed political party agendas to reduce support for the welfare state.

Finally, because culture plays a crucial role in our theoretical and empirical analysis, our paper speaks to the literature on the impact of culture on redistribution (Verdier and Bisin (2000), and Tirole and Benabou (2006). Our work also builds largely on the findings of Luttmer (2011), who shows that immigrants' preferences for redistribution are strongly affected by preferences in their countries of birth, and in particular that immigrants from high-preference countries are more likely to vote for more pro-redistribution parties.

The paper is organized as follows: Section 2 presents the model. Section 3 solves the model and analyzes redistributive policy preferences with and without immigrant voting. Section 4 studies natives' attitudes towards foreigners' political rights. Section 5 empirically tests the predictions of the model, and section 6 concludes. Tables and proofs are located in the Appendix.

2. Model

We consider a closed economy with a native population whose size is N normalized to 1 and an immigrant population with size $M < 1$.[4] The native population has a share λ_l^n of low-skill workers and $1 - \lambda_l^n$ high-skill workers, whereas the share of low-skill workers in the immigrant population is equal to λ_l^m. We assume that foreign-born residents and natives provide inelastically one unit of labor supply to a measure 1 of firms that produce a good with the linear production function $Y = (\lambda_l^n + M\lambda_l^m)y_l + (1 - \lambda_l^n + M(1 - \lambda_l^m))y_h$, with skill-specific wages $y_l < y_h$.[5] In this economy, redistribution is financed via a proportional tax on wages at rate τ. The tax proceeds $G = \tau Y$ are then used to finance a private transfer t to the exclusive benefit of low-skill workers and a public good g in proportion μ (resp. $1-\mu$), such that the government budget constraint writes $\tau Y = (\lambda_l^n + M\lambda_l^m)t + g$ with

$$t = \frac{\mu\tau Y}{\lambda_l^n + M\lambda_l^m} \tag{1}$$

and

$$g = (1 - \mu)\tau Y. \tag{2}$$

We define the utility of an individual with skill $i \in \{l, h\}$ and nationality $j \in \{n, m\}$ as

$$u_{i,j} = \ln(c_i) + \alpha_i^j \ln(g), \tag{3}$$

[4] In what follows, we will refer to either immigrants or foreigners interchangeably.

[5] Our results would not be affected by assuming a non-linear production function and a labour market competition effect on wages y_l and y_h. Indeed, as we shall see later in the paper, although income inequalities affect the redistributive preferences of agents in our model, our main predictions do not depend on the level of wages, neither in absolute nor in relative terms.

where the benefits of redistribution vary across income class and nationality. Private consumption writes $c_l = (1-\tau)y_l + t$ for low-skill workers, and $c_h = (1-\tau)y_h$ for high-skill ones. Only low-skill agents receive the private transfer, which aggregates all cash expenditures paid out to lower-income agents for welfare and social assistance purposes. On the other hand, $\alpha_i^j \geq 0$ is an income and nationality-specific taste parameter for the public good g, where $\alpha_i^j = \psi_j \alpha_i$. This composite public good includes a variety of public expenditures including general public services, environmental protection, defense and justice expenditures, and economic and financial affairs which benefit all residents equally regardless of their skills and nationality. Moreover, this public good covers public services to which skilled natives may prefer privately funded alternatives, such as healthcare, education, housing and community amenities, leading to a lower overall valuation of these goods for high-skill than low-skill workers ($0 < \alpha_h < \alpha_l < 1$). Also, because individual preferences about the role of government in the provision of public goods and services are to some extent the product of a national and cultural heritage beside economic determinants, we make the assumption that the taste for the public good varies across nationality through the parameter ψ_j, with $0 < \psi_j < \frac{1}{\alpha_l}$[6].

Political rights $w \in [0,1]$ are modeled as a continuous variable to capture the various degrees through which foreigners are able to gain political influence. Although political participation is often understood as the right to vote and exercise electoral rights, there exist several distinct ways to influence political decisions. We therefore propose a broader definition of political rights which encompasses all political liberties and opportunities to participate in democratic life[7]. Those include the presence of immigrant organisations and local consultative bodies, the right to partake in political activism, lobbying, and protesting, the right to vote in local, regional, or national elections, and the whole set of criteria that governs access to citizenship and naturalization, which are both sufficient conditions for immigrants to participate in the political process. Alternatively, the variable w can be interpreted as the share of foreign residents in a country which are entitled to political rights based on their duration of residence.[8]

Finally, the redistributive policy $\sigma = (\tau, \mu)$ determines the size and composition of public spending in the economy. This policy σ is the outcome of a political process described by probabilistic voting in its simplest form (see Persson and Tabellini, 2000), where all types of agents, whether natives or foreigners, have the same ideological dispersion towards a candidate and the relative political weight of foreigners is equal to w. The redistributive policy outcome therefore maximizes the following social welfare function:

[6]The upper bound on ψ_j makes sure that public good consumption is valued less than or as much as private consumption ($\alpha_i^j < 1$ fo any $(i,j) \in \{l,h\} \times \{n,m\}$). However, in practice, our results would hold if we were to relax this assumption.

[7]Our approach mirrors the Migrant Integration Policy Index (MIPEX), a set of over 160 policy indicators describing migrants opportunities to participate in society in several countries

[8]Most countries impose residency requirements to foreign residents in order to be granted voting rights or file for naturalization.

$$\underset{(\tau,\mu)}{\mathrm{W}} = \lambda_l^n u_{l,n} + (1-\lambda_l^n)u_{h,n} + wM(\lambda_l^m u_{l,m} + (1-\lambda_l^m)u_{h,m}) \tag{4}$$

subject to the budget constraint: $\tau Y = (\lambda_l^n + M\lambda_m^n)t(\tau,\mu) + g(\tau,\mu)$, with $(\tau,\mu) \in [0,1]^2$.

3. Redistribution

3.1 Preferences for redistribution

Before solving for the redistributive equilibrium with and without foreigners' political rights, we look at individual preferences over τ and μ. Let $\gamma = \frac{y_h}{y_l}$ be the income inequality ratio, $L_l = \lambda_l^n + M\lambda_l^m$ and $L_h = 1 + M - L_l$ the total low-skill (resp. high-skill) labour force in the economy, and $F_l = \frac{y_l L_l}{Y}$ the share of output produced by low-skill workers. The policy preferences $\sigma_{i,j}^*$ of an individual with skill level $i \in \{l,h\}$ and nationality $j \in \{n,m\}$ are then characterized by the following first order conditions[9]:

$$FOC_{i,j}^{\mu} : \frac{t_i}{\mu c_i} - \frac{\alpha_i^j}{1-\mu} = 0 \tag{5}$$

$$FOC_{i,j}^{\tau} : \frac{\frac{t_i}{\tau} - y_i}{c_i} + \frac{\alpha_i^j}{\tau} = 0 \tag{6}$$

where $t_l = t$ and $t_h = 0$.

Turning first to the spending policy, notice that a greater μ is equivalent in our model to spending more on private transfers. As a result, the benefit from spending more tax proceeds on private transfers is represented by the positive term $\frac{t_i}{\mu c_i}$ while the benefit from spending more on public good provision is captured by $-\frac{\alpha_i^j}{1-\mu}$, which is negative. Notice also that because high-skill workers do not receive private transfers ($t_h = 0$), (5) becomes $-\frac{\alpha_h^j}{1-\mu}$ and is always trivially negative for high-skill agents regardless of the amount of income taxation in the economy. For low-skill workers, on the other hand, the marginal benefit of increasing the share of tax proceeds spent on private transfers is captured by the term $\frac{t_l}{\mu c_l} = \frac{\tau y_l}{F_l c_l} = \frac{1}{\mu + \frac{1-\tau}{\tau} F_l}$.
Moving now to the tax-rate policy, the first term on the LHS of (6) corresponds to the net gains from income redistribution. For high-skill workers, this simplifies to $-\frac{1}{1-\tau}$ and is always negative because they do no benefit from any private transfers. For low-skill workers, the first term on the LHS of (6) rewrites $\frac{1}{\tau + \frac{F_l}{\mu - F_l}}$, and the net gains from income redistribution are positive provided $\mu > F_l$, i.e when the spending policy redistributes a sufficiently high share of tax proceeds in the form of private transfers. The second term on the LHS of (6), $\frac{\alpha_i^j}{\tau}$, is always positive and captures the marginal benefit of increasing public good provision through a higher

[9] The strict quasi-concavity of u in both τ and μ is trivially satisfied.

labour income tax for a given share μ spent on the financing of public goods.

As a result, the policy mix preferred by high-skill workers is trivial, so that $\mu^*_{h,j}(\tau) = 0$ for any $\tau \in [0,1]$, and $\tau^*_{h,j}(\mu) = \frac{\alpha^j_h}{1+\alpha^j_h}$ for any $\mu \in [0,1)$.[10] Low-skill workers' relative redistributive preferences, on the other hand, depend on the relative value of τ and μ. More specifically, when $\tau < 1$, i.e under partial redistribution, low-skill workers' preferred spending policy $\mu^*_{l,j}(\tau)$ is an increasing function of τ because the provision of public goods depends entirely on government redistribution while individuals enjoy private good consumption in the form of labour income. Therefore, when tax proceeds are smaller, a higher share of them must finance the public good in order to ensure a minimal level of provision. Also, when the share of tax proceeds financing private transfers μ is smaller than $\frac{F_l}{1+\alpha^j_l}$, low-skill workers prefer partial redistribution ($\tau^*_{l,j}(\mu) < 1$) and their preferred tax rate $\tau^*_{l,j}(\mu)$ is an increasing function of μ. First, recall from the expression of (6) that when the share of government spending financing private transfers is low enough, the net gains from income redistribution for low-skill workers are negative[11], so that increasing the tax-rate will decrease their private consumption. Thus, when μ is such that the cost of a marginally higher τ on private consumption exceeds its marginal benefit from increasing the provision of public good, low-skill workers prefer an interior solution $\tau^*_{l,j}$. Moreover, as μ increases, the net marginal benefit from income redistribution increases as a greater share of tax proceeds finances private transfers, while the marginal benefit from increasing public good provision through a greater tax-rate remains constant[12]. Therefore, $\tau^*_{l,j}(\mu)$ increases with μ.

The former discussion is summarized in Lemma 1:

Lemma 1: *For any* $(\tau,\mu) \times (0,1)^2$, $\tau^*_{h,j}(\mu) = \frac{\alpha^j_h}{1+\alpha^j_h}$ *and* $\mu^*_{h,j}(\tau) = 0$. *Moreover,* $\mu^*_{l,j}(\tau) = 0$ *if* $\tau \leq \frac{1}{\frac{1}{\alpha^j_l F_l}+1}$, *and* $\mu^*_{l,j}(\tau) > 0$ *and is increasing in* τ *otherwise. If* $\mu \geq \frac{F_l}{1+\alpha^j_l}$, *then* $\tau^*_{l,j}(\mu) = 1$, *and* $\tau^*_{l,j}(\mu) < 1$ *and increases with* μ *otherwise.*

We can also derive from FOCs (5) and (6) the bliss points of each type of agents in the economy. In the absence of a distortionary effect of taxation, low-skill workers (resp. foreigners) prefer that all labour income is redistributed and that government spending finances the public good based on their relative taste for both goods, i.e such that the marginal benefit from consuming public and private goods is identical under full redistribution (when $\tau = 1$). On the other hand, we already know from what precedes that high-skill workers prefer that redistribution finances exclusively the public good and that labour income is taxed at a rate $\tau = \frac{\alpha^j_h}{1+\alpha^j_h}$. Therefore, a

[10] Note that $\tau^*_{h,j}$ is in fact discontinuous at $\mu = 1$, where $\tau^*_{h,j}(1) = 0 < \frac{\alpha^j_h}{1+\alpha^j_h}$ because skilled individuals want no redistribution at all when the tax proceeds finance exclusively private transfers. In the rest of the paper, we will however focus our attention on interior solutions for τ and μ.

[11] Observe that $\frac{1}{\tau+\frac{F_l}{\mu-F_l}} < 0$ whenever $\mu < F_l$, which is indeed satisfied if $\mu < \frac{F_l}{1+\alpha^j_l}$

[12] $\frac{\alpha^j_i}{\tau}$ does not depend on μ

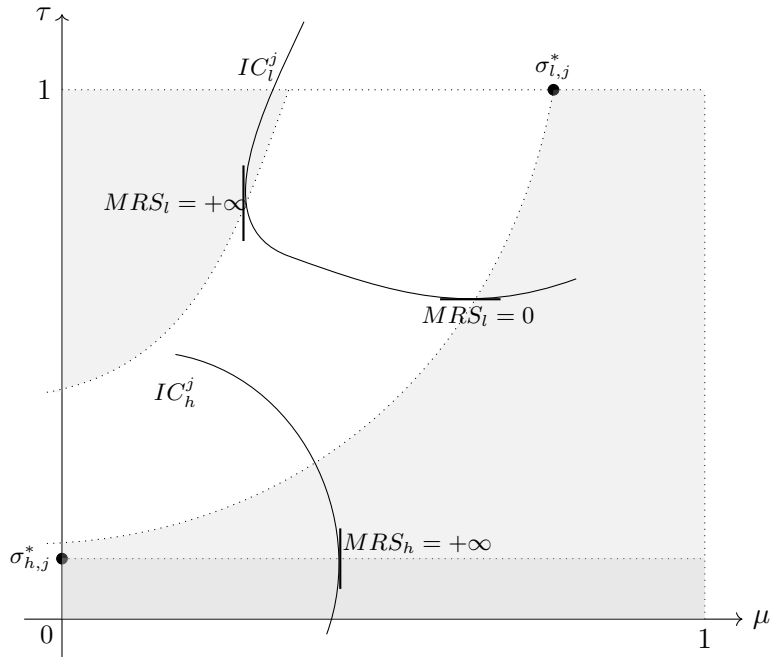
low-skill worker will always prefer a strictly higher tax rate τ and a weakly greater spending policy μ than a high-skill worker of the same nationality: $\tau^*_{l,j} = 1 > \tau^*_{h,j}$ and $\mu^*_{l,j} \geq \mu^*_{h,j} = 0$.

Lemma 2: *The preferred policy pair* $\sigma^*_{i,j} = (\tau^*_{i,j}, \mu^*_{i,j})$ *of an agent of skill* $i \in \{l, h\}$ *and nationality* $j \in \{n, m\}$ *is:*

$$\begin{cases} (\tau^*_{l,n}, \mu^*_{l,n}) = (1, \frac{1}{1+\psi_n \alpha_l}) \\ (\tau^*_{h,n}, \mu^*_{h,n}) = (\frac{\psi_n \alpha_h}{1+\psi_n \alpha_h}, 0) \\ (\tau^*_{l,m}, \mu^*_{l,m}) = (1, \frac{1}{1+\psi_m \alpha_l}) \\ (\tau^*_{h,m}, \mu^*_{h,m}) = (\frac{\psi_m \alpha_h}{1+\psi_m \alpha_h}, 0) \end{cases}$$

Individual policy preferences are corner solutions and are not affected by the size or the skill composition of the native and foreign populations. Figure 1 below graphs the preferred policy pair $\sigma^*_{l,j}$ and $\sigma^*_{h,j}$ and indifference curves IC^j_l and IC^j_h in the policy space (τ, μ). The utility-improving set of low-skill and high-skill workers is respectively located to the north-east and the south-west of IC^j_l and IC^j_h, and the grey areas capture the parameter space over which the indifference curve of high-skill workers, low-skill workers or both has a positive slope. Because rich workers' preferred tax-rate is always equal to $\frac{\alpha^j_h}{1+\alpha^j_h}$ and they do not want redistribution to finance private transfers, they will prefer to trade a lower tax-rate against a spending policy that finances a lower share of public good (a greater μ) as long as τ is greater than $\frac{\alpha^j_h}{1+\alpha^j_h}$. As a result, their indifference curve is upward sloping if $\tau \leq \frac{\alpha^j_h}{1+\alpha^j_h}$, and downward sloping otherwise. For low-skill workers, the grey zone on the right hand side of Fig. 1. corresponds to the parameter space where (i) the spending policy μ is such that the net gains from income redistribution are positive (analytically, both terms on the LHS of (6) are positive) and (ii) the marginal benefit of spending more tax proceeds on public good provision is greater than the marginal benefit of spending more on private transfers (the LHS of (5) is negative). For any policy pair (τ, μ) located in this space, there is under-provision of public goods and low-skill workers prefer a greater income-tax and that a greater share of tax proceeds finances the public good. On the contrary, when the net marginal cost of labour taxation on private consumption outweighs the marginal benefit from increasing public good provision through a greater tax-rate (analytically, this is the case when the LHS of (6) is negative), low-skill workers benefit from a reduction in the income tax and a greater share of tax proceeds financing private transfers. This is represented by the grey zone in the upper left corner of Fig. 1. Finally, the white zone in the middle corresponds to the parameter space where the policy pair (τ, μ) is such that low-skill workers' utility increases with τ and μ.

Figure 1: *Indifference curves and MRS in the* (τ, μ) *space*



We now turn to the preferences of workers based on their nationality $j \in \{n, m\}$. Analyzing the redistributive policy preferred by natives and immigrants separately provides a more intuitive grasp of the underlying mechanisms driving natives' attitudes towards enfranchisement. To do this, we first describe in the next section the redistributive political equilibrium when only natives have the right to vote.

3.2 Redistributive equilibrium without foreign voting

In this section, we characterize natives' preferences by looking at the electoral outcome when foreigners have economic rights but are excluded from the franchise ($w = 0$). The political equilibrium defined in Section 2 then maximizes a weighted social welfare function where the weight of each skill group of natives is equal to their share of the population. Let $\sigma_n = (\tau_n, \mu_n)$ be the policy pair solution to

$$\max_{\sigma} W = \lambda_l^n u_{l,n}(\sigma) + (1 - \lambda_l^n) u_{h,n}(\sigma)$$

Solving the first order conditions for policy preferences τ_n and μ_n yields[13]:

$$\sigma_n = \begin{cases} \left(\frac{\alpha_n}{1+\alpha_n}, 0 \right) \text{ if } \lambda_l^n \leq F_l \\ \left(1 - \frac{1-\lambda_l^n}{(1+\alpha_n)(1-F_l(\lambda_l^n, \lambda_l^m))}, \frac{1}{1+\alpha_n \frac{1-F_l(\lambda_l^n, \lambda_l^m)}{\lambda_l^n - F_l(\lambda_l^n, \lambda_l^m)}} \right) \text{ otherwise} \end{cases} \tag{7}$$

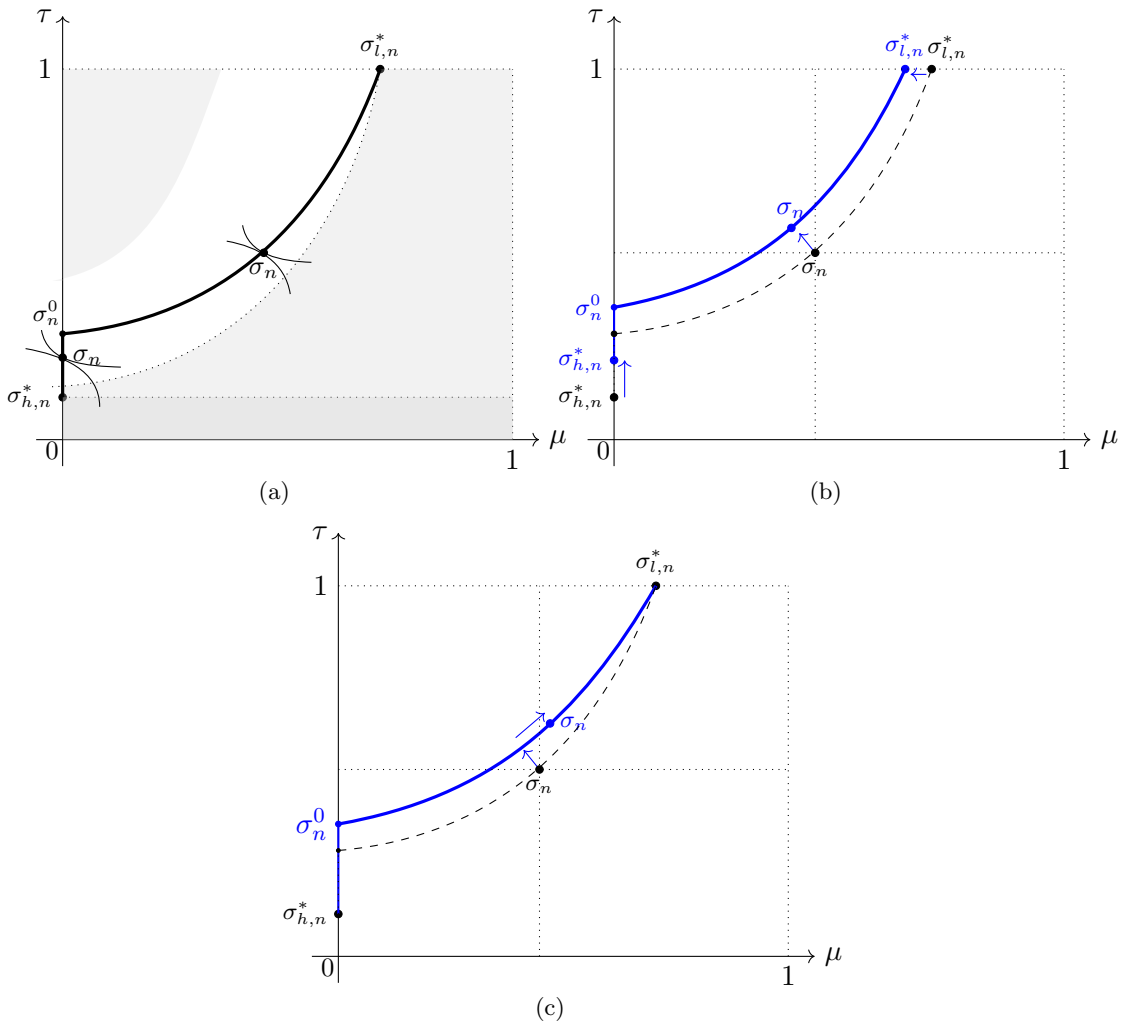
[13]The strict quasi-concavity of W_n in both τ_n and μ_n is trivially satisfied

where $\alpha_n = \psi_n \Big[\lambda_l^n \alpha_l + (1 - \lambda_l^n)\alpha_h\Big]$ is the average taste for the public good among natives.

First, notice that under our simple probabilistic voting framework, the political weight of the low-skill group corresponds to the share of low-skill workers in the native population λ_l^n. Second, observe that the marginal benefit of a policy that spends more on private transfers will decrease when the share of output produced by low-skill workers F_l increases. The intuition is straightforward: $F_l = \frac{y_l L_l}{Y}$ is an increasing function of γ (i.e is decreasing with income inequalities) and the share of low-skill workers L_l in the economy. Therefore, in line with seminal models of redistribution such as Meltzer and Richards (1981), the marginal value of income redistribution is decreasing with the average wealth in the economy, which is captured here by F_l. A direct consequence of this effect is that low-skill natives have less to gain from increasing the share of public money spent on private transfers when F_l increases. In our model, this implies that income redistribution, i.e spending more tax proceeds on private transfers, becomes relatively less efficient and less valuable than spending those tax proceeds on the provision of public goods. Furthermore, because only low-skill natives receive the private transfers, the marginal value of income redistribution is always nill for high-skill natives. As a result, the social value of income redistribution, or the value of income redistribution for society as a whole, decreases with F_l. When the political weight of low-skill natives is too small with respect to F_l, the social value of income redistribution becomes negative, and $\mu_n = 0$.
Graphically, when $\lambda_l^n \leq F_l$, the redistributive equilibrium σ_n spends no money on private transfers ($\mu_n = 0$). In Figure 2.a, it is located between the points $\sigma_{h,n}^*$ and σ_n^0 on the contract curve that runs from low-skill to high-skill natives' policy preferences (the thick dark line). When $\lambda_l^n = F_l$, a marginal increase and a marginal decrease in μ have the same social value, and the redistributive outcome is located at σ_n^0. When $\lambda_l^n \geq F_l$, it becomes socially optimal to spend some of the tax proceeds on private transfers, and $\mu_n > 0$.
Moreover, observe that the electoral outcome σ_n is Pareto-optimal[14] ($MRS_{l,n} = MRS_{h,n}$) and that the marginal rate of substitution of natives is positive at σ_n: The equilibrium tax-rate and share of tax proceeds spent on private transfers is too low (resp. too high) for low-skill (resp. high-skill) natives. Because we make the assumption that immigration is already present in the country, the size and average wealth in the economy is fixed, and redistribution therefore boils down to a zero-sum game between low-skill and high-skill natives. It is worth stressing that symmetric results would hold for the redistributive preferences of foreigners $\sigma_m = (\tau_m, \mu_m)$ if the redistributive equilibrium was decided by a voting process in which only foreigners were allowed to vote. In this regard, symmetric propositions to 1.1, 1.2, and 1.3 derived hereafter apply to the preferences of foreigners.

[14]This is a standard result of probabilistic voting (Coughlin (1982)

Figure 2: *The consequences of immigration on natives' redistributive preferences*



Proposition 1.1: *When $\lambda_l^n \leq F_l$, τ_n is increasing with ψ_n, α_l and α_h. When $\lambda_l^n > F_l$, τ_n is increasing with α_l and α_h, and ψ_n, and μ_n is decreasing in ψ_n, α_l and α_h.*

A greater intrinsic taste for the public good (captured through ψ_n, α_l and α_h) decreases the share of tax proceeds financing the private transfer as natives' relative taste for the public good over the private good increases. Likewise, the equilibrium tax rate τ_n increases with ψ_n, α_l, and α_h since natives then value the consumption of the public good more independently of their support for income redistribution. Graphically, an increase in ψ_n shifts $\sigma^*_{l,n}$ to the left while $\sigma^*_{h,n}$ and σ^0_n move up. As a result, the new policy equilibrium shifts up and left with the new contract curve (see Fig 2.b).

Proposition 1.2: *When $\lambda_l^n \leq F_l$, τ_n is increasing with λ_l^n. When $\lambda_l^n > F_l$, μ_n and τ_n are increasing with λ_l^n.*

We first describe what happens when $\lambda_l^n > F_l$. The impact of an increase in the share of low-skill natives λ_l^n on the equilibrium policy μ_n goes through three distinct channels. The first one is political: When the low-skill group has greater political weight, this pushes the spending policy μ_n up as low-skill natives prefer that a greater share of tax proceeds finances private transfers than high-skill natives (this is captured by the term $\lambda_l^n - F_l$ in the expression of μ_n in (7)). The second and third channels are economic: A greater share of low-skill workers λ_l^n implies that the economy is poorer on average, and therefore that the social marginal value of income taxation is lower, along the same intuition as the one developed in the previous section. Therefore, μ_n goes down as it becomes socially optimal to spend a lower share of public funds on private transfers. Also, because low-skill natives value the public good more than high-skill natives (recall $\alpha_l > \alpha_h$), the average taste for the public good among natives will increase with λ_l^n: As a result, the social value of the public good increases, and μ_n decreases. The aggregate impact of λ_l^n on μ_n is positive because the political effect dominates the economic effect: The additional political weight of low-skill native λ_l^n outweighs the change in natives' average economic preferences.

In the same fashion, the impact of λ_l^n on τ_n depends on the relative changes in the political weight of low-skill natives with respect to the economic preferences of the native population: When the political weight of low-skill natives λ_l^n increases, the tax rate policy τ_n increases as well because low-skill natives prefer a higher tax-rate than high-skill natives (recall that $\tau_{l,n}^*(\mu_n) > \tau_n > \tau_{h,n}^*(\mu_n)$). A greater share of low-skill workers λ_l^n also implies that the economy is poorer on average, and therefore that the marginal social value of income taxation is lower, which exerts a downward pressure on τ_n. Finally, because $\alpha_l > \alpha_h$, the average value of public good for natives goes up with λ_l^n. This increases their demand for the provision of public good regardless of how much they value income taxation and increases τ_n. The effect of the two positive channels combined always dominates the adverse impact of a lower social value of income taxation, and τ_n increases with λ_l^n.

When $\lambda_l^n \leq F_l$, the impact of λ_l^n on the equilibrium tax-rate τ_n only depends on the changes in the political weight of low-skill natives and natives' average taste for the public good. Indeed, redistribution does not finance the private transfer ($\mu_n = 0$) and therefore λ_l^n has no effect on the social value of income redistribution. Since both of the former channels have a positive effect on the equilibrium tax-rate, we have that τ_n unambiguously increases with λ_l^n when $\lambda_l^n \leq F_l$.

Graphically, when λ_l^n increases, σ_n^0 moves up and defines a new contract curve (see Fig 2.c). When $\lambda_l^n \leq F_l$, σ_n simply moves up along with this new contract curve. When $\lambda_l^n > F_l$, the policy equilibrium σ_n moves in the north-west direction and shifts up and right alongside the new contract curve.

Proposition 1.3: *γ has no effect on σ_n as long as $\lambda_l^n \leq F_l$. When $\lambda_l^n > F_l$, τ_n and μ_n increase with γ.*

Income inequalities only affect σ_n through the average income in the economy and therefore the social value of income redistribution. Therefore, as long as $\lambda_l^n \leq F_l$ and redistribution does not finance private transfers, a change in income inequalities will have no effect on the redistributive equilibrium. On the other hand, when $\lambda_l^n > F_l$ and $\mu_n > 0$, both τ_n and μ_n will increase with income inequalities γ. The intuition is the following: Ceteris paribus, greater income inequalities will increase the size of cash transfers received by low-skill natives. Because high-skill natives' preferences over μ and τ are completely independent (recall $\mu_{h,n}^*(\tau) = 0$ and $\tau_{h,n}^*(\mu) = \frac{\alpha_h^n}{1+\alpha_h^n}$), a higher γ will only affect low-skill natives' redistributive preferences. As a result, the marginal social value of greater income taxation increases, and τ_n and μ_n increase as well, bringing the redistributive equilibrium closer to low-skill natives preferences.
Graphically, when γ increases, σ_n^0 goes down and σ_n will move up on the contract curve towards $\sigma_{l,n}^*$ and reach a redistributive equilibrium that features a greater tax-rate and a spending policy that spends a greater share of tax proceeds on private transfers.

Proposition 1.4: *When $\lambda_l^n \leq F_l$, a change in the the size (M) or the skill composition (λ_l^m) of immigration does not alter the redistributive outcome. When $\lambda_l^n > F_l$, μ_n and τ_n decrease with λ_l^m. Moreover, μ_n and τ_n decrease with M if and only if immigrants are less skilled than natives on average.*

When the spending policy does not finance private transfers, the change in immigrants' skill composition or in the size of immigration has no effect on σ_n. In fact, a larger and / or a less skilled immigration does not affect natives' preferences for the public good but only the average income in the economy and therefore the social value of income redistribution. As discussed previously, when redistribution does not finance private transfers, this has no effect on the redistributive equilibrium. However, when $\lambda_l^n > F_l$, a relatively less skilled immigration implies that the economy is poorer on average, which reduces the social value of income redistribution, and τ_n and μ_n therefore decrease. In the same fashion, if immigrants are less skilled than natives on average ($\lambda_l^n < \lambda_l^m$), the economy becomes poorer as more immigrants enter the country, which has the same adverse impact on the social value of income redistribution as an increase in λ_l^m. This leads to lower τ_n and μ_n in equilibrium. Graphically, an increase in λ_l^m or an increase in M when $\lambda_l^n < \lambda_l^m$ will have the same consequences: σ_n will shift down and left alongside the contract curve.

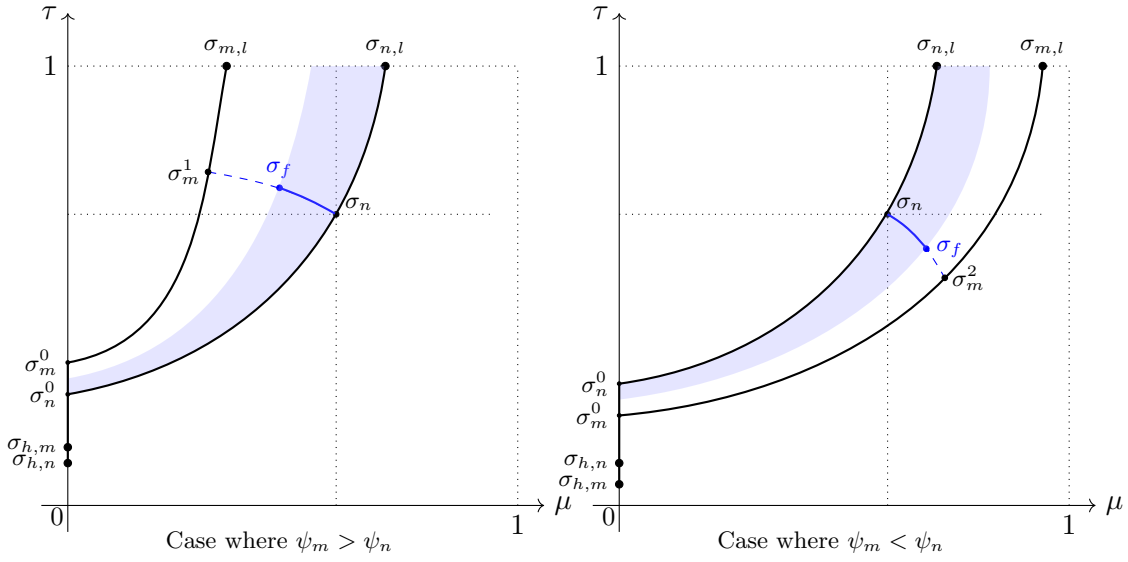
This last proposition resonates with the recent findings of the political economy literature. More specifically, a large body of works documenting the impact of immigration on welfare attitudes finds that natives reduce their support for income redistribution in the presence of a

relatively low-skill immigration (see for instance Alesina et al. (2005, 2018)), and this welfare retrenchment is often associated in the theoretical literature with two distinct channels. The first one is cultural: Natives selectively oppose redistribution towards immigrants whom they perceive as undeserving, which is also referred to as welfare chauvinism. The second channel is economic, and suggests that natives decrease their support for redistribution when faced with low-skill immigration as they expect transfers to decrease with the average income in the economy. Proposition 1.4 above falls into the second category, as we find that both the tax-rate and the share of tax proceeds spent on private transfers are decreasing (resp. increasing) with the size of immigration when immigrants are on average less (resp. more) skilled than natives.

3.3 Redistributive equilibrium with foreign voting

We now turn to the impact of foreigners' enfranchisement on the redistributive equilibrium. We first provide a graphical example of the consequences of foreigners' enfranchisement in the policy space (τ, μ). In Figure 3, the locus of all possible redistributive equilibria when foreigners are granted political rights is represented by the shaded area in blue, where the outer limit of that space extends towards the contract curve of foreigners as the size of immigration M increases. More specifically, for a given set of preferences σ_n and σ_m, the policy equilibrium when foreigners do not have political rights coincides with the preferences of natives σ_n and moves towards σ_f - the policy outcome when foreigners are granted full enfranchisement ($w = 1$) - along the blue segment as foreigners' political rights increase. The slope of this segment is equal to the marginal rate of transformation between τ and μ with political rights, i.e the relative rate of change between the two policy variables with w. In the rest of the paper, we normalize natives' cultural taste for redistribution to $\psi_n = 1$ so that $\psi_m = \psi$ capture immigrants' relative cultural preferences for public spending.

Figure 3: *The consequences of foreigners' political rights on redistribution*



Let $\sigma_0(w) = (\tau_0(w)\mu_0(w))$ be the redistributive policy equilibrium when foreigners have political rights $w \in [0,1]$. Maximizing (4) over σ then yields the following equilibrium policies[15]:

$$\mu_0(w) = \frac{1}{1 + \frac{\alpha_p(w)(1-F_l)}{\lambda_l^n - F_l + Mw(\lambda_l^m - F_l)}} \tag{8}$$

$$\tau_0(w) = 1 - \frac{1 - \lambda_l^n + Mw(1-\lambda_l^m)}{(1+\alpha_p(w)+wM)(1-F_l)} \tag{9}$$

where $\alpha_p(w) = \alpha_n + wM\alpha_m$ captures the socially weighted taste for the public good in the economy when foreigners have political rights w.

Proposition 2.1: *The tax rate τ_0 increases with the political rights of foreigners w if and only if $\frac{1+\alpha_n}{1+\alpha_m} \leq \frac{1-\lambda_l^n}{1-\lambda_l^m}$. The share of government spending financing private transfers μ_0 increases with w if and only if $\frac{\alpha_m}{\alpha_n} \leq \frac{\lambda_l^m - F_l}{\lambda_l^n - F_l}$.*

This proposition states the condition under which the enfranchisement of foreign workers will lead to an increase in the equilibrium tax rate τ_0. Intuitively, τ_0 will increase with the enfranchisement of foreign workers when the average preferred tax rate among foreigners is greater than the average tax rate preferred by natives. It is also clear from what precedes that the equilibrium tax rate τ_0 is increasing with the share of low-skill workers in the economy and the cultural taste for the provision of public good α. In relative terms, this implies that the preferred tax rate of the average immigrant worker τ_m will be greater than natives' preferred tax rate τ_n when (i) the relative share of low-skill workers in the foreign population and (ii) the relative taste of foreigners for the public good are sufficiently high, as stated by the inequality in the first part of the proposition.

Moreover, the impact of migrants' enfranchisement on the composition of public spending depends on the relative preference for private transfers over the public good between natives and foreigners. While a relatively greater share of low-skill foreign workers increases the demand for private transfers and thus increases μ_0, relatively stronger preferences for the public good exerts a symmetric downward pressure on the spending policy as the average worker in the franchise values the public good more. Note that both channels depend positively on λ_l^m, and therefore μ_0 increases with w when foreigners' cultural preferences for the public good ψ are sufficiently low.

Figure 4. graphs the effect of the political rights of foreigners on redistributive policies in the space (λ_l^m, ψ). The red shaded area corresponds to the parameter space over which τ_0 is in-

[15]For the rest of the paper, we will focus our attention on interior solutions only, namely on solutions where $(\tau_0, \mu_0) \in (0,1)^2$ and therefore assume that $\lambda_l^n + Mw\lambda_l^m > F_l(1+Mw)$. This assumption does not alter the main predictions of the model and simplifies the exposition

creasing with w, while the grey, hatched area indicates the values of ψ and λ_l^m for which the share of public spending on transfers μ_0 is increasing.

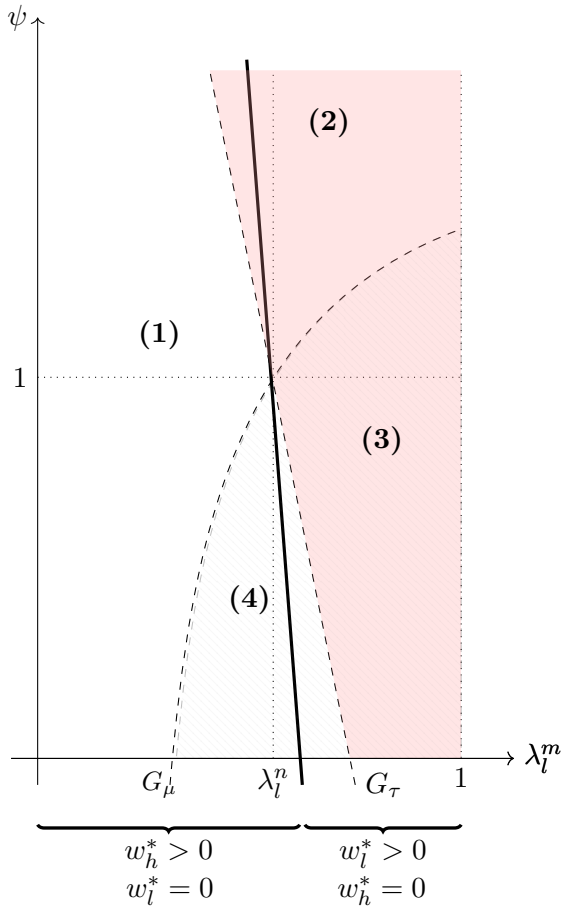
Proposition 2.2: *When foreigners are more conservative than natives ($\psi \leq 1$), the share of tax proceeds spent on cash transfers μ_0 increases with political rights w if foreigners are on average less skilled than natives ($\lambda_l^m > \lambda_l^n$). Moreover, when $\psi \leq 1$, if the equilibrium tax rate τ_0 is increasing with w then μ_0 is increasing as well: $\frac{d\tau_0}{dw} \geq 0 \Rightarrow \frac{d\mu_0}{dw} \geq 0$. When foreigners are more liberal than natives ($\psi \geq 1$), the equilibrium tax-rate policy τ_0 increases with political rights w if foreigners are on average less skilled than natives ($\lambda_l^m > \lambda_l^n$). Moreover, if μ_0 is increasing with w, then τ_0 is increasing as well: $\frac{d\mu_0}{dw} \geq 0 \Rightarrow \frac{d\tau_0}{dw} \geq 0$.*

When foreigners have lower cultural preferences for the public good than natives, they prefer that the government spends more money on the provision of private transfers than natives, ceteris paribus. Also, we know from Proposition 1.2 that a greater share of low-skill workers of nationality j increases the share of public money spent on private transfers μ_j preferred by individuals of nationality j. Therefore, when foreigners are both less skilled than natives and have intrinsically lower preferences for the public good ($\psi < 1$), their enfranchisement will always lead to a weakly greater share of tax proceeds spent on the financing of private transfers μ_0. Also, because a lower taste for the public good decreases the tax-rate τ_j preferred by workers of nationality j, a necessary condition for the tax rate τ_0 to increase with w is that immigrants are less-skilled than natives.
A symmetric argument can be made for the case where foreigners value the public good more than natives ($\psi > 1$). It suffices then that foreigners are relatively less skilled than natives ($\lambda_l^m > \lambda_l^n$) in order for the tax-rate policy τ_0 to increase with political rights w. Likewise, because foreigners' that have greater taste for the public good than native prefer to spend fewer tax proceeds on private transfer, ceteris paribus, a necessary but not sufficient condition for the equilibrium policy μ_0 to increase with w is that foreigners are relatively less skilled than natives.

Foreigners' political rights can therefore influence redistribution in the four possible ways depicted in Figure 4: When the skill level of immigration is high enough ($\lambda_l^m < G_\mu$ and $\psi < 1$ or $\lambda_l^m < G_\tau$ and $\psi > 1$), the enfranchisement of foreigners decreases both the tax-rate and the share of tax proceeds spent on private transfers (area (1)). When foreigners have sufficiently greater taste for the public good ($\lambda_l^m < G_\mu$ and $\lambda_l^m > G_\tau$), granting foreigners political rights lead to an increase in the size of public spending (a greater τ_0) and a decrease in the share of pubic spending spent on private transfers μ_0 (area (2)). When the immigrants are sufficiently unskilled and the preferences of foreigners for the public good low enough, both the tax rate and the share of tax proceeds spent on transfers increases when foreigners are enfranchised (area (3)). Finally, when the skill gap between immigrants and natives is small enough and foreigners value the public good less than natives, their political participation leads to a greater share of public spending financing private transfers μ_0 and a lower tax rate τ_0 (area (4)). The thick

black line represents natives' attitudes towards enfranchisement and will be discussed later in the paper.

Figure 4: *The consequences of foreigners' political rights on redistribution*



Finally, because natives' attitudes towards enfranchisement depend ultimately on the impact of political rights on the level of private consumption and public good provision through their redistributive implications, we characterize the effect of foreigners' political participation on c and g. Plugging (8) and (9) into the expression of c_i and g, we obtain the following level of private consumption and public good provision at the redistributive equilibrium σ_0:

$$c_i(\sigma_0) = \frac{Y(\lambda_i^n + \lambda_i^m M w)}{(\lambda_i^n + \lambda_i^m M)(1 + wM + \alpha_p)} \tag{10}$$

$$g(\sigma_0) = \frac{\alpha_p Y}{1 + wM + \alpha_p} \tag{11}$$

Proposition 2.3: *The private consumption c_i of natives with skill level $i \in \{l, h\}$ increases with the political rights of foreigners w if and only if $\lambda_i^m(1+\alpha_n) \geq \lambda_i^n(1+\alpha_m)$. The level of public good provision g increases with the political rights of foreigners w if and only if $\alpha_m \geq \alpha_n$.*

For low-skill natives, the net effect of political rights on private consumption is positive when private transfers increase with w. Because only low-skill workers receive private transfers, the political participation of foreigners leads to an increase in the size of these transfers only when the share of low-skill immigrants λ_l^m is sufficiently high. Moreover, the impact of political rights on redistributive policies depends not only on the skill composition of foreigners but also on their relative cultural preferences towards public spending. In particular, foreigners choose to increase the amount of tax proceeds and spend a greater share of those proceeds on public good provision as ψ increases. Therefore, another condition for low-skill private consumption and private transfers to increase with w is that foreigners' cultural preferences towards public spending are sufficiently low[16].

The level of public good provision g will increase with political rights when the average taste for the public good among foreigners is greater than among natives. Recall that $\alpha_j = \psi_j\Big[\lambda_l^j\alpha_l + (1-\lambda_l^j)\alpha_h\Big]$, from which comes immediately that the effect of w on the provision of public goods depends on the relative skill composition and the cultural preferences of foreigner. Therefore, public good provision will increase following foreigners' enfranchisement when $\alpha_m \geq \alpha_n$, i.e when immigrants are sufficiently unskilled and their cultural preferences for redistribution are sufficiently high.

4. Attitudes towards political rights

We have seen in the previous section how the political rights of foreigners alter the redistributive political equilibrium σ and thereby impact natives' private and public good consumption. We can now determine under which conditions the enfranchisement of foreigners benefits natives. Plugging (10) and (11) into (3) gives the following indirect utility function for low and high-skill natives:

$$V_l(w) = \ln\big(\frac{Y(\lambda_l^n + \lambda_l^m M w)}{(\lambda_l^n + \lambda_l^m M)(1 + wM + \alpha_p)}\big) + \alpha_l \ln\big(\frac{\alpha_p Y}{1 + wM + \alpha_p}\big) \tag{12}$$

$$V_h(w) = \ln\big(\frac{Y(1 - \lambda_l^n + (1-\lambda_l^m) M w)}{(1 - \lambda_l^n + (1-\lambda_l^m) M)(1 + wM + \alpha_p)}\big) + \alpha_h \ln\big(\frac{\alpha_p Y}{1 + wM + \alpha_p}\big) \tag{13}$$

Lemma 3: *Low and high-skill natives have single-peaked preferences in w.*

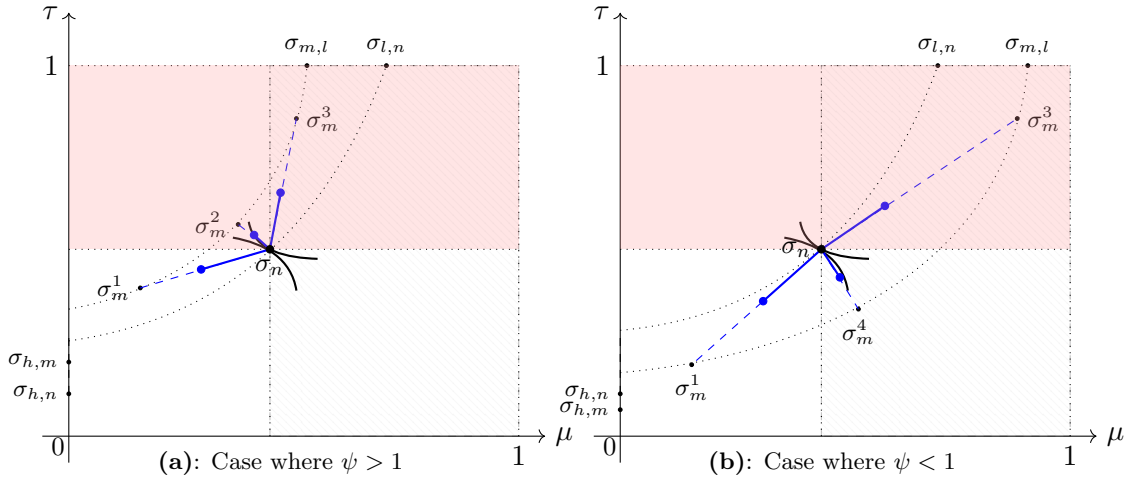
The preferred level of political rights w_i^* of a native with skill level $i \in \{l, h\}$ is then obtained

by maximizing V_i over w. The FOC then yields the following proposition:

Proposition 3: *Natives have opposite views towards the political rights of foreigners:* $w_l > 0 \Leftrightarrow w_h = 0$.

The intuition is simple. In the absence of political rights, because the redistributive policy outcome σ_n is Pareto-optimal, the marginal rate of substitution is the same for low-skill and high-skill natives and there exists no policy deviation from σ_n that can improve the utility of both groups. Therefore, natives hold conflicting, income-specific views over w. Fig 5 represents graphically the locus of political redistributive equilibria σ_0 for different values of σ_m and ψ. Natives will prefer to grant some political rights ($w_i^* > 0$) to foreigners when the redistributive political equilibrium moves from σ_n into their utility-improving set. When $\psi > 1$ (Fig 5.a), a first possibility is that foreigners' preferences are located at σ_m^1, such that τ_0 and μ_0 decrease with w (outcome (1) of Fig. 4). The redistributive equilibrium is then located on the blue segment between σ_n and σ_m^1 and in the utility-improving set of high-skill natives and stays outside that of the low-skill group. On the other hand, both σ_m^2 and σ_m^3 represents a set of foreign preferences for which foreigners' political rights would benefit low-skill natives at the margin (i.e at $w = 0$), respectively through an increase in τ_0 and a decrease in μ_0 (σ_m^2, outcome (2)) and an increase in both τ_0 and μ_0 (σ_m^3, outcome (3)). Fig 5.b represents all possible political outcomes when $\psi < 1$. The case where foreigners' preferences are located at σ_m^1 and σ_m^3 have been discussed previously. σ_m^4 (outcome (4)) corresponds to the fourth possible way in which foreigners' political rights may impact the redistributive equilibrium: The tax-rate τ_0 decreases while the spending policy μ increases. The graphical example presented here is such that the enfranchisement of foreigners benefit high-skill natives, but we will see later in the paper that this is not always the case.

Figure 5: *Natives' attitudes towards enfranchisement*



Proposition 4: *Skill i natives grant political rights $w_i^* > 0$ to foreigners if and only if $\lambda_i^m \geq \underline{\lambda_i}$, with $\underline{\lambda_i} > 0$. Moreover, $\frac{d\lambda_l}{d\lambda_l^n} \geq 0$ and $\frac{d\lambda_l}{d\psi} \leq 0$, and $\frac{d\lambda_h}{d\lambda_h^n} \geq 0$ and $\frac{d\lambda_h}{d\psi} \geq 0$. Finally, $\underline{\lambda_l} \geq \lambda_l^n$ and $\underline{\lambda_h} \leq \lambda_h^n$ if and only if $\psi \leq 1$.*

The first part of Proposition 4 is rather intuitive and simply states that natives prefer to grant foreigners political rights $w_i^* > 0$ when immigrants with the same skill level as their own make up a sufficiently high share of the foreign population. For low-skill natives, the redistributive policy outcome σ_n is such that the tax-rate and the share of public money spent on private transfers is too low. Therefore, they would never grant political rights to foreigners when too many of them are skilled, as their enfranchisement would then lead to lower values of both τ_0 and μ_0 (see Prop 2.1). Furthermore, because low and high-skill natives have symmetric views towards enfranchisement, high-skill natives will always grant foreigners political rights when low-skill natives refuse to do so, and therefore support foreigners' enfranchisement when immigrants are sufficiently skilled. However, the relatively unskilled or skilled immigration alone is neither a sufficient nor a necessary condition for the enfranchisement of foreigners because redistributive preferences are also driven by cultural beliefs ψ. Proposition 4 therefore predicts that the maximum (resp. minimum) skill level for which low-skill (resp. high-skill) natives are willing to grant foreigners political rights increases with the share of low-skill (resp. high-skill) foreigners **and** immigrants' cultural preferences for redistribution: When foreigners are more liberal towards public spending ($\psi \geq 1$), low-skill natives are then willing to enfranchise them even if their average skill level is greater than natives', i.e even if $\lambda_l^m < \lambda_l^n$. On the other hand, they will hold more restrictive views towards the enfranchisement of conservative immigrants, and would only grant them political rights under the condition that they are strictly less skilled than the native population. High-skill natives, on the contrary, have symmetric attitudes towards immigrants' political rights, and would enfranchise foreigners more easily when those are less supportive of government spending. This is represented in Fig. 4 by the thick black line, which divides the parameter space between the values of λ_l^m and ψ for which natives prefer to grant political rights to foreigners.

To better understand the interaction between the skill level of immigrants and their cultural preferences behind this last result, we discuss hereafter the impact of foreigners' political rights on private consumption and public good provision for low-skill natives. The following discussion should give the reader sufficient intuition to achieve a symmetric conclusion for high-skill natives.

First, notice that low-skill natives will always oppose enfranchisement when c_l and g decrease with w and always support it when they both increase with w. On the other hand, a trade-off between private and public good consumption arises when either c_l or g increases and the other decreases with w. More specifically, when foreigners are more conservative than natives ($\psi < 1$), this trade-off is such that private consumption increases and public good provision decreases with w (see Prop 2.3), and low-skill natives then enfranchise foreigners ($w_l^* > 0$) if and only if the following inequality is satisfied:

$$\frac{\lambda_l^m(1+\alpha_n)-\lambda_l^n(1+\alpha_m)}{\alpha_n-\alpha_m} \geq \frac{\alpha_l \lambda_l^n}{\alpha_n} \tag{14}$$

The term on the LHS of (14) corresponds to the relative marginal impact (or marginal rate of transformation) of political rights on private consumption and public good provision, i.e the ratio of the marginal effect of w on c_l over its marginal impact on g at the redistributive policy equilibrium σ_n[17], i.e when foreigners are excluded from the franchise. On the other hand, the term on the RHS captures natives' marginal rate of substitution between c and g at σ_n. The ratio $\frac{\alpha_l}{\alpha_n}$ measures the relative value of a marginal increase in g while λ_l^n corresponds to the marginal value of private consumption. Because utility is concave in both c and g, the relative value of an increase in g decreases with low-skill natives' average taste for the public good α_n and the relative value of private consumption c_l decreases with the political weight of skill low-skill natives λ_l^n. This is because the larger these parameters are, the greater the value of g and c_l will be at σ_n.

When c_l increases and g decreases with w, foreigners' political participation increases low-skill natives' utility through higher private transfers and decreases it through lower public good provision. Low-skill natives then enfranchise foreigners when the relative marginal impact of w on c_l is sufficiently high with respect to their marginal effect on g[18].
Also, while the share of low-skill immigrants λ_l^m does not affect natives' marginal rate of substitution between c_l and g at σ_n (the RHS of (14)), it increases the marginal impact of political rights on c_l and decreases their marginal impact on g[19], which implies that the relative marginal impact of w on c_l with respect to g (the LHS of (14)) is increasing with λ_l^m. In particular, when immigration is less skilled (λ_l^m is higher), the marginal impact of political rights on c_l increases with w by $(1+\alpha_n)-\lambda_l^n\psi(\alpha_l-\alpha_h)$, where the first term $(1+\alpha_n)$ is positive and captures the effect of the additional weight of low-skill voters supporting private transfers, while the second term $-\lambda_l^n\psi(\alpha_l-\alpha_h)$ represents the adverse impact on private consumption of foregone tax proceeds not financing private transfers as a result of a greater taste for the public good among foreigners: Recall that low-skill workers value the public good more than skilled workers: $\alpha_l > \alpha_h$, and therefore a less skilled immigration also has a greater average taste for the public good. Incidentally, the skill composition λ_l^m has a direct effect on the marginal impact of political rights on g, which decreases by $\psi(\alpha_l-\alpha_h)$, as foreigners' average preferences for the public good increase. Therefore, the fact that low-skill workers value the public good more than skilled workers lowers the positive marginal impact of w on private consumption c_l but also decreases the adverse marginal impact of w on g when the share of low-skill immigrants

[17]The numerator is positive because c_l increases with w while the denominator is positive as g decreases with w. See Prop 2.3.

[18]Analytically, this is the case when the marginal impact of political rights is greater than the marginal rate of substitution

[19]The derivative of $\lambda_l^m(1+\alpha_n)-\lambda_l^n(1+\alpha_m)$ with respect to λ_l^m is $(1+\alpha_n)-\lambda_l^n\psi(\alpha_l-\alpha_h)$, which is always positive when $\psi<1$, and the derivative of $\alpha_n-\alpha_m$ with λ_l^m is $-\psi(\alpha_l-\alpha_h)$ and always negative

goes up.
Besides, it is easy to check that the share of low-skill immigrants λ_l^m has a relatively greater effect through foreigners' cultural preferences ψ on the marginal impact of political rights on g than it has on the marginal impact of political rights c_l, since $\psi(\alpha_l - \alpha_h) > \lambda_l^n \psi(\alpha_l - \alpha_h)$. When c_l increases and g decreases, this implies that the relative marginal impact of w will increase more rapidly with λ_l^m for larger values of ψ. In other words, as λ_l^m increases, political rights become relatively more efficient at increasing private consumption than they are at decreasing public good provision when ψ is higher, and low-skill natives will support enfranchisement for lower values of λ_l^m.

When $\psi > 1$, low-skill natives face the opposite trade-off, where private consumption decreases and public good provision increases with w. They enfranchise foreigners if and only if the following inequality is satisfied :

$$\frac{\lambda_l^m(1+\alpha_n) - \lambda_l^n(1+\alpha_m)}{\alpha_n - \alpha_m} \leq \frac{\alpha_l \lambda_l^n}{\alpha_n} \tag{15}$$

Using a symmetric argument as before, a greater ψ then implies that as λ_l^m increases, political rights will be more efficient at increasing public good provision than they are at decreasing private consumption so that the maximum skill level for which low-skill natives are willing to grant foreigners political rights increases with ψ.

A more general economic intuition for the previous discussion is that greater cultural taste for redistribution and a greater share of low-skill immigrants work as complements in low-skill natives' decision to enfranchise foreigners: For a given skill level of immigration λ_l^m, a greater ψ leads, ceteris paribus, to greater tax proceeds, which can be used to finance more public good and / or greater private transfers. On the other hand, a lower ψ leads to lower tax proceeds and forces a trade-off between the financing of private and public goods. When $\psi > 1$, the fact that foreigners have greater cultural taste for redistribution therefore creates a form of *redistributive slack* by increasing the amount of tax proceeds so that low-skill natives may choose to enfranchise immigrants even if those are relatively more skilled than natives on average. On the other hand, when $\psi < 1$, more conservative views towards redistribution shrinks the amount of tax proceeds which requires that immigrants are strictly less skilled than natives for low-skill natives to benefit from their enfranchisement.

Therefore, in our model, the skill composition of immigrants alone does not explain natives' attitudes towards foreigners' political participation. Rather, natives will support the enfranchisement of foreigners based on the combined effect of the quality of immigration and the cultural preferences of foreigners on redistribution. In this regard, Proposition 4 establishes a

simple but original result[20]. It predicts that when foreigners are relatively liberal towards public spending, low-skill natives grant political rights to richer immigrants when the aggregate effect of enfranchisement on their level of public and private consumption increases their economic welfare. Symmetrically, when foreigners are relatively conservative, high-skill natives enfranchise poorer immigrants when their enfranchisement decreases the size of government spending so that the utility gains from a lower tax-rate are greater than the cost of decreasing the provision of public goods. This result is represented graphically in Figure 4 by the thick dark line which parts the parameter space according to the preferences of low-skill and high-skill natives.

In what follows, we characterize the willingness of natives to grant political rights by looking at how their preferred level of political rights w^* varies with the exogenous parameters of the model when the optimization problem of natives admits an interior solution.

Proposition 5: *Both low and high-skill natives' preferred level of political rights decreases with the size of immigration M.*

In line with recent studies about natives' attitudes toward foreigners' political participation (Mariani, 2013, Stutzer et al. (2019), our model predicts that a larger immigration reduces natives' support for political rights. In our model, the size of immigration influences natives' preferred level of political rights only through the political weight of foreigners. Recall that because immigration is not endogenous, redistribution is a zero-sum game. Natives therefore only support the political rights of foreigners insofar as they contribute to bringing the policy outcome as close as possible to their own preferences. In this regard, the level of political participation w and the size of immigration M can be regarded as perfect substitutes because foreigners' political weight following enfranchisement is simply the product of the size of immigration and their political rights Mw. Since a larger immigration implies that the impact of foreigners' enfranchisement on redistribution will be greater for a given level of political rights w, less political rights are required to influence the equilibrium policy in natives' most preferred way when M is larger, and w^* therefore decreases with M.

[20]As mentioned in the introduction, these results do not depend on income levels and inequalities and would therefore hold under the assumption of labour market competition between natives and immigrants.

Proposition 6: *When foreigners are more conservative than natives ($\psi \leq 1$), low-skill natives' preferred level of political rights w_l^* increases with foreigners' cultural preferences for redistribution ψ. Moreover, w_h^* increases with ψ for sufficiently low values of α_m, and decreases with ψ otherwise. When foreigners are more liberal than natives ($\psi \geq 1$), low-skill natives preferred level of political rights w_l^* increases with foreigners' cultural preferences for redistribution ψ for sufficiently low values of α_m, and decreases with ψ otherwise. Moreover, w_h^* always decreases with ψ.*

First, notice that if both private consumption c_i and public good provision g increase with w, then natives will always grant foreigners full enfranchisement ($w_i^* = 1$). On the contrary, when both private consumption and public good provision are decreasing with political rights, natives always oppose enfranchisement and $w_i^* = 0$. Therefore, for any interior solution $w^* \in (0, 1)$ to the optimization problem of natives, it must be that either c or g increases while the other decreases with w, and we will thus focus our attention on these two scenarios in what follows.
Second, notice that an increase in ψ implies that (i) foreigners are in favour of taxing labour income more because a greater taste for the public good, ceteris paribus, requires higher tax proceeds, and (ii) foreigners' valuation of the public good α_m w.r.t to private transfers increases.

In what follows, we describe the intuition behind Proposition 6 separately for low-skill natives and high-skill natives.

When $w_l^* \in (0, 1)$ and foreigners are relatively conservative ($\psi \leq 1$), low-skill natives' private consumption c_l increases while public good provision g decreases with w (τ_0 is decreasing and μ_0 increasing with w). Therefore, a higher ψ implies that a marginal increase in political rights leads to relatively greater tax proceeds, i.e is such that the tax rate τ_0 decreases less with w. Second, as foreigners' cultural views on public spending ψ improve, the spending policy μ_0 puts relatively more weight on the financing of public good provision and these additional tax proceeds are spent in a way that is better aligned with low-skill natives' relative taste for the public and the private good[21]. Therefore, by increasing the size of tax proceeds and shaping the use of public funds in a more profitable way, a larger ψ increases the marginal benefit of political rights for low-skill natives, and w_l^* increases with ψ.
When w_l^* is interior and foreigners are relatively liberal ($\psi \geq 1$), low-skill natives' private consumption c_l decreases while public good provision g increases with w (τ_0 is increasing and μ_0 decreasing with w). As before, a higher ψ is such that a marginal increase in political rights increases tax proceeds relatively more (τ_0 increases more with w), which benefits low-skill natives. However, the effect of ψ on the spending policy now depends on foreigners' relative taste for the public good α_m. As long as α_m is lower than α_l, the same positive effect as before plays out: Changes to the spending policy benefit low-skill natives because foreigners' relative preferences

[21] α_m increases with ψ. Therefore, when $\frac{dg}{dw} < 0$ and $\alpha_m < \alpha_n$, the gap between low-skill natives' relative taste for the public good α_l and foreigners' α_m gets smaller as ψ increases, since we have trivially that $\alpha_l > \alpha_n > \alpha_m$.

between both goods gets closer to their own as ψ increases[22]. Therefore, w_l^* increases with ψ. On the other hand, when ψ increases and foreigners' valuation of the public good α_m is greater than α_l, a marginal increase in w will redistribute tax proceeds according to a spending policy that is now further away from natives' relative preferences. An increase in ψ is then profitable for low-skill natives as long as its former positive tax-rate effect dominates its adverse impact on the spending policy. This is the case when foreigners' average taste for the public good α_m is sufficiently close to that of low-skill natives α_l. However, when α_m is too high, the spending policy channel dominates and w_l^* decreases with ψ.

For high-skill natives, a symmetric reasoning applies: When foreigners are relatively liberal ($\psi \geq 1$), private consumption c_h decreases while public good provision g increases with political rights (τ_0 increases and μ_0 decreases with w). An increase in ψ is such that a marginal increase in political rights leads to relatively greater tax proceeds, which decrease the marginal benefit of political rights for high-skill natives as their after-tax private consumption c_h decreases. Moreover, the spending policy μ_0 puts relatively more weight on the financing of public good provision and these additional tax proceeds are spent in a way that is even further away from high-skill natives' relative taste for the public and the private good[23]. Therefore, by increasing the tax rate and spending public funds in a less profitable way, an increase in ψ always decreases the marginal benefit of political rights for high-skill natives, and w_h^* decreases with ψ.
On the contrary, when foreigners are relatively conservative ($\psi \leq 1$), private consumption c_h increases while public good provision g decreases with political rights (τ_0 decreases and μ_0 increases with w). As is the case when $\psi \geq 1$, an increase in ψ is such that a marginal increase in political rights leads to relatively greater tax proceeds, which decreases the marginal benefit of political rights for high-skill natives. However, these additional tax proceeds may be spent in a way that is better aligned with high-skill natives' relative taste for the public and the private good: In particular, as long as foreigners' average valuation of the public good α_m is lower than α_h, an increase in ψ implies that a marginal increase in w will redistribute tax proceeds according to a spending policy that is closer to high-skill natives' preferences[24]. When this positive impact dominates the negative tax-rate effect of ψ on the marginal impact of political rights, an increase in ψ becomes profitable and w_h^* increases with ψ.

[22]The gap between α_l and α_m gets smaller when ψ increases as long as α_m is lower than α_l

[23]When $\frac{dg}{dw} > 0$ and $\alpha_m > \alpha_n$, the gap between α_h and α_m gets bigger as ψ increases since we have trivially that $\alpha_h < \alpha_n < \alpha_m$.

[24]The gap between α_h and α_m gets smaller as ψ increases whenever α_m is lower than α_h

Proposition 7: *When foreigners are more conservative than natives ($\psi \leq 1$), low-skill natives' preferred level of political rights w_l^* increases with the share of low-skill immigrants λ_l^m. Moreover, w_h^* increases with λ_l^m for sufficiently low values of α_m, and decreases otherwise. When foreigners are more liberal than natives ($\psi \geq 1$), low-skill natives preferred level of political rights w_l^* increases with the share of low-skill immigrants λ_l^m for sufficiently low values of α_m, and decreases with λ_l^m otherwise. Moreover, w_h^* always decreases with λ_l^m. Finally, if w_l^* increases with ψ, then it increases with λ_l^m. If w_l^* increases with λ_l^m, then it increases with ψ.*

The effect of an increase in λ_l^m on the marginal impact of political rights is two-fold: The first channel through which it operates increases the share of immigrants that receive private transfers and therefore the marginal impact of political rights on the labour income tax and the size of private transfers. The second channel is comparable to the effect of an increase in ψ described previously, where foreigners are in favour of taxing labour income more in order to finance a greater taste for the public good, and their relative valuation of the public good w.r.t to private transfers increases.

Because the former of these two channels is unambiguously profitable for low-skill natives, only the latter matters for the sign of $\frac{dw_l^*}{d\lambda_l^m}$, and the intuition is the same as in Proposition 6. Low-skill natives' preferred level of political rights w_l^* therefore increases with λ_l^m as long as foreigners' average relative taste for the public good α_m is sufficiently close to that of low-skill natives α_l. However, because λ_l^m also increases the share of immigrants that receive private transfers, the positive effect of λ_l^m on the marginal impact of political rights on τ is greater than when ψ increases, and the aggregate effect of λ_l^m on w_l^* will remain positive for greater values of α_m and a larger gap between low-skill natives' and foreigners' relatives preferences for the public good $\alpha_l - \alpha_m$.
For high-skill natives, the effect of an increase in λ_l^m on the share of immigrants that receive private transfers has a symmetric, negative impact on w_h^*. Therefore, w_h^* may increase with λ_l^m when α_m is lower than α_h, although under more restrictive conditions than those of Proposition 6.

The comparative statics presented in Propositions 6 and 7 therefore provide a set of original predictions about natives' attitudes towards foreigners' political rights. We find that low-skill natives' support for enfranchisement is not monotonically increasing in the share of low-skill immigrants or the cultural preferences of immigrants for public spending. Because redistribution operates through two distinct policies - τ and μ - to finance a private and a public good, natives' relative taste between both goods is a critical driver of their attitudes towards enfranchisement. More specifically, when foreigners' skill composition and economic conservatism are such that their average relative preference for the public over the private good is too high with respect to natives', a higher share of low-skill immigrants or more pro-redistribution beliefs decreases the marginal benefit of political rights for low-skill natives: The marginal utility cost of spend-

ing a higher share of government funds on public goods is too high relative to the marginal utility gains from immigrants helping to increase the size of tax proceeds. Low-skill natives then support lower levels of political participation despite immigrants being more liberal and less skilled than natives. On the contrary, high-skill natives can support greater political rights for relatively less skilled foreigners if increasing the share of low-skill immigrants compensates for relatively conservative views about public spending. The marginal utility cost of taxing skilled natives' labour income is then sufficiently low relative to the marginal utility gains from immigrants helping to spend more on public goods, which can only be financed via government redistribution. High-skill natives then support higher levels of political participation even though immigrants are more liberal and less skilled than natives.

This last section describes how the skill composition and cultural preferences of foreign residents influence the attitudes of native citizens towards the concession of political rights. In the next section, we test more specifically the prediction that low-skill natives are more supportive of foreigners' political rights when these foreigners are poorer and hold more liberal beliefs towards public spending.

5. Empirical evidence

5.1 Local voting rights in Switzerland

In this section, we test some of the main predictions of the model using Swiss municipal data. We choose Switzerland as a case study because of its unique political institutions. First, Switzerland is a country where a significant level of financial and political autonomy is delegated to subnational levels of government, either regional (Canton) or municipal (Communes). Under the laws of the Federal Constitution, cantons have extensive powers to enact their own legislation and in particular extend voting rights to foreign nationals in cantonal and municipal elections. In practice, while most cantons do not enfranchise their foreign residents, between 1990 and 2014, over 30 regional referenda asked Swiss citizens from 14 different cantons their opinions about enfranchising foreign residents[25]. Although most of these referenda were bundled into a process of broader constitutional revision, a few of them asked citizens specifically it they wanted to grant political rights to foreign residents. Moreover, due to a high level of decentralization, local authorities in Switzerland enjoy a significant amount of financial responsibilities: Cantons and municipalities are jointly responsible for the implementation and financing of welfare programmes. While municipalities are statutorily required to provide social assistance to poor residents subject to a binding minimum standard under the cantonal law, local administrations nevertheless retain some control over the final level of distributed cash benefits. Municipalities also have control over various policy areas such as healthcare, primary and secondary education, environmental issues, order and security, public administration, financial and economic affairs,

[25] "Pour la participation politique des etrangers au niveau local", Adler et al. 2015.

to which they allocate the remainder of their budget[26]. The delegation of substantial financial responsibilities to local authorities comes with significant tax autonomy: Swiss municipalities have the ability to collect taxes on personal income and wealth (concurrently with the cantonal and federal authorities) as well as corporate profits, and thus finance a large portion of their expenditures through their own revenues.

Against this backdrop, it is reasonable to assume that the opinion of Swiss voters regarding local franchise extension was motivated by economic considerations and in particular the consequences of these voting rights on the size and composition of local public spending. In this regard, our model predicts that the score of these referenda should depend on foreigners' relative economic position and cultural preferences. Foreigners in Switzerland as in many European countries suffer from poorer integration into the labour market than their native counterparts, resulting in higher unemployment rates and lower economic status. At the national level, the unemployment rate amongst foreign residents in 2010 was almost three times as high as among Swiss natives ($8,9\%$ against $3,3\%$), and the poverty rate twice as high ($21,4$ against $10,4\%$). Moreover, while only one in four people residing in Switzerland is a foreigner, they represent almost 50% of "Aide Sociale Economique"[27] beneficiaries at the national level. This pattern holds at the regional level, where foreigners are overrepresented amongst welfare recipients in all 26 cantons, and our estimation suggests that foreigners are also poorer than natives in the vast majority of municipalities[28]. Moreover, Switzerland is a notoriously conservative country when it comes to public spending. According to several international surveys such as the International Social Survey Programme (ISSP) and the European Social Survey (ESS), individual support for public spending in most of the countries from which foreigners residing in Switzerland emigrated are more liberal than those of Swiss natives[29].

In light of the context in which these referenda took place, the theoretical perspective adopted in this paper has several implications. First, according to Proposition 4, low-skill natives will support foreigners' enfranchisement when these foreigners are relatively less skilled and hold more liberal beliefs about public spending than natives, while high-skill natives will oppose it.[30] We therefore expect support for the enfranchisement of foreigners to increase with the municipal share of low-skill natives. In addition, Proposition 6 and 7 predict that low-skill natives' support for enfranchisement w_l^* will increase with the share of low-skill workers λ_l^m and foreigners' cultural preferences for public spending ψ on the condition that foreigners' relative preferences for the public good α_m are sufficiently low. In the notation of the model, $\alpha_m = \psi[\lambda_l^m(\alpha_l - \alpha_h) + \alpha_h]$ is an increasing function of λ_l^m, the share of low-skill foreigners. In

[26]The range and depth of their responsibilities over these various items also vary across regions.

[27]"Aide Social Economique" is the main social assistance scheme in Switzerland.

[28]Source: Federal Statistical Office, "Statistique de l'aide sociale (SAS)". See Appendix and Figure 7 for details at the municipal level.

[29]see the Variable section and author's own calculations in Appendix and Table 5 for more detailed evidence from the ISSP survey module on the role of government.

[30]This corresponds to the parameter space depicted in the upper-right corner of Figure 4 in Section 3.3, where $w_l^* > 0$ and $w_h^* = 0$.

Switzerland, the share of low-skill foreigners as per the definition of our theoretical model is relatively low[31], and we therefore assume that the previous condition is satisfied. As a result, Proposition 6 imply that an increase in the municipal share of low-skill foreign-born residents should be associated with increased support for enfranchisement among low-skill natives. Likewise, according to Proposition 7, we expect the support for foreigners' enfranchisement among low-skill natives to increase when foreigners residing in the same municipality have more liberal views about the role of government in the provision of public goods. In order to examine these predictions, we proxy the share of low-skill native voters and foreigners using the share of individuals receiving cash transfers in the population. We also build an index of economic conservatism based on the average preferences for public spending in immigrants' origin countries as a measure of pro-redistribution culture among foreign residents. We then test the following hypotheses:

H1: Municipalities in which a greater share of natives received welfare benefits should be more supportive of the enfranchisement of foreigners.

H2: Support for foreigners' enfranchisement should increase more strongly with the share of natives receiving welfare benefits in municipalities where a greater share of foreigners received welfare benefits.

H3: Support for foreigners' enfranchisement should increase more strongly with the share of natives receiving welfare benefits in municipalities where foreigners had greater cultural preferences for public spending.

5.2 Data

In this study, we assemble an original dataset which combines information about municipal scores in six referenda conducted between 2005 and 2014 in the Cantons of Geneva, Bern, Schaffhausen, Zurich, Luzern, and Vaud[32]. We also use data from the Swiss Federal Statistical Office and the regional statistical offices of various Swiss cantons to collect several economic and political variables at the municipal level. Data on municipal parliaments were kindly provided by Pr. Andreas Ladner.

We construct an original measure of foreigners' relative poverty and cultural preferences for public spending at the municipal level. To proxy the former, we estimate foreigners' relative welfare dependency, i.e the difference in the share of welfare-dependent residents in the native

[31] We identify as low-skill workers in the model those individuals who benefit from income redistribution through publicly funded cash transfers. In practice, only 6% of foreign-born workers receive such transfers in Switzerland.

[32] More information about the nature of these referenda is available in Table 6

and foreign population. We focus specifically on individuals who receive cash transfers under the "Aide Sociale Economique" programme[33]. Because this variable is not directly available for foreign residents at the municipal level, we first extract the share of individuals receiving the ASE transfer for each nationality at the regional level, and impute the share of welfare recipients at the municipal level according to the share of each nationality in the municipal population[34]. Following Luttmer (2011), we measure the cultural preferences of foreign residents about the role of government in the provision of public goods and services based on their country of origin. Luttmer shows that the birth country's cultural preferences for redistribution of a European immigrant is a strong predictor of that immigrants' individual taste for redistribution, and that this effect persists for those immigrants who have lived many years, have become citizens, and have been granted the right to vote in their country of residence. Moreover, he finds that immigrants from countries with a greater taste for redistribution are more likely to vote for more pro-redistribution parties, which gives further credit to the theoretical mechanism identified in the model whereby low-income natives support the enfranchisement of foreigners insofar as they hope to secure greater redistribution thanks to their political influence. Our variable capturing cultural preferences is constructed using a two-step process. First, we build an international index of economic conservatism which captures country-specific preferences for public spending. To do this, we use survey data from three rounds of the ISSP survey (1996, 2006, and 2016), which measures attitudes towards the role of government across countries and over time, and extract the country-specific effect driving individual preferences towards government's responsibility to provide jobs and public services. Second, we compute a weighted average of foreigners' cultural preferences for redistribution at the municipal level by imputing scores according to the share of each nationality in the municipal population[35].

Our final sample comprises around 690 municipalities for which descriptive statistics are provided in Table 1.

[33]The Aide Sociale programme is a means-tested, poverty relief programs to which low-income residents are eligible when they are not part of any other targeted social insurance or welfare scheme.

[34]More details on the construction of this variable are available in Appendix.

[35]More details on the wording of the questions about attitudes towards the role of government and the construction of this variable are available in Appendix. In practice, because not all countries whose nationals have emigrated to Switzerland are surveyed by the ISSP, our conservatism index does not cover one hundred percent of the foreign population in a municipality. We therefore only include in our final sample municipalities in which data on cultural redistributive preferences were available for at least 70% of the municipal foreign population.

5.3 Empirical strategy

To examine the effect of the share of welfare-dependent natives on the willingness of a municipality to enfranchise foreigners and how this effect varies with the relative economic position and cultural preferences of these foreigners, we fit the following model:

$$y_{ij} = \alpha Share\_welfare_i + \beta\ Z_i + \gamma\, Share\_welfare_i \times Z_i + \delta X_i + \mu_j + \epsilon_{ij}$$

where y_{ij} is the percentage of votes in favour of foreigners' political rights in municipality i and canton j, $Share\_welfare_i$ denotes the share of welfare beneficiaries in the municipal resident population[36], Z_i corresponds alternatively to foreigners' cultural preferences for public spending or their relative welfare-dependency. In the baseline model, we also include a set of control variables X_i that are likely to influence the result of a referendum on foreign voting rights. These control variables include the turnout rate and the logarithms of the population and mean income. Since there also exist non-economic (such as religious and ethnic) drivers of the preferences of natives toward foreigners' political rights, we also control for the municipal share of residents with non-European origins. Finally, we include canton dummies to capture the effect of regional characteristics (such as language or culture) and the purpose of the referendum, which was the direct implementation of foreign voting rights in some cantons but only included the possibility of opting-in in others - See Table 6.

5.4 Results

Column (1) of Table 2 shows the results of the baseline model with controls, excluding foreigners' welfare dependency and economic conservatism as regressors. The coefficient for the share of welfare recipients in a municipality is positive and significant, and suggests that a one percent increase in the share of welfare recipients in an average municipality increases the referendum score by 1.51 percentage points. This result provides support for hypothesis H1 that municipalities with a greater share of welfare-dependent natives are more likely to support the enfranchisement of foreigners. This effect holds for the fuller specification in column (2), where we add as explanatory variables the relative welfare dependency and cultural preferences of foreigners. The coefficient for the cultural preferences of foreigners for public spending is positive and significant, suggesting that it increases the support for the enfranchisement of foreign residents within a municipality independently of the share of low-income residents. A possible explanation behind this coefficient is that cultural preferences for public spending are correlated with other cultural or social preferences that are likely to positively influence the

[36]The share of welfare beneficiaries in the resident population can be regarded as an acceptable measure of natives' welfare dependency as long as the relative size of the foreign population is low enough. In our final sample, foreigners represent on average 14% of the municipal resident population.

willingness of native residents to enfranchise foreigners. Regarding the impact of immigrants' skill level on the effect of the share of welfare beneficiaries, the coefficient for the interaction term in column (3) is statistically significant and has the expected positive sign, indicating that municipalities where the share of welfare recipients is greater support foreigners' political rights more strongly when foreigners are relatively poorer. Likewise, the interaction term in column (4) returns a positive and statistically significant coefficient which indicates that an increase in the share of welfare beneficiaries will have a stronger positive effect on the support for foreigners' enfranchisement in municipalities where foreigners have greater preferences for public spending. This result corroborates hypothesis H3 that low-income natives will be more supportive of the political integration of foreigners when the latter hold more liberal beliefs about redistribution as they expect a greater increase in the size of the pro-redistribution voters.
Turning to the control variables, our estimates suggest that richer and more ethnically homogeneous municipalities - in which the total share of non-European population is lower - voted more in favour of non-citizen enfranchisement. Although not statistically significant in the baseline regression, the negative coefficient for the share of non-EU residents is in line with our intuition that natives usually have more restrictive attitudes towards foreigners that come from a different ethnic background. To the extent that the mean income reflects the average level of education in a municipality, the positive income coefficient could be interpreted as less hostile views about immigration in more educated municipalities independently of the share of welfare recipients, which represents in fine a small fraction of the population[37].

These findings provide empirical support for all our three hypotheses and the mechanisms identified in the theoretical model: We find that municipalities where a greater share of people receive welfare transfers are more likely to support the enfranchisement of foreigners, and that this effect is stronger when foreigners are relatively poorer and emigrated from countries with more liberal attitudes towards public spending.

5.5 Robustness

Our findings are robust to alternative specifications and the inclusion of richer demographic, economic, and political control variables. Column (1) of Table 3 reports our baseline coefficients without interaction for a specification with only canton dummies as controls. Although lower in magnitude, the coefficient for the share of welfare beneficiaries in the total population is still highly significant. Column (2) offers an alternative measure for the share of low-skill natives, where the share of welfare recipients is replaced by the unemployment rate at the municipal level. The coefficient is positive and very significant, suggesting that a one percent increase in unemployment rate in an average municipality increases the referendum score by 2.7 percentage point. Column (3) to (5) report significant coefficients for specifications where we use the log of the median income and the Gini coefficient as alternative measures of municipal wealth. Next, we run specifications that include a more comprehensive list of control variables: We

[37]This result is in line with the evidence in the literature that more educated natives are less hostile to immigration regardless of redistribution concerns - see for instance Hainmueller and Hiscox (2010)

control for demographic characteristics through the relative share of school-aged population and elders among natives and foreigners, as well as the average age of the municipal resident population. To refine our measurement of non-economic drivers, we also include the share of muslim individuals in the resident population and control for violations of the Federal law on foreigners (LEtr), a legislation that contains measures on immigration of foreign individuals, family reunification, and integration policy as well as law and order. Moreover, we consider the possibility that natives' decision to support foreign voting rights could be influenced by the perceived impact of political integration on selective migration, for instance if political rights were to affect the quantity and the quality of immigration by acting as a welfare magnet for low-skill immigrants. We control for this channel with the net inflows of international immigrants at the municipal level in the three years prior to the referendum. Finally, we also add a dummy variable for whether or not the municipality has an elected municipal parliament[38]. The results in Column (6) to (8) show that the coefficients remain significant and very close in magnitude to those reported in the baseline model when we add that full set of controls. Although slightly lower than in the baseline model (1.38), the coefficient for the share of welfare recipient - Col (6) - remains strongly significant. Moreover, the interaction coefficients in Column (7) and (8) suggests that the mediating effect of foreigners' relative welfare dependency and cultural preferences for public spending hardly varies with comprehensive controls. These coefficients are respectively 0.22 and 9.43 against 0.24 and 9.98 in the baseline model, and their level of statistical significance remains unchanged.

We also test the robustness of our results to the choice of sample. For example, our results are robust to using different threshold values of the share of foreigners covered by our index of economic conservatism preferences (Table 4). We also run our regressions on a subsample that includes only municipalities which voted about foreign municipal voting rights (thus excluding regional voting rights referenda) or focusing on municipalities where the share of welfare beneficiaries was strictly greater than 0 (see Table 5)

6. Conclusion

We propose in this paper a new theoretical framework to explore the consequences of foreigners' political rights on redistribution and natives' attitudes towards non-citizen enfranchisement. Our model is the first to account for both economic and cultural drivers of preferences for redistribution and distinguish between public spending on private and public goods in order to understand how the extension of the franchise to foreign residents can influence a country's spending policy.

We find that low-skill natives are more likely to grant political rights to foreign residents when

[38]In Switzerland, all municipalities elect an executive council but the decisional power when it comes to budget, tax rates and other investment projects at the city level lies in the hands of a legislative council. While in bigger municipalities this council takes the form of an elected municipal parliament, enfranchised citizens can exercise their right to vote on municipal budgets and policies in municipal assemblies which meet several times a year in smaller municipalities

these foreigners are relatively less skilled and have greater cultural preferences for public spending. In particular, contrary to the commonly held assumption in the political economy literature that low-skill natives would only support the enfranchisement of poorer foreigners, we show that they are willing to enfranchise relatively skilled foreigners as long as these foreigners have sufficiently liberal beliefs towards public spending. We also establish that the extent of the political rights that low-skill natives are prepared to grant them is not monotonically increasing with the share of low-skill foreigners or their cultural support for public expenditure. Rather, low-skill natives prefer to grant fewer political rights to less-skilled or more liberal immigrants when those immigrants' relative preferences for the private and the public good are too different from their own.

We also test empirically some of the predictions of the model using an original municipality-level dataset of Swiss referenda about non-citizen voting rights. In line with our theoretical intuition, we find that municipalities where a greater share of natives received social transfers were more likely to support immigrant voting, and that this effect was stronger where foreigners were poorer and emigrated from countries with stronger redistributive preferences.

From a public policy perspective, our paper provides a richer picture of the political preferences of native and foreign residents and shows why immigrants' cultural preferences about public spending are key to understand the fiscal implications of immigration on both redistribution and integration policies. Our work is therefore relevant for public life to help inform future political strategies regarding immigration rights and ensure the successful integration and social inclusion of foreign-born populations

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Appendix

Proofs

Proof of Lemma 1 and 2

Lemma 1 and 2 comes immediately from the expression of the FOCs.

Proof of Proposition 1.1

Proposition 1.1 comes immediately from observing that τ_n and μ_n are respectively increasing and decreasing with α_l, α_h, and ψ_n.

Proof of Proposition 1.2

Let $F_l' = \frac{dF_l}{d\lambda_l^n} = \frac{y_l y_h(1+M)}{Y^2}$. From the expression of τ_n, we have that $\frac{d\tau_n}{d\lambda_l^n} \geq 0$ is equivalent to

$$
\begin{aligned}
&- \Big[\frac{(1+\alpha_n)(1-F_l) - (1-\lambda_l^n)\big[\psi_n(\alpha_l-\alpha_h)(1-F_l) - (1+\alpha_n)F_l'\big]}{\big((1+\alpha_n)(1-F_l)\big)^2} \geq 0 && (16)\\
&\Leftrightarrow F_l'(1-\lambda_l^n)(1+\alpha_n) \leq (1-F_l)\big[1+\alpha_n + (1-\lambda_l^n)\psi_n(\alpha_l-\alpha_h)\big] && (17)\\
&\Leftrightarrow F_l'(1-\lambda_l^n)(1+\alpha_n) \leq (1-F_l)(1+\psi_n\alpha_l) && (18)\\
&\Leftrightarrow \frac{(1-\lambda_l^n)}{1-F_l} \leq \frac{1+\psi_n\alpha_l}{(1+\alpha_n)F_l'} && (19)
\end{aligned}
$$

where because $\psi_n\alpha_l > \alpha_n$, we have immediately that the RHS of (19) is greater than $\frac{1}{F_l'}$. Therefore, it suffices that $\frac{1}{F_l'}$ is greater than the LHS of (19) for τ_n to increase with λ_l^n. Let us check that $\frac{1}{F_l'} \geq \frac{(1-\lambda_l^n)}{1-F_l}$ is indeed satisfied. From the expression of F_l and F_l' we obtain

$$
\begin{aligned}
&\frac{1}{F_l'} \geq \frac{1-\lambda_l^n}{1-F_l} && (20)\\
&\Leftrightarrow \frac{Y^2}{y_l y_h(1+M)} \geq \frac{(1-\lambda_l^n)Y}{L_h y_h} && (21)\\
&\Leftrightarrow \bar{y}L_h \geq (1-\lambda_l^n)y_l && (22)
\end{aligned}
$$

where $\bar{y} = \frac{Y}{1+M}$ is the average income in the economy. Because, $\bar{y} > y_l$ and $L_h > (1-\lambda_l^n)$, (22) is trivially satisfied. Therefore, (19) is satisfied as well and $\frac{d\tau_n}{d\lambda_l^n} \geq 0$.

Turning to μ_n, we have that $\frac{d\mu_n}{d\lambda_l^n} \geq 0$ is equivalent to

$$-\Big[\frac{(1+\alpha_n)(1-F_l)-(1-\lambda_l^n)\big[\psi_n(\alpha_l-\alpha_h)(1-F_l)-(1+\alpha_n)F_l'\big]}{\big((1+\alpha_n)(1-F_l)\big)^2}\geq 0 \tag{23}$$

$$\Leftrightarrow \frac{(1-\lambda_l^n)}{1-F_l}\leq \frac{\psi_n(\alpha_l F_l+(1-F_l)\alpha_h)}{\alpha_n F_l'} \tag{24}$$

Trivial algebra proves that the RHS of (24) is increasing with α_h when $\lambda_l^n > F_l$. We then have $\frac{\psi_n(\alpha_l F_l+(1-F_l)\alpha_h)}{\alpha_n F_l'} \geq \frac{\psi_n \alpha_l F_l}{\psi_n \alpha_l \lambda_l^n F_l'} = \frac{F_l}{\lambda_l^n F_l'}$[39], and it suffices therefore that $\frac{F_l}{\lambda_l^n F_l'}$ is greater than the LHS of (24) for μ_n to increase with λ_l^n. Let us check that $\frac{F_l}{\lambda_l^n F_l'} \geq \frac{(1-\lambda_l^n)}{1-F_l}$ is indeed satisfied. From the expression of F_l and F_l' we obtain

$$\frac{F_l}{\lambda_l^n F_l'}\geq \frac{(1-\lambda_l^n)}{1-F_l} \tag{25}$$

$$\Leftrightarrow \frac{y_l y_h (L_l+L_h)(1-\lambda_l^n)\lambda_l^n}{Y^2}\leq \frac{y_l y_h L_l L_h}{Y^2} \tag{26}$$

$$\Leftrightarrow (L_l+L_h)(1-\lambda_l^n)\lambda_l^n \leq L_l L_h \tag{27}$$

$$\Leftrightarrow (1-\lambda_l^n)^2\lambda_l^m \geq -(1-\lambda_l^m)((\lambda_l^n)^2+M\lambda_l^m) \tag{28}$$

which is trivially satisfied. □

Proof of Proposition 1.3

Notice that $\frac{dF_l}{d\gamma}\leq 0$, from which we have trivially using the chain rule that $\frac{d\tau_n}{d\gamma}\geq 0$. Moreover, simple algebra gives us that $\frac{1-F_l}{\lambda_l^n-F_l}$ is increasing with F_l, which leads to the same result for μ_n under the assumption that $\lambda_l^n > F_l$. □

Proof of Proposition 1.4

Using the chain rule, we have that $\frac{d\tau_n}{d\lambda_l^m} = \frac{d\tau_n}{dF_l}\frac{dF_l}{d\lambda_l^m}$, which implies $\frac{d\tau_n}{d\lambda_l^m}\leq 0$ since $\frac{d\tau_n}{dF_l}$ is negative and $\frac{dF_l}{d\lambda_l^m}$ is positive. A similar argument gives us $\frac{d\mu_n}{d\lambda_l^m}\leq 0$. □

Proof of Proposition 2.1

The derivative of τ_0 with respect to w writes $\frac{d\tau_0}{dw} = -\frac{M}{1-F_l}\frac{(1-\lambda_l^m)(1+\alpha_n)-(1-\lambda_l^n)(1+\alpha_m)}{(1+\alpha_p(w)+wM)^2}$, which is positive if and only if $\frac{1+\alpha_n}{1+\alpha_m}\leq \frac{1-\lambda_l^n}{1-\lambda_l^m}$.

[39] where $\frac{\psi_n\alpha_l F_l}{\psi_n\alpha_l\lambda_l^n F_l'}$ is the expression of the RHS of (24) when $\alpha_h = 0$

The derivative of μ_0 with respect to w is $\frac{-\frac{M}{1-F_l}\frac{\alpha_m(\lambda_l^n-F_l)-\alpha_n(\lambda_l^m-F_l)}{(\lambda_l^n-F_l+Mw(\lambda_l^m-F_l))^2}}{\left(1+\frac{\alpha_p(w)(1-F_l)}{\lambda_l^n-F_l+Mw(\lambda_l^m-F_l)}\right)^2}$, which is positive if and only if $\frac{\alpha_m}{\alpha_n} \leq \frac{\lambda_l^m-F_l}{\lambda_l^n-F_l}$. $\square$

Proof of Proposition 2.2

To prove the first part of Proposition 2.2, we must show that if $\psi < 1$ and $\lambda_l^m > \lambda_l^n$, then $\frac{\alpha_m}{\alpha_n} \leq \frac{\lambda_l^m-F_l}{\lambda_l^n-F_l}$.
$\frac{\alpha_m}{\alpha_n} \leq \frac{\lambda_l^m-F_l}{\lambda_l^n-F_l}$ is equivalent to $\alpha_n(\lambda_l^m - F_l) \geq \alpha_m(\lambda_l^n - F_l)$. Because $\psi < 1$, we also have that $\alpha_m < \alpha_l\lambda_l^m + (1-\lambda_l^m)\alpha_h$, which gives us $\alpha_m(\lambda_l^n - F_l) < \left[\alpha_l\lambda_l^m + (1-\lambda_l^m)\alpha_h\right](\lambda_l^n - F_l)$. By transitivity, it suffices to show that $\alpha_n(\lambda_l^m - F_l) \geq \left[\alpha_l\lambda_l^m + (1-\lambda_l^m)\alpha_h\right](\lambda_l^n - F_l)$ to complete the proof. Notice that

$$\alpha_n(\lambda_l^m - F_l) \geq \left[\alpha_l\lambda_l^m + (1-\lambda_l^m)\alpha_h\right](\lambda_l^n - F_l) \tag{29}$$

$$\Leftrightarrow \left[\alpha_l\lambda_l^n + (1-\lambda_l^n)\alpha_h\right](\lambda_l^m - F_l) \geq \left[\alpha_l\lambda_l^m + (1-\lambda_l^m)\alpha_h\right](\lambda_l^n - F_l) \tag{30}$$

which simplifies to $\big(\alpha_h + F_l(\alpha_l - \alpha_h)\big)(\lambda_l^m - \lambda_l^n) \geq 0$ and is trivially satisfied if $\lambda_l^m > \lambda_l^n$. $\square$

Moreover, we have to prove $\frac{d\tau_0}{dw} > 0 \Rightarrow \frac{d\mu_0}{dw}$ if $\psi < 1$, which is equivalent to showing $\frac{1+\alpha_n}{1+\alpha_m} \leq \frac{1-\lambda_l^n}{1-\lambda_l^m} \Rightarrow \frac{\alpha_m}{\alpha_n} \leq \frac{\lambda_l^m-F_l}{\lambda_l^n-F_l}$.
Suppose $\frac{1+\alpha_n}{1+\alpha_m} \leq \frac{1-\lambda_l^n}{1-\lambda_l^m}$. If $\psi < 1$, then $\alpha_m < \alpha_l\lambda_l^m + (1-\lambda_l^m)\alpha_h$, which by transitivity gives us

$$\frac{1-\lambda_l^n}{1-\lambda_l^m} \geq \frac{1+\alpha_n}{1+\alpha_m} \geq \frac{1+\alpha_n}{1+\alpha_l\lambda_l^m + (1-\lambda_l^m)\alpha_h} \tag{31}$$

After some trivial algebra, $\frac{1-\lambda_l^n}{1-\lambda_l^m} \geq \frac{1+\alpha_n}{1+\alpha_l\lambda_l^m+(1-\lambda_l^m)\alpha_h}$ simplifies to $(1+\alpha_l)(\lambda_l^m - \lambda_l^n) \geq 0$, which implies $\lambda_l^m \geq \lambda_l^n$. Using that if $\psi < 1$ and $\lambda_l^m \geq \lambda_l^n$, then $\frac{d\mu_0}{dw} > 0$ (which was proved above), we have indeed that $\frac{d\tau_0}{dw} > 0 \Rightarrow \frac{d\mu_0}{dw}$ if $\psi < 1$. $\square$

The second part of the proof (for $\psi > 1$) is obtained using a symmetric reasoning.

Proof of Proposition 2.3

Proposition 2.3 is obtained after some trivial algebra on the expression of c and g in (10) and (11).

Proof of Lemma 3

To prove Lemma 3, we must prove that V is strictly quasi-concave in w for both types of natives, i.e we must show that the following SOC is satisfied[40]:

$$\frac{d^2V_i}{d^2w} = M\left[-\frac{(\lambda_i^m)^2}{(\lambda_i^n + \lambda_i^m Mw)^2} - \frac{\alpha_i\alpha_m^2}{\alpha_p^2} + \frac{(1+\alpha_i)(1+\alpha_m)^2}{(1+wM+\alpha_p)^2}\right] < 0 \tag{32}$$

Notice that the FOC for low-skill natives writes

$$\frac{dV_l}{dw} = 0 \Leftrightarrow M\left[\frac{\lambda_l^m}{\lambda_l^n + \lambda_l^m Mw} + \frac{\alpha_l\alpha_m}{\alpha_p} - \frac{(1+\alpha_l)(1+\alpha_m)}{1+wM+\alpha_p}\right] = 0,$$

which gives us $\frac{(1+\alpha_l)(1+\alpha_m)}{1+wM+\alpha_p} = \frac{\lambda_l^m}{\lambda_l^n+\lambda_l^m Mw} + \frac{\alpha_l\alpha_m}{\alpha_p} \Rightarrow \left(\frac{(1+\alpha_m)}{1+wM+\alpha_p}\right)^2 = \frac{1}{(1+\alpha_l)^2}\left(\frac{\lambda_l^m}{\lambda_l^n+\lambda_l^m Mw} + \frac{\alpha_l\alpha_m}{\alpha_p}\right)^2$. Therefore, the SOC for low-skill natives can be expressed as the following inequality:

$$-\frac{(\lambda_l^m)^2}{(\lambda_l^n + \lambda_l^m Mw)^2} - \frac{\alpha_l\alpha_m^2}{\alpha_p^2} + \frac{1}{(1+\alpha_l)}\left(\frac{\lambda_l^m}{\lambda_l^n + \lambda_l^m Mw} + \frac{\alpha_l\alpha_m}{\alpha_p}\right)^2 < 0 \tag{33}$$

$$\Leftrightarrow (1-(1+\alpha_l))\frac{(\lambda_l^m)^2}{(\lambda_l^n + \lambda_l^m Mw)^2} + (\alpha_l - (1+\alpha_l))\frac{\alpha_l\alpha_m^2}{\alpha_p^2} + \frac{2\lambda_l^m\alpha_l\alpha_m}{(\lambda_l^n + \lambda_l^m Mw)\alpha_p)} < 0 \tag{34}$$

$$-\alpha_l\left[\frac{\lambda_l^m}{\lambda_l^n + \lambda_l^m Mw} - \frac{\alpha_m}{\alpha_p}\right]^2 < 0 \tag{35}$$

which is unambiguously negative. □.

Proof of Proposition 3

Using the strict quasi-concavity of V_i[41], we have that $w_i^* > 0$ if and only if the derivative of V_i with respect to w is positive at $w = 0$. This conditions ($\frac{dV_i}{dw}_{|w=0} \geq 0$) writes

$$\frac{\lambda_i^m}{\lambda_i^n} + \frac{\alpha_i\alpha_m}{\alpha_n} - \frac{(1+\alpha_i)(1+\alpha_m)}{1+\alpha_n} \geq 0 \tag{36}$$

$$\Leftrightarrow (1+\alpha_n)(\alpha_n\lambda_i^m + \alpha_i\alpha_m\lambda_i^n) - \alpha_n(1+\alpha_i)(1+\alpha_m)\lambda_i^n \geq 0 \tag{37}$$

$$(1+\alpha_n)\alpha_n\lambda_i^m \geq \lambda_i^n(\alpha_n(1+\alpha_i)(1+\alpha_m) - \alpha_i\alpha_m(1+\alpha_n)) \tag{38}$$

$$(1+\alpha_n)\lambda_i^m - \lambda_i^n(1+\alpha_i+\alpha_m(1-\frac{\alpha_i}{\alpha_n})) \geq 0 \tag{39}$$

$$\lambda_i^m\left[(1+\alpha_n) - \psi(\alpha_i-\alpha_{-i})(1-\frac{\alpha_i}{\alpha_n})\lambda_i^n\right] - \lambda_i^n\left[1+\alpha_i+\psi\alpha_{-i}(1-\frac{\alpha_i}{\alpha_n})\right] \geq 0 \tag{40}$$

$$\lambda_i^m \geq \frac{1+\alpha_i+\psi\alpha_{-i}(1-\frac{\alpha_i}{\alpha_n})}{\frac{1+\alpha_n}{\lambda_i^n} + \psi(\alpha_i-\alpha_{-i})(\frac{\alpha_i}{\alpha_n}-1)} \tag{41}$$

[40] We only detail the proof for low-skill natives (V_l) as a symmetric reasoning can be used to obtain the result for high-skill natives

[41] As in Lemma 3, we prove the Proposition for low-skill natives only

To prove $w_l > 0 \Leftrightarrow w_h = 0$, it is then enough to show that $\lambda_l^m \geq \underline{\lambda_l} \Leftrightarrow \lambda_h^m \leq \underline{\lambda_h}$. First, notice that $\underline{\lambda_i}$ can write $\frac{(1+\alpha_i+\alpha_m(1-\frac{\alpha_i}{\alpha_n}))}{(1+\alpha_n)}\lambda_i^n$[42], and we therefore have to prove that $\lambda_l^m \geq \frac{(1+\alpha_l+\alpha_m(1-\frac{\alpha_l}{\alpha_n}))}{(1+\alpha_n)}\lambda_l^n \Leftrightarrow \lambda_h^m \leq \frac{(1+\alpha_h+\alpha_m(1-\frac{\alpha_h}{\alpha_n}))}{(1+\alpha_n)}\lambda_h^n$. Using that $\alpha_l = \frac{\alpha_n-(1-\lambda_l^n)\alpha_h}{\lambda_l^n}$, we have

$$\lambda_l^m \geq \frac{(1+\alpha_m+\alpha_l(1-\frac{\alpha_m}{\alpha_n}))}{(1+\alpha_n)}\lambda_l^n \tag{42}$$

$$\Leftrightarrow \lambda_l^m(1+\alpha_n) \geq \big(1+\alpha_m+(1-\frac{\alpha_m}{\alpha_n})\frac{(\alpha_n-(1-\lambda_l^n)\alpha_h)}{\lambda_l^n}\big)\lambda_l^n \tag{43}$$

$$\Leftrightarrow \lambda_l^m(1+\alpha_n) \geq (1+\alpha_m)\lambda_l^n + (1-\frac{\alpha_m}{\alpha_n})(\alpha_n-(1-\lambda_l^n)\alpha_h) \tag{44}$$

$$\Leftrightarrow \lambda_l^m(1+\alpha_n) \geq \lambda_l^n - (1-\lambda_l^n)\alpha_m - \alpha_h(1-\lambda_l^n)(1-\frac{\alpha_m}{\alpha_n}) + \alpha_n \tag{45}$$

$$\Leftrightarrow (\lambda_l^m-1)(1+\alpha_n) \geq \lambda_l^n - 1 - (1-\lambda_l^n)(\alpha_m+\alpha_h(1-\frac{\alpha_m}{\alpha_n})) \tag{46}$$

$$\Leftrightarrow 1-\lambda_l^m \leq \frac{1+\alpha_m+\alpha_h(1-\frac{\alpha_m}{\alpha_n})}{1+\alpha_n}(1-\lambda_l^n) \tag{47}$$

$$\Leftrightarrow \lambda_h^m \leq \frac{1+\alpha_m+\alpha_h(1-\frac{\alpha_m}{\alpha_n})}{1+\alpha_n}\lambda_h^n \tag{48}$$

□.

Proof of Proposition 4

The first part of proposition 4 was already proven in (41), where $\underline{\lambda_i} = \frac{1+\alpha_i+\psi\alpha_{-i}(1-\frac{\alpha_i}{\alpha_n})}{\frac{1+\alpha_n}{\lambda_i^n}+\psi(\alpha_i-\alpha_{-i})(\frac{\alpha_i}{\alpha_n}-1)}$. Using that $\underline{\lambda_i} = \frac{(1+\alpha_i+\alpha_m(1-\frac{\alpha_i}{\alpha_n}))}{(1+\alpha_n)}\lambda_i^n$, trivial algebra gives us $\frac{d\underline{\lambda_l}}{d\lambda_l^n} \geq 0$, $\frac{d\underline{\lambda_l}}{d\psi} \leq 0$, $\frac{d\underline{\lambda_h}}{d\lambda_h^n} \geq 0$, and $\frac{d\underline{\lambda_h}}{d\psi} \geq 0$.

Finally, we must show that $\underline{\lambda_l} \geq \lambda_l^n$ and $\underline{\lambda_h} \leq \lambda_h^n$ if and only if $\psi \leq 1$.

First, we prove that $\underline{\lambda_i} = \lambda_i^n$ if and only if $\psi = 1$.

Notice that $\psi = 1$ implies $\underline{\lambda_i} = \frac{1+\alpha_i+\alpha_{-i}(1-\frac{\alpha_i}{\alpha_n})}{\frac{1+\alpha_n}{\lambda_i^n}+(\alpha_i-\alpha_{-i})(\frac{\alpha_i}{\alpha_n}-1)} = \lambda_i^n\frac{1+\alpha_i-\alpha_{-i}\big(\frac{(1-\lambda_i^n)(\alpha_i-\alpha_{-i})}{\alpha_n}\big)}{1+\alpha_n+\lambda_i^n(\alpha_i-\alpha_{-i})\big(\frac{(1-\lambda_i^n)(\alpha_i-\alpha_{-i})}{\alpha_n}\big)}$.
Moreover, we have that $1+\alpha_n+\lambda_i^n(\alpha_i-\alpha_{-i})\big(\frac{(1-\lambda_i^n)(\alpha_i-\alpha_{-i})}{\alpha_n}\big)-\Big[1+\alpha_i-\alpha_{-i}\big(\frac{(1-\lambda_i^n)(\alpha_i-\alpha_{-i})}{\alpha_n}\big)\Big] = 0$, which implies $\underline{\lambda_i} = \lambda_i^n$.

Also if $\underline{\lambda_i} = \lambda_i^n$, then $1+\alpha_n+\psi\lambda_i^n(\alpha_i-\alpha_{-i})\big(\frac{(1-\lambda_i^n)(\alpha_i-\alpha_{-i})}{\alpha_n}\big) = \Big[1+\alpha_i-\psi\alpha_{-i}\big(\frac{(1-\lambda_i^n)(\alpha_i-\alpha_{-i})}{\alpha_n}\big)\Big]$, which implies $\psi\frac{(\alpha_i-\alpha_{-i})(1-\lambda_i^n)(\lambda_i^n(\alpha_i-\alpha_{-i})+\alpha-i)}{\alpha_n} = (\alpha_i-\alpha_{-i})(1-\lambda_i^n)$, and $\psi = 1$.

[42]This comes immediately from the expression of (23)

Therefore, $\underline{\lambda_i} = \lambda_i^n$ if and only if $\psi = 1$. Moreover, we know from the first part of Proposition 4 that $\frac{d\underline{\lambda_l}}{d\psi} \leq 0$ and $\frac{d\overline{\lambda_h}}{d\psi} \geq 0$. It is then easy to complete the proof. $\square$.

Proof of Proposition 5

Rewriting the FOC of V_i, we have

$$\alpha_p\lambda_i^m(1+wM+\alpha_p)+\alpha_i\alpha_m(1+wM+\alpha_p))(\lambda_i^n+\lambda_i^m Mw)=\alpha_p(1+\alpha_i)(1+\alpha_m)(\lambda_i^n+\lambda_i^m Mw) \tag{49}$$

$$\Leftrightarrow wM\alpha_m\big[\lambda_i^n(1+\alpha_m)-\lambda_i^m(1+\alpha_n+\alpha_i(1-\frac{\alpha_n}{\alpha_m}))\big]=\alpha_n\big[\lambda_i^m(1+\alpha_n)-\lambda_i^n(1+\alpha_m+\alpha_i(1-\frac{\alpha_m}{\alpha_n}))\big] \tag{50}$$

$$\Leftrightarrow w=\frac{1}{M}\Big(\frac{\alpha_n\big[\lambda_i^m(1+\alpha_n)-\lambda_i^l(1+\alpha_m+\alpha_i(1-\frac{\alpha_m}{\alpha_n}))\big]}{\alpha_m\big[\lambda_i^l(1+\alpha_m)-\lambda_i^m(1+\alpha_n+\alpha_i(1-\frac{\alpha_n}{\alpha_m}))\big]}\Big) \tag{51}$$

which gives us a closed form expression of w_i^*. It comes immediately from the expression of w_i^* in (51) that w_i^* decreases with M. $\square$

Proof of Proposition 6

We prove the proposition for low-skill natives.
Proposition 6 can be proven applying the Implicit Function Theorem and calculating the sign of $-\frac{\frac{d^2V_l}{dwd\psi}}{\frac{d^2V_l}{d^2w}}$, which in turn gives us the sign of $\frac{dw_l^*}{d\psi}$. That $\frac{d^2V_l}{d^2w}$ is negative has already been established in the proof of Lemma 3. We are thus left to check under which conditions $\frac{d^2V_l}{dwd\psi}$ is positive. From the expression of $\frac{dV_l}{dw}$, we have that

$$\frac{d^2V_l}{dwd\psi}=\frac{\alpha_l\alpha_n}{\alpha_p^2}-\frac{(1+\alpha_l)(1+\alpha_n)}{(1+wM+\alpha_p)^2} \tag{52}$$

which is positive whenever

$$\frac{\alpha_l\alpha_n}{\alpha_p^2}-\frac{(1+\alpha_l)(1+\alpha_n)}{(1+wM+\alpha_p)^2}\geq 0 \tag{53}$$

$$\Leftrightarrow -\alpha_p^2(1+\alpha_l)(1+\alpha_n)+\alpha_l\alpha_n(1+wM+\alpha_p)^2\geq 0 \tag{54}$$

$$\Leftrightarrow -\alpha_p^2(1++\alpha_n+\alpha_l)+\alpha_p(2\alpha_n\alpha_l(1+wM))+\alpha_l\alpha_n(1+wM)^2\geq 0 \tag{55}$$

Let $Q(x)=-x^2(1++\alpha_n+\alpha_l)+x(2\alpha_n\alpha_l(1+wM))+\alpha_l\alpha_n(1+wM)^2$. Trivial algebra gives us that the unique positive root of Q is

$$x=\frac{\alpha_l\alpha_n(1+wM)}{1+\alpha_n+\alpha_l}\Big[1+\big(1+\frac{1+\alpha_n+\alpha_l}{\alpha_l\alpha_n}\big)^{\frac{1}{2}}\Big]$$

from which we have that (55) is equivalent to

$$\alpha_p \leq \frac{\alpha_l \alpha_n (1+wM)}{1+\alpha_n+\alpha_l}\Big[1+\big(1+\frac{1+\alpha_n+\alpha_l}{\alpha_l\alpha_n}\big)^{\frac{1}{2}}\Big] \tag{56}$$

$$\Leftrightarrow \alpha_m \leq \frac{\alpha_n}{wM}\left[\frac{\alpha_l(1+wM)}{1+\alpha_n+\alpha_l}\Big[1+\big(1+\frac{1+\alpha_n+\alpha_l}{\alpha_l\alpha_n}\big)^{\frac{1}{2}}\Big]-1\right] \tag{57}$$

which is satisfied when α_m is sufficiently small.

Moreover, we have to prove that if $\psi < 1$, then w_l^* is increasing with ψ. Recall that if $w_l^* \in (0,1)$ and $\psi < 1$, then $\frac{dg}{dw} \leq 0$, which implies $\alpha_m < \alpha_n$.
Also, we can show that (57) holds for $\alpha_m = \alpha_n$. Indeed, observe that

$$\alpha_n \leq \frac{\alpha_n}{wM}\left[\frac{\alpha_l(1+wM)}{1+\alpha_n+\alpha_l}\Big[1+\big(1+\frac{1+\alpha_n+\alpha_l}{\alpha_l\alpha_n}\big)^{\frac{1}{2}}\Big]-1\right] \tag{58}$$

$$\Leftrightarrow \frac{1+\alpha_n+\alpha_l}{\alpha_l} \leq 1+\big(1+\frac{1+\alpha_n+\alpha_l}{\alpha_l\alpha_n}\big)^{\frac{1}{2}} \tag{59}$$

$$\Leftrightarrow (1+\alpha_n)^2\alpha_n \leq \alpha_l(1+\alpha_n+\alpha_l+\alpha_l\alpha_n) \tag{60}$$

where because $(1+\alpha_n) \leq (1+\alpha_n+\alpha_l+\alpha_l\alpha_n)$ and $\alpha_n \leq \alpha_l$, (60) is trivially satisfied. By transitivity, we therefore have $\alpha_m \leq \alpha_n \leq \frac{\alpha_n}{wM}\left[\frac{\alpha_l(1+wM)}{1+\alpha_n+\alpha_l}\Big[1+\big(1+\frac{1+\alpha_n+\alpha_l}{\alpha_l\alpha_n}\big)^{\frac{1}{2}}\Big]-1\right]$, and $\frac{dw_l^*}{d\psi} \geq 0$. □

A symmetric reasoning allows to prove Proposition 6 for high-skill natives.

Proof of Proposition 7

We prove the proposition for low-skill natives.
Again, Proposition 6 can be obtained applying the Implicit Function Theorem by calculating the sign of $-\frac{\frac{d^2V_l}{dwd\lambda_l^m}}{\frac{d^2V_l}{d^2w}}$, which in turn gives us the sign of $\frac{dw_l^*}{d\lambda_l^m}$. From the FOC of V_l, we have that

$$\frac{d^2V_l}{dwd\lambda_l^m} = \frac{\lambda_l^n}{(\lambda_i^n+\lambda_l^m Mw)^2} + \psi(\alpha_l-\alpha_h)\Big[\frac{\alpha_l\alpha_n}{\alpha_p^2} - \frac{(1+\alpha_l)(1+\alpha_n)}{(1+wM+\alpha_p)^2}\Big] \tag{61}$$

The sign of this expression has already been discussed in the proof of Prop 6., from which we have that (61) is positive when ψ is sufficiently small. □

Tables

Table 1: Summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Referendum score (% of yes)	24.34	11.18	2.36	61.6	688
Turnout (%)	42.78	11.11	15.7	77.5	688
Log population	6.98	1.18	3.87	12.86	688
Share of foreigners in tot. pop (%)	14.01	9.45	0	51.2	688
Share of non-EU foreigners (%)	19.1	10.47	0	100	688
Log mean income	10.51	0.35	9.68	12.42	688
Log median income	10.28	0.22	9.14	10.87	688
Gini coefficient	0.47	0.08	0.34	0.9	688
Average age of tot. pop.	40.56	2.5	34.34	49.98	688
Share of Muslims in tot. pop (%)	1.46	1.65	0	16.4	688
Net inflow of for. migrants (% of tot. pop.)	0.02	0.02	-0.05	0.31	688
Dummy elders (for. vs natives)	0.03	0.18	0	1	688
Dummy school-aged pop. (for. vs natives)	0.35	0.48	0	1	688
Violations of the law on foreigners (/1000 inhab.)	1.56	4.35	0	50.83	688
Unemployment rate (%)	2.39	1.24	0	7.91	688
Parliament dummy	0.24	0.43	0	1	688
Share of welfare beneficiaries in tot. pop.	1.73	1.45	0	8.97	688
Share of welfare benef. in foreign pop. (%)	5.64	3	0	15.18	688
Foreigners' relative welfare dependence	4.52	2.58	-4.07	13.73	688
Foreigners' cultural pref. for public spending	0.43	0.07	0.19	0.62	688

Table 2: Main results

	Yes vote [0,100]			
	(1)	(2)	(3)	(4)
Share of welfare beneficiaries in tot. pop.	1.51***	1.35***	0.41	-3.28**
	(0.32)	(0.30)	(0.43)	(1.37)
Foreigners' relative welfare dependency		0.19	-0.23	0.14
		(0.16)	(0.23)	(0.16)
Foreigners' cultural pref. for public spending		22.8***	18.4**	5.59
		(7.45)	(7.40)	(8.38)
Share of welfare beneficiaries in tot. pop. × Foreigners' RWD			0.24***	
			(0.094)	
Share of welfare beneficiaries in tot. pop. × Foreigners' cultural pref. for PS				9.91***
				(3.04)
Share of non-EU foreigners in tot. pop.	-0.057	-0.13	-0.31**	-0.26*
	(0.13)	(0.13)	(0.15)	(0.14)
Log mean income	3.36***	5.08***	5.17***	5.01***
	(1.08)	(1.19)	(1.19)	(1.18)
Log population	0.29	0.032	0.051	0.098
	(0.35)	(0.39)	(0.40)	(0.40)
Turnout	0.18***	0.14**	0.13**	0.14**
	(0.059)	(0.058)	(0.059)	(0.058)
N	688	688	688	688
r2	0.58	0.59	0.60	0.60

Sample includes municipalities for which at least > 70% of the foreign population are covered by our index of economic conservatism. Robust standard errors in parentheses. All regressions include canton dummies.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Robustness checks with additional controls

	Yes vote [0,100]							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share welfare benef.	0.83***		1.47***	0.50	-3.21**	1.38***	0.52	-3.01**
	(0.26)		(0.30)	(0.43)	(1.36)	(0.31)	(0.41)	(1.37)
Unemployment rate		2.71***						
		(0.42)						
Foreigners' RWD	0.17	0.17	0.21	-0.21	0.17	0.21	-0.17	0.16
	(0.15)	(0.15)	(0.16)	(0.23)	(0.16)	(0.17)	(0.24)	(0.17)
Foreigners' cult. pref. for PS	18.9**	17.3**	24.0***	19.8***	6.77	21.8***	18.7**	6.26
	(7.55)	(7.43)	(7.45)	(7.36)	(8.29)	(7.47)	(7.36)	(8.27)
Share welfare benef. × Foreigners' RWD				0.25***			0.22**	
				(0.094)			(0.090)	
Share welfare benef. × Foreigners' cult. pref. for PS					10.0***			9.34***
					(3.03)			(3.00)
Baseline controls		x	x	x	x	x	x	x
Alternative economic controls			x	x	x			
Comprehensive controls						x	x	x
N	695	688	688	688	688	686	686	686
r2	0.57	0.61	0.60	0.61	0.61	0.60	0.61	0.61

Sample includes municipalities for which at least $> 70\%$ of the foreign population are covered by our index of economic conservatism.
Robust standard errors in parentheses. All regressions include canton dummies.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Main specifications for different values of the coverage of the index of redistributive preferences

	Yes vote [0,100]								
	Coverage > 65%			Coverage > 75%			Coverage > 80%		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Share welfare benef.	1.25***	0.65*	-2.08	1.39***	0.12	-4.54***	1.45***	0.31	-6.13***
	(0.28)	(0.39)	(1.34)	(0.35)	(0.50)	(1.57)	(0.42)	(0.53)	(1.94)
Foreigners' relative welfare dependency	0.090	-0.18	0.076	0.30	-0.34	0.23	0.27	-0.36	0.16
	(0.14)	(0.21)	(0.14)	(0.20)	(0.29)	(0.19)	(0.23)	(0.32)	(0.22)
Foreigners' cultural pref. for public spending	22.8***	21.0***	9.93	19.0**	12.9	-3.21	15.2*	9.70	-11.3
	(6.90)	(6.81)	(8.04)	(8.28)	(8.18)	(9.34)	(9.19)	(9.10)	(10.2)
Share welfare benef. × Foreigners' RWD		0.14*			0.37***			0.39***	
		(0.081)			(0.11)			(0.13)	
Share welfare benef. × Foreigners' cult. pref. for PS			7.11**			13.0***			16.9***
			(3.04)			(3.63)			(4.52)
N	765	765	765	571	571	571	473	473	473
r2	0.60	0.60	0.60	0.57	0.58	0.58	0.53	0.55	0.55

Robust standard errors in parentheses. All regressions include baseline controls and region and time fixed effects.

Coefficients for higher values of the threshold above > 80% (not shown here) have the expected sign but lose statistical significance as the sample of municipalities becomes smaller.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Additional robustness checks

	Yes vote [0,100]					
	Municipal Voting rights only			Percentage of welf. benef. > 0		
	(1)	(2)	(3)	(4)	(5)	(6)
Share welfare benef.	1.75***	-0.077	-8.21***	1.48***	0.54	-2.60*
	(0.52)	(0.67)	(1.37)	(0.31)	(0.48)	(1.47)
Foreigners' RWD	0.33	-0.30	0.19	0.27	-0.19	0.21
	(0.20)	(0.30)	(0.19)	(0.17)	(0.27)	(0.17)
Foreigners' cult. pref. for PS	35.4***	30.6***	-2.21	25.6***	22.9***	9.61
	(9.24)	(9.25)	(9.58)	(8.05)	(7.97)	(9.35)
Share welfare benef. × Foreigners' RWD		0.37***			0.22**	
		(0.12)			(0.10)	
Share welfare benef. × Foreigners' cult. pref. for PS			22.8***			8.69***
			(3.26)			(3.25)
N	378	378	378	649	649	649
r2	0.67	0.68	0.70	0.61	0.61	0.61

Sample includes municipalities for which at least $> 70\%$ of the foreign population are covered by our index economic conservatism.

Robust standard errors in parentheses. All regressions include baseline controls and region and time fixed effects.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Variables

Score of 'YES' vote in referendum: Our data on municipal referendum outcomes come from cantonal offices of statistics. The voting rule in all referenda excluded foreigners from participating and suffrage was limited to Swiss citizens. In practice, voters were asked to vote "yes" or "no" to a political proposal offering to grant foreign residents local voting rights under some residency requirements. The content of these rights can be found in Table 6 below.

Table 6: List of referendums

Canton	Political rights	Jurisdiction	Date of referendum
Schaffhausen	RV, RE, RBE	MUN, CANT	2014
Zurich	RV, RE, RBE	MUN (opting-in)	2013
Vaud	RV, RE, RBE	CANT	2011
Luzern	RV	MUN (opting-in)	2011
Bern	RV, RE, RBE	MUN (opting-in)	2010
Geneva	RV, RE	MUN	2005

RV = Right to vote /RE = Right to elect/RBE = Right to be elected.
CANT = Canton level / MUN = Municipal level / opting-in = Possibility for municipalities to opt-in.

Log of mean / median income: Log of mean / median taxable income.

Net inflow of foreign migrants (% of tot. pop.): This variable corresponds to the ratio of the net migratory balance (immigration - emigration) of international migrants in the three years prior to the referendum over the total resident population in the year the referendum took place.

Dummy elders: This dummy takes value 1 when the share of people of 65 years of age or more in the foreign population is greater than that share in the native population.

Dummy education: This dummy takes value 1 when the share of school-aged people (between 3 and 16 years of age) in the foreign population is greater than that share in the native population.

Violations of the law on foreigners : This variable corresponds to the annual number of registered offences against the law on foreigners (LEtr) per 1'000 inhabitants, averaged over the three years prior to the referendum.

Municipal share of muslim residents: The share of muslims residents in the total resident population in 2000.

Municipal share of welfare recipients: The share of individuals in the total resident population receiving the "Aide Sociale Economique" transfer.

Share of welfare recipients in the resident foreign population: We use regional census data and several rounds of the "Statistique de l'aide sociale (SAS)" survey from the Federal Statistical Office to obtain the share of foreign welfare-beneficiaries by nationality at the cantonal level, which we store under variable $Welfaredep_j^l$, expressed as the percentage of foreign residents of nationality j receiving financial help through the Aide Sociale programme in canton l. The share of welfare recipients at the municipal level is then imputed according to the share of each nationality in the municipal population: For a given municipality i in canton l, we compute the weighted share of welfare beneficiaries in the foreign resident population $WD_i^l = \sum_j w_i^j Welfaredep_j^l$, where the weight variable w_i^j corresponds to share of foreigners of nationality j in municipality i.[43]

Foreigners' relative welfare dependency: The relative welfare dependency of foreigners $RWD_i = \frac{WD_i - Share\_welfare_i}{Nat_i}$ is obtained by taking the difference between the share of welfare recipients in the foreign resident population WD_i and the share of welfare recipients in the total resident population $Share\_welfare_i$, divided by the inverse of the share of Swiss citizens in the total resident population Nat_i.

Foreigners' cultural preferences for public spending: The data come from various rounds of the ISSP survey module on the role of government (1996, 2000, 2006) which collected information for a total of 45 countries across 132,000 individual observations. In each round, respondents from several countries were asked to what extent they think it is the government's responsibility to provide jobs and public services[44]. In particular, individual respondents were offered to disagree strongly, disagree, neither agree nor disagree, agree, or agree strongly to the following statements:

[43]For every municipality i, we have $\sum_j w_i^j = 1$. The average share of foreign residents for which such data are available in our sample is 98% ($\bar{w}_i > 0.98$), with a minimum coverage rate of 85%. Note that the municipal share of welfare recipients in the total resident population is directly available from federal statistical sources. Therefore, when our proxy of the municipal share of foreign welfare recipients does not square with those federal data, we correct for outstanding values by imputing as the share of welfare recipients in the foreign resident population WD_i the maximum possible value according to federal sources. For instance, if our proxy WD_i for municipality i is strictly greater than 0 while official data state that no individual (whether foreigner or native) receive cash transfers in that municipality, we replace our estimate with $WD_i = 0$.

[44]Some countries participate in all rounds of the survey, while other were only surveyed once.

On the whole, do you think it should or should not be the government's responsibility to...

- *Provide a job for everyone who wants one ?*
- *Provide health care for the sick ?*
- *Provide a decent standard of living for the old ?*
- *Provide industry with the help it needs to grow ?*
- *Give financial help to university students from low-income families ?*
- *Provide decent housing for those who cannot afford it ?*

Because these questions do not refer specifically to the government of the country that the respondent lives in but rather ask about the state's general responsibility, we believe that they provide an adequate measure of individual ideological beliefs about redistribution instead of simply capturing attitudes towards the relative level of public expenditures in the country at the time the survey was administered. We code respondents' answers between disagree strongly, disagree, neither agree nor disagree, agree, or agree strongly on a five-point scale and use the average individual scores across all six items to measure respondents' general attitudes towards the role of government as provider of basic public services, which we store under variable $Pref\_Red_i$. We then perform the following OLS regression on the full sample of respondents in order to extract the country-specific effect driving economic conservatism:

$$Pref\_Red_i = \alpha W_i + \delta_t + \gamma_j$$

where W_i is a vector of demographic characteristics, such as age and gender[45], as well as measures such as income and education that are meant to capture how much the individual stands to gain or lose from greater public spending. It also includes a variable that control for individual trust in politicians, which is likely to influence respondents' beliefs about the role of government in the provision of public services. δ_t is a fixed effect for the date at which the survey was administered, which captures the possible effect of the international, macro-economic context on preferences for redistribution. Finally, the dummy variable γ_j measures the country effect, i.e the extent to which living in a specific country influences individual economic conservatism. We choose Switzerland as the reference country in the model and report the list of coefficient γ for every country in Table 7. All but one country (Japan) surveyed by the ISSP appear to entertain more liberal views than Switzerland about the role of government in the provision of jobs and public goods. We store these country-specific scores under the variable $\widehat{PrefCult}_j$ to construct a weighted average of foreigners' attitudes for public spending at the municipal level. We attribute to every foreign resident from country j the score $\widehat{PrefCult}_j$ of

[45]Because the ISSP questionnaire does not distinguish between native and foreign respondents, we cannot separate the two and all respondents are therefore included in the sample. We also exclude from the sample individuals that were younger than 18 at the time of the survey.

her country of origin, which captures the average citizen's beliefs that it is the government's responsibility to provide jobs and public services. We then compute the weighted average of foreigners' relative cultural preferences for public spending CPR_i in municipality i following this simple rule: $CPR_i = \sum_j w_i^j \widehat{PrefCult}_j$, where w_i^j the share of foreigners in municipality i born in country j is such that $\sum_j w_i^j = 1$.[46]

[46]Because the list of countries surveyed in the ISSP is not exhaustive, the share of foreign population covered by our index varies depending on the country of origin of the foreign population across municipalities. Figure 9 graphs the distribution of the municipal share of foreigners for which we were able to impute redistributive preferences

Table 7: Relative cultural preferences for public spending

Country	**Red. score**
Japan	-0.03
Switzerland	**0**
USA	0.16
Korea	0.17
Canada	0.22
Australia	0.25
Germany	0.26
New-Zealand	0.27
Sweden	0.29
Netherlands	0.30
Cyprus	0.32
Finland	0.32
Czech Republic	0.34
Denmark	0.35
Belgium	0.38
Taiwan	0.39
UK	0.40
Lithuania	0.41
France	0.41
Iceland	0.42
Hungary	0.47
Norway	0.48
Thailand	0.49
Bulgaria	0.49
Philippines	0.50
Italy	0.53
Turkey	0.53
Dominican Republic	0.55
Slovakia	0.58
Poland	0.60
Uruguay	0.60
Latvia	0.60
Chile	0.60
India	0.61
South Africa	0.62
Israel	0.62
Ireland	0.62
Russia	0.64
Portugal	0.64
Spain	0.66
Slovenia	0.66
Suriname	0.73
Croatia	0.74
Georgia	0.84
Venezuela	0.91

Note on Figure 6, 7, 8 and 9: The share of welfare beneficiaries is the share of individuals receiving the *Aide Sociale Economique* transfer in the resident population. The relative welfare dependency of foreigners corresponds to the difference between the estimated share of welfare beneficiaries among foreigners and the share of welfare beneficiaries in the total resident population.

Figure 6: Distribution of the share of welfare beneficiaries

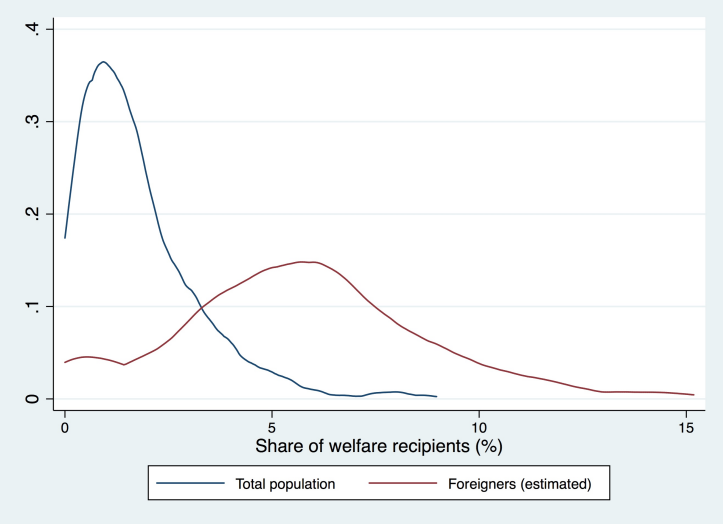
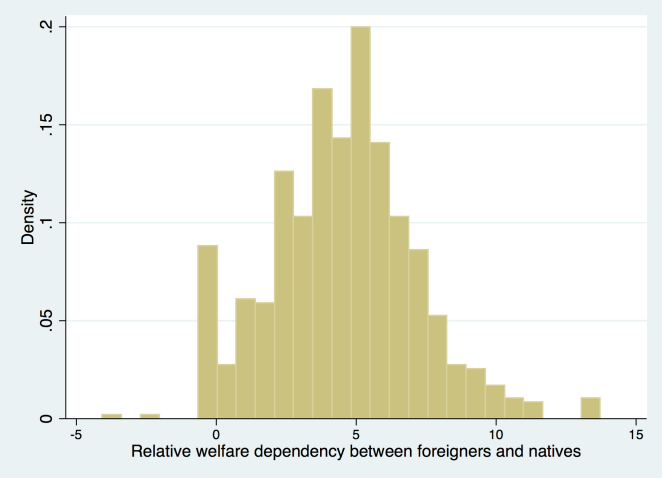


Figure 7: Distribution of foreigners' relative welfare dependency



Notes: A positive value on the x-axis means that the share of welfare beneficaries is higher among foreigners than among natives.

Figure 8: Distribution of foreigners' average cultural preferences for redistribution

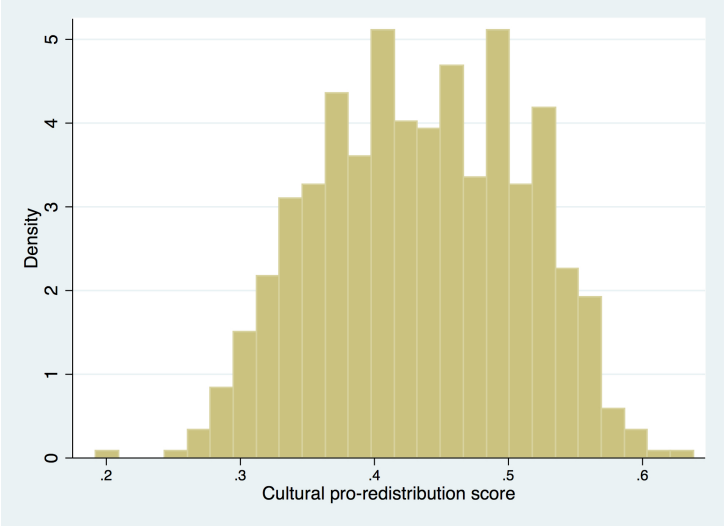


Figure 9: Share of foreigners covered by index of red. preferences