

MIT

POLITICAL SCIENCE

Massachusetts Institute of Technology

Political Science Department

Research Paper No. 2015-12

Franchise reforms in the age of migration:
Why do governments grant voting rights to noncitizens?

Guillermo Toral, MIT

Do Not Cite or Circulate Without Permission from Author

Franchise reforms in the age of migration: Why do governments grant voting rights to noncitizens?*

Guillermo Toral[†]

April 11, 2015

Abstract

This article examines the enfranchisement of noncitizens and seeks to explain governments' decisions about whether to include or exclude them from the vote. By focusing on the incentives behind incumbents' decisions, the article argues that partisanship, inequality, and immigration are the factors driving the (dis)enfranchisement of noncitizens. The theory leads to a number of testable hypotheses that are then subjected to regression analyses using an original dataset of 33 democracies in the period 1960-2010. The results indicate that while franchise reforms to include noncitizens are more likely to be passed by left-wing governments, noncitizen voting rights are highest at intermediate levels of immigration. The findings are relevant for an emerging literature of quantitative studies of immigrant rights, as well as for the literature on franchise extensions along lines of class and gender.

*I thank Pablo Beramendi, Daniel de Kadt, Kerem Ozan Kalkan, Desmond King, Martin Ruhs, Cindy Skach, and participants at PhD seminars at King's College London and MIT for useful comments on an earlier version of this paper. All remaining errors are my own.

[†]PhD student, Department of Political Science, Massachusetts Institute of Technology: gtoral@mit.edu

1 Introduction

Traditional conceptions of democracy tie universal suffrage to citizenship status – countries are considered electorally democratic if all adult *citizens* are allowed to vote in transparent elections. Yet, political theorists such as [Walzer \(1983\)](#) have emphasized that the exclusion from the franchise of permanent residents who are not citizens is a form of “tyranny”. If polyarchies are regimes combining both liberalization and inclusiveness ([Dahl, 1973](#)), the exclusion of noncitizens from the franchise undermines a country’s inclusiveness. This is especially true in the current “age of migration” ([Castles et al., 2005](#)), when many countries have a large number of noncitizens living in their territory.

Perhaps in response to these new realities, a growing number of countries have granted noncitizens with some voting rights. Contrary to the common belief that noncitizen voting rights are limited to a few European states, over a fourth of the currently existing countries in the world give noncitizens some voting rights. A total of 57 countries gave voting rights to noncitizens as of January 1, 2011. The number goes up to 62 if we also count the enfranchisement of European citizens in EU countries under the Treaty of Maastricht, and to 66 if we include those countries where some subnational governments enfranchise noncitizens. [Figure 5](#) in the Appendix illustrates the distribution of this practice across the world. The prevalence of noncitizen voting rights, together with the de-linking of other rights (such as economic and social rights) from citizenship status, suggests that citizenship is not anymore the clear-cut dividing principle and the coherent set of civil, political and social rights that Marshall’s seminal essay on citizenship described ([Marshall, 1950](#)).

Despite the extension of noncitizen voting rights, little is known about what actually drives the enfranchisement of noncitizens, especially taking into account that striking cross-national variation persists. This article offers an original theory for the enfranchisement of noncitizens and tests it using an original dataset of noncitizen voting rights across 33 countries for the period 1960-2010. The research question this article aims to answer is: *what explains the enfranchisement of noncitizens and its variation across time and countries?* By “noncitizens” I refer to people who do not hold citizenship of the country where they reside permanently and lawfully.

A number of reasons justify investigating the enfranchisement of noncitizens. Normatively, giving voting rights to noncitizens is closely related to the accommodation of cultural diversity and the management of the social, economic, and political dilemmas it raises. In fact, from the second half of the 20th century, some Western democracies have been increasing migrants’ opportunities to participate in politics. Strategies to do so include the enfranchisement of noncitizens, absentee ballot, more inclusive naturalization policies, and an increasing tolerance to plural nationality.

The issue of noncitizen voting rights is also paradoxical from the point of view of positive political theory. Put in terms of *The logic of political survival* ([Bueno de Mesquita et al., 2003](#)), the question is why would the incumbent widen the “selectorate”? And why would citizens agree to share their right to vote with a larger number of people, especially considering these are ethnic minorities whose presence in the country is often contested?

Moreover, the enfranchisement of noncitizens is not without consequences. To the extent that it changes the pool of people who are eligible to elect public officials, and that the newly included individuals differ

systematically from citizens (for instance along socioeconomic and ethnic lines) so that the distribution of their preferences are arguably different, we can expect policy outcomes to differ in response to the enfranchisement of noncitizens. In fact, [Vernby \(2013\)](#) analyzes data from Swedish municipalities before and after the national parliament imposed the enfranchisement of noncitizens for local elections and finds in a differences-in-differences design that this legislative measure led towns with larger numbers of noncitizens to increase their spending in education as well as social and family services.

Finally, the enfranchisement of noncitizens is relevant for the study of the state and its contemporary transformations. Some social scientists claim that transnational processes weaken state sovereignty and the link between state and nation ([Soysal, 1994](#); [David and McGrew, 2000](#)). In this view, echoed by many legal scholars and political theorists, the enfranchisement of noncitizens is the result of the expansion of international norms of human rights, leading to what has been called postnational or transnational citizenship. The enfranchisement of noncitizens is thus an interesting case to study the potential transformations of the state and sovereignty in a globalizing world.

The rest of the paper is organized as follows. Section 2 presents a theory of noncitizen voting rights. Building on the insights of extensive qualitative studies on the enfranchisement of noncitizens, as well as on the consolidated literature on franchise extensions to include the working class and women, I propose an original theoretical framework and spell out testable hypotheses for this and the alternative theories. Section 3 introduces the sample, data, estimation strategy and empirical results of my study. It first explains my two operationalizations of the dependent variable as a continuous scale measuring the level of noncitizen voting rights, and as a binary variable indicating when franchise extensions are approved. I then proceed to present and discuss the results of the two corresponding regression models: a panel with fixed effects that explores what is behind different levels of voting rights, and a hazard model that examines the timing of franchise extensions. Finally, Section 4 concludes by summarizing the findings and discussing their implications for the study of noncitizen voting rights and franchise extensions in general.

2 Theory

2.1 Building on previous studies of the enfranchisement of noncitizens

A nontrivial amount of studies on the enfranchisement of noncitizens (for example [Soysal \(1994\)](#); [Bauböck \(2005\)](#); [Moya Malapeira and Ferrer \(2010\)](#)) is based on legal positivism (describing changes in the laws regulating voting rights) and/or political philosophy (analyzing the normative dimensions of excluding or including noncitizens from the franchise). While these studies provide an important source of information on the dependent variable and spell out the normative aspects of noncitizen voting rights, they cannot explain why and when some (but not all) governments decide to grant voting rights to noncitizens.

The past few decades have seen a significant amount of empirical qualitative studies on the enfranchisement of noncitizens ([Tung, 1985](#); [Raskin, 1993](#); [Jacobs, 1998](#); [Jacobs and Swyngedouw, 2002](#); [Benhabib, 2004](#); [Hayduk, 2006](#); [Andres, 2007](#); [Day, 2009](#); [Triandafyllidou, 2014](#)). By focusing on one or few countries, and by studying

history and discourse, these studies have been able to do in-depth analysis of the debates surrounding noncitizen voting rights and the apparent justifications of political actors in favor or against this legislative measure. On one hand, rich insights have emerged from this literature as to what may be the potential causes and mechanisms at play in the enfranchisement of noncitizens. On the other hand, the ability of these studies to attribute between competing potential causes is limited. In some cases, the inclusion of noncitizens in the suffrage is conceived as “a generous gesture from the political elite” (Togeby, 1999, 665), thus failing to frame it as a political phenomenon. In other cases, rich political explanations of the enfranchisement of noncitizens in one given country are not subjected to comparative analyses that consider other potential channels and examine a larger number of cases.

To my knowledge, few studies have engaged in cross-national, qualitative comparisons of the enfranchisement of noncitizens. Joppke (2003) provides a theory of the relationship between citizenship and ethnicity, grounded on a small-n comparison of well-selected cases. He argues that the de-ethnicization of citizenship (i.e. the dissociation of citizenship from filiation, which includes the enfranchisement of noncitizens) stems from immigration in “the context of a global human rights culture”, “the decoupling of the state from nation-building”, and the presence of a leftist incumbent (Joppke, 2003, 436-7). Following his theory, then, noncitizens would be enfranchised by leftist governments when the levels of immigration are high and sustained, and when the state has renounced to nation-building. The hypothesis of a positive effect of a leftist incumbent is echoed in the study of Howard (2010), who finds that citizenship laws in 11 “restrictive” European countries have been liberalized mostly under leftist incumbents but, especially, in countries where far-right parties were weak. This effect of both government partisanship and strength of the far right is also tested in a recent study of immigrant rights (Koopmans et al., 2012), which finds that the strength of the far right has a negative effect, while government partisanship has no significant effect.

The only previous large-n study of the enfranchisement of noncitizens (Earnest, 2006, 2008, 2014, 2015) provides additional theoretical and empirical background for my study. In a decade-long series of studies, Earnest uses time-series cross-section (TSCS) analyses of a group of 25 democracies to test a number of hypotheses, grouped around a theory of cross-national convergence (where transnational pressures would push towards the enfranchisement of noncitizens worldwide) versus divergence (where national dimensions such as partisanship, courts and the welfare state lead to persistent differences across countries). While the different waves of Earnest’s study show somewhat different results, overall he finds a positive effect of some national factors (such as birthright citizenship provisions, social security spending, and partisanship in some model specifications) as well as some transnational factors (such as border effects or the presence of international non-governmental organizations, INGOs). Earnest does not examine the effect of immigration – rather, he studies only countries that have a stock of immigrants above certain threshold.

To sum up, the existing literature provides many rich insights on what may cause the enfranchisement of noncitizens, as well as empirical tests in case studies, small-n comparisons, and large-n comparisons. It is nonetheless surprising that scholars of noncitizen voting rights have not established a dialogue with the rich literature on franchise extensions along the lines of class and gender. The theory I propose here bridges that gap and incorporates theoretical and empirical insights of that field, while placing partisanship and immigration

at the center of the analysis.

2.2 Building on previous studies of other types of franchise extensions

Compared to other extensions of the franchise, the granting of voting rights to noncitizens has a number of unique features. First, it takes place in societies that are considered fully democratized. Second, the criterion along which the franchise is extended is *de jure* a legal or administrative condition (citizenship status) but *de facto* also an ethnic one. It is therefore different from previous franchise extensions which, typically during the 19th and early 20th centuries, took place along lines of class and gender. I claim that investigating why governments enfranchise noncitizens requires us to consider why governments gave voting rights to other disenfranchised groups in the past. Moreover, the enfranchisement of noncitizens could constitute an under-explored test for general theories about the extension of the franchise.

One of the most well-known theories of franchise extensions is that elites extended the franchise to avoid revolutionary processes and thus preserve the status quo. Although the argument is old (Bendix and Rokkan, 1968), its most elaborated version is that of Acemoglu and Robinson (2000). They argue that extensions of the franchise constitute a credible redistributive commitment from political elites that face a revolutionary threat. This hypothesis, which receives empirical support in recent work by other authors (Przeworski, 2009; Aidt and Jensen, 2014), does not seem to apply to the case of the enfranchisement of noncitizens. Simply put, noncitizens fail to constitute a revolutionary threat.

A number of insights from the literature on franchise extensions seem more applicable to the case of noncitizen voting rights. Jack and Lagunoff (2006) make a useful distinction between two sorts of arguments about why elites extend the franchise, namely “the external conflict explanation” (i.e., the Acemoglu-and-Robinson-like argument) and “the internal conflict explanation” (namely, that “rights are extended to gain support in an environment with ideological or class conflict among the elite”). Good examples of this second type of arguments are the works by Lizzeri and Persico (2004) and by Llavador and Oxoby (2003), whose models show extensions of the franchise as a result of divergences in the economic interests of different sectors of the elite. Przeworski’s explanation for the enfranchisement of women is another relevant example of “internal conflict explanations”. He argues that while “the poorer classes fought their way into the representative institutions”, women’s voting rights were treated “as an instrument of electoral competition” by already-established parties (Przeworski, 2009, 319). Also relevant are the effects of diffusion which previous studies of franchise reforms point to (Freeman and Snidal, 1982; Przeworski, 2009; Aidt and Jensen, 2014). For them, extensions of the franchise are partially the result of diffusion effects. Finally, previous studies point to the importance of inequality. Engerman and Sokoloff (2005) point at the relevance of equality and homogeneity for the extensions of the franchise. Looking at variation across countries and across states within the USA, they show that “states or countries with greater equality or homogeneity (incorporating both socioeconomic and ethnic/racial attributes) among the population tended to extend the franchise earlier and more broadly” (Engerman and Sokoloff, 2005, 916).

2.3 Proposed theory

I argue that the enfranchisement of noncitizens is a policy choice made by self-interested incumbents. In that sense, noncitizens will be given voting rights when the incumbent perceives it to be in its electoral interest.

I assume that the type and number of noncitizens is exogenous to partisan competition. Considering immigration as exogenous to the political game is reasonable for the short-term time horizon that elected officials typically behave with. Moreover, it is consistent with empirical findings on governments' inability to control their borders (Cornelius and Tsuda, 2004), and with the economic explanations of migration, including theories of push and pull factors (Lee, 1966; Dorigo and Tobler, 1983) as well as the so-called “new economics of labor migration” (Stark and Blackwell, 1991). I also assume that political parties are myopic, risk-averse, and only interested in maximizing votes in order to either gain or keep office; that immigrants are generally poorer than natives; and that low-skilled immigrants outnumber high-skilled ones. The assumption that immigrants are over-represented at the lower end of the distribution is a generalization that has nonetheless some empirical founding. OECD data shown in Appendix 5.2 show that foreign-born people who occupy high-skilled jobs are less numerous than those who occupy non-high-skilled jobs.¹ Moreover, European survey data cited by Lupu and Pontusson (2011) show that in most countries the percentage of foreign-born people in the bottom third of the income distribution is larger than the percentage of foreign-born in the other two thirds of the distribution.

On a simple bipartisan, one-dimensional electoral space, enfranchising noncitizens will lead to a larger electoral base for the left, to the detriment of the right. Hence I theorize that, *ceteris paribus*, left-leaning governments are more likely to enfranchise noncitizens. It has become a common place to argue that centre-left parties are friendlier to noncitizen voting rights than centre-right ones (Layton-Henry, 1990; Weil, 2001; Jacobs and Swyngedouw, 2002; Howard, 2006, 2010). However, little (if anything) is usually said as to what makes leftist parties more willing to give voting rights to noncitizens. Ideology-centered arguments about the left's support for noncitizens' voting rights are close to circular and prevent us from understanding the observed variation. My claim is that, in general, left-wing governments expect to benefit electorally through the enfranchisement of noncitizens because these are over-represented among the low-skilled and/or those in the bottom of the income distribution, and are thus more likely to support the economic policies of the left, as well as the left's generally friendlier stance towards minorities. This leads to the first hypothesis:

- **Hypothesis 1:** Noncitizens are more likely to be enfranchised under left-wing incumbents than under non-left-wing ones.

While the answer to “who benefits from the enfranchisement of noncitizens?” depends on the country's political cleavages and on the characteristics of the immigrant population, my hypothesis here is a general statement that I expect to be valid in most cases. It may be the case that in some cases immigrants vote more on the basis of language or religion rather than socioeconomic status, or that they are relatively wealthy and thus have socioeconomic preferences aligned with those of the right. In general, however, and given the

¹The OECD does not provide data on occupation disaggregated by citizenship, so data for foreign-born people is presented instead of noncitizens. One could argue that the ethnic stratification of the labor market under-represents the skill level of immigrants. However, OECD data also show that foreign-born people with tertiary education are less numerous than those without.

typical composition of immigrant populations, it is arguably the left that benefits from the enfranchisement of noncitizens. Moreover, there is some empirical evidence indicating that noncitizens/immigrants are, in general, more likely to vote for the left (Richman et al., 2014; Bergh and Bjørklund, 2011; Anwar, 2001).

I further claim that the electoral incentives to enfranchise noncitizens are mediated by three constraints, namely the strength of far-right parties, income inequality, and the size of the pool of noncitizens. The presence of far-right parties, which are able to mobilise latent anti-immigrant sentiments, will discourage the incumbent from enfranchising noncitizens. This disincentive may be especially strong for right-wing governments as direct competitors of far-right parties. Nonetheless, the effect is arguably still present for a leftist incumbent, which would fear the alienation of its white-collar electoral bases. This leads to the second hypothesis:

- **Hypothesis 2:** Noncitizens are less likely to be enfranchised the stronger far-right parties are.

Second, the more unequal a society is, the more reluctant both the “selectorate” and the incumbent will be to grant noncitizens voting rights, since they can expect a larger effect of enfranchisement on redistribution. Therefore, societies with high levels of inequality will be less likely to enfranchise noncitizens. This part of the theory is based on positive and empirical studies on the relationship between a given society’s inequality and its inclusiveness towards immigrants. Dolmas and Huffman (2004) present a model in which levels of inequality are related to the level of immigration desired by the median voter and to her decision about immigrants’ voting rights. Timmer and Williams (1998) find that inequality between unskilled and skilled (citizen) workers is the best predictor for immigration policy restrictiveness. Building on this literature, I argue that when the level of inequality is high both the incumbent and the “selectorate” will be reluctant to give voting rights to a (poor) group of immigrants.

- **Hypothesis 3:** Noncitizen voting rights will be less likely to occur, or less generous, the higher the level of inequality.

The size of the noncitizen population will act as a third constraint on the enfranchisement of noncitizens. If the pool of noncitizens in the country is too large, the uncertainty vis-a-vis the consequences of the enfranchisement may surpass the expected electoral benefit, hence trumping the change. Therefore, my theory predicts a bell-shaped effect of the size of the immigrant (noncitizen) population on the enfranchisement of noncitizens. If there is very few immigrants, the electoral incentive to enfranchise them will be too small. If there is many immigrants, the risk will be too high. This is contrary to the argument of Joppke (2003), who claims that immigration has a positive effect on rights, as well as to the argument of Ruhs and Martin (2008), who suggests a trade-off between the number of (low-skilled) immigrants and the social and economic rights that they are entitled to. This hypothesis is also contrary to a potential threat-of-revolution explanation, which would predict that enfranchisement is more likely to happen under very high levels of immigration.

- **Hypothesis 4:** The size of the pool of immigrants will have a bell-shaped relationship to noncitizen voting rights, with enfranchisement being most likely at intermediate levels of immigration.

2.4 Scope of the theory

The theory presented above calls for some caveats regarding its scope. First, I consider noncitizen voting rights are a feature of democratic governance. Therefore, I only expect it to work for already established democracies. Second, this theory has at its core the politics of nation-states, so we can only expect it to apply to franchise reforms approved by national governments. The enfranchisement of noncitizens by subnational governments may or may not follow the same dynamics. Another phenomenon excluded from my theory is European citizenship. Since the signature of the Treaty of Maastricht and its implementation, all members of the European Union (EU) give voting rights at local and European elections to every national of other member state residing in their territory. These franchise reforms are passed by national governments. However, the politics of European citizenship not being one of the major stakes in states' interests to join the EU, it is unrealistic to assume that governments who want to join are actually free to decide about the franchise reforms required by the Treaty of Maastricht. Finally, the model does not aspire to explain franchise contractions. There are no theoretical reason to assume that the same factors that explain the enfranchisement of noncitizens actually explain their exclusion from the suffrage in those contexts where they were previously included.

2.5 Competing theories

The empirical and the theoretical validity of my theory will be examined against other rival theories of the enfranchisement of noncitizens. The two most outstanding theories available in the literature are presented below, to which I add two further potential mechanisms at work.

2.5.1 The pro-immigrant judiciary hypothesis

Following a widespread argument, judges are in a much better position to protect the rights of noncitizens than governments. This hypothesis, which is related to general arguments about the role of activist courts in the expansion of rights (Epp, 1998), has been defended with reference to two main reasons. First, that judges are insulated from the pressures of democracy and populism (Guiraudon, 1999). Second, that judges count on legal (especially constitutional) and moral resources that can be and in fact are mobilized for the protection of noncitizens (Joppke, 2001; Rubio-Marin, 2000). Either way, this hypothesis would predict that the larger the power of judges, the more likely noncitizens will be enfranchised. On the other hand, there are also important arguments and some evidence pointing in the opposite direction. Hofhansel offers a comparative study showing that courts often do not play a counter-majoritarian but a nationalizing role regarding citizenship policy (Hofhansel, 2008). This is well illustrated by the cases of Germany and Greece, where national courts overruled legislative measures to enfranchise noncitizens (Earnest, 2008; Triandafyllidou, 2014).

- **Hypothesis 5:** Countries with higher levels of judicial review are more likely to enfranchise noncitizens.

2.5.2 The political system hypotheses

I consider two variables of a country's political system that may have an impact on the enfranchisement of noncitizens: the electoral system and the distribution of power among territories. A number of authors, including [Earnest \(2008, 2014\)](#), argue that proportional representation systems are more inclusive of minorities and may hence be more likely to enfranchise noncitizens. This hypothesis could be made compatible with my theory by arguing that in proportional representation systems the consequences of extending the franchise are less dramatic than under majoritarian systems, in that they are unlikely to change who governs.

- **Hypothesis 6:** Countries with proportional representation systems will be more likely to give voting rights to noncitizens.

On the other hand, federalism may make the enfranchisement of noncitizens by national governments more likely by allowing the measure to be tested first by subnational governments. The cases of the USA, Switzerland, Canada or Argentina suggest that in federal countries subnational units are prone to experimenting with the enfranchisement of noncitizens. Federalism grants subnational governments with significant autonomy, even on something as critical as the definition of voting rights.

- **Hypothesis 7:** Federal countries will be more likely to give voting rights to noncitizens.

2.5.3 The transnationalist hypotheses

What can be called the transnationalist theory basically argues that states enfranchise noncitizens as a result of globalization. In its view, international and transnational processes erode the sovereignty and legitimacy of the state, originating a global regime of denizen rights ([Hammar, 1990](#)). There is no consensus on the mechanisms behind this change, and in fact they are often not theorized. I propose four different (but not necessarily incompatible) mechanisms through which a global regime of noncitizen voting rights could be emerging.

The first potential mechanism through which a transnational regime of noncitizen voting could be emerging is human rights international norms. Following this argument, states' commitment to the international human rights regime makes governments more likely to enfranchise noncitizens. [Sassen \(1996, 2002\)](#) offers a classical account of how the international human rights regime undermines state sovereignty and lead to denizen rights. On the other hand, ([Hooghe, 2005](#)) offers a good theory and some evidence of how international norms are the result of national rather than international processes.

- **Hypothesis 8:** The higher a country's commitment to human rights, the more likely it will enfranchise noncitizens.

A second potential mechanism is the emergence of a transnational civil society. Following this argument, in a context of "diffuse sovereignty" ([Soysal, 1994](#)) international non-governmental organisations (INGO) become key players in the protection of noncitizens' rights. Therefore, the stronger the presence of INGO in a country, the more it will tend to a model of "post-national membership" and therefore the more likely noncitizens will be enfranchised. Two seminal works in the study of post-nationalism ([Soysal, 1994](#); [Jacobson, 1996](#)) reserve

an important role for the transnational civil society. Moreover, Park shows how INGO have a key role in the diffusion of norms at the international level and across states (Park, 2006).

- **Hypothesis 9:** The larger the presence of international non-governmental organizations in a country, the more likely it will grant voting rights to noncitizens.

A third potential mechanism would be the diffusion of noncitizen voting rights through demonstration effects. To the extent that more and more countries give voting rights to noncitizens, the probability of a given country to enfranchise noncitizens would hence increase. This argument may be compatible with my theory, in that incumbents may take their decisions about the reform of the franchise after receiving information from other countries' experiences with different policy choices.

- **Hypothesis 10:** The higher the number of countries that enfranchise noncitizens, the more likely a given country is to give voting rights to citizens in its territory.

Another potential diffusion mechanism would be the influence of intergovernmental organizations as creators of norms and transmitters of policy options. Following this hypothesis, states would be socialized through intergovernmental organizations into a norm in favor of noncitizen voting rights and/or into a group of states that share policy experiences. If this hypothesis is right, we would observe that member states of these international organizations are more likely to enfranchise noncitizens. International relations theory (Johnston, 2001; Goodman and Jinks, 2004; Checkel, 2005; Bearce and Bondanella, 2007) offers good theoretical frameworks as to why and how international socialization works. International organizations that are shown in the literature as favoring the enfranchisement of noncitizens are the European Union, the Council of Europe, the Commonwealth of Nations, and the Nordic Council (Earnest, 2008; O'Leary and Tiilikainen, 1998).

- **Hypothesis 11:** States that belong to intergovernmental organizations with statements in favor of noncitizen voting rights (the European Union, the Council of Europe, the Commonwealth of Nations, and/or the Nordic Council) will be more likely to enfranchise noncitizens.

2.5.4 The immigration policy hypotheses

Finally, there are two other hypotheses related to immigration policy. One could hypothesize that states use the enfranchisement of noncitizens as a way to attract high-skilled immigrants. This hypothesis is based in the fact that industrialized economies compete for a limited pool of high-skilled immigrants (Basri et al., 2008; Ruhs et al., 2010). Following this logic, we could expect the countries whose economies are in highest need for immigrants to offer especially generous regimes of immigrant rights, including voting rights, in order to incentivize that qualified immigrants move in and stay in the country.

- **Hypothesis 12:** Countries whose labor markets need immigrants most will have higher levels of noncitizen voting rights.

Another possibility is that noncitizen voting rights are granted by those governments who have restrictive naturalization laws. This would allow them to politically integrate their immigrant communities without having

to depart from an ethnic understanding of citizenship. In this sense, noncitizen voting rights would paradoxically be a device for protecting (instead of undermining) an exclusionary regime of national belonging. If this hypothesis holds, we would observe that inclusiveness in naturalization is inversely related to inclusiveness in noncitizen voting rights.

- **Hypothesis 13:** Countries that have more restrictive requirements for naturalization will be more likely to enfranchise noncitizens.

3 Empirics

3.1 Sample

The sample of country-year observations used to test my hypothesis is determined by two criteria. First, a substantial criteria related to the scope of the theory: since noncitizen voting rights are a feature of democracy, I only include countries once they become consolidated democracies. I examine Polity IV scores (Marshall et al., 2010) and include countries in the sample only from the time they continuously score 6 or higher up to 2010. Second, a pragmatic criteria related to data availability: I only include country-year observations for which there is reliable and comparable data on partisanship and immigration, the key variables in my theory. As explained below, reliable and comparable data on partisanship is only available for the period 1960-2012, and for immigration for the period 1960-2010. Therefore, I include in my sample all countries for which there is reliable and comparable partisanship data, for the period 1960-2010, truncating on the left periods of non-democracy or non-independence.² Table 1 details the 1,275 country-year observations that fulfill these two criteria. The resulting set of countries is significantly diverse in terms of history, political institutions, regional environment, and immigration policy.

Table 1: Country-year observations included in the sample

Countries that were independent and democratic at the beginning of the period 1960-2010 (entering the dataset in 1960)	Austria, Australia, Belgium, Canada, Switzerland, Denmark, Finland, Ireland, Iceland, Italy, Japan, Luxembourg, Netherlands, Norway, New Zealand, Sweden, United Kingdom, United States
Countries that became independent or reunified after the fall of the Berlin Wall (entering the dataset when they become independent/reunified and democratic)	Czech Republic (1993), Germany (1990), Estonia (1991), Hungary (1991), Lithuania (1991), Latvia (1991), Poland (1992), Romania (1997), Slovenia (1991), Slovakia (1993),
Countries that became democratic after 1960 (entering the dataset when they become democratic)	Spain (1978), France (1969), Greece (1975), Portugal (1976)
Total number of country-year observations	1275

²I include Germany only after its 1990 reunification, since West Germany (for which there is good data on partisanship and immigration) cannot be taken as representative of Germany as a whole.

3.2 Data

3.2.1 Operationalization of the dependent variables

I collected data on the extent to which noncitizens are allowed to vote, for country-year observations all around the world. I based the collection of data on academic literature (Earnest, 2008; Blais et al., 2001; Waldrauch, 2003; Bauböck, 2005; Andres, 2007; Niessen et al., 2007; Munteanu et al., 2001), national constitutions and electoral laws, international treaties, and news articles. I collected data on five dimensions of noncitizen voting rights. First, the scope of noncitizen voting rights, namely whether noncitizens are allowed to vote at no elections, only at subnational (local, regional), or at subnational as well as national elections. Secondly, I collected data on the breadth of noncitizen voting, that is, which noncitizens are entitled to vote. I operationalized the breadth of noncitizen voting rights as two ordinal variables. One of them captures the nationality requirement, i.e. whether only citizens are enfranchised, only noncitizens from one country (typically a former colonial metropolis), only noncitizens from several countries with which reciprocity agreements have been signed, or noncitizens from any country. The other variable related to the breadth of noncitizen voting captures the requirement of a minimum residence period, going from zero to ten or more years. I operationalize this variable so that higher minimum-residence requirements score lower, and vice versa, so that in all dimensions a higher score indicates a more generous regime of noncitizen voting rights. I also collected data on whether noncitizens are granted either both passive and active suffrage, only active suffrage, or no suffrage at all. Finally, I collected data on the level of government that passes the franchise reform, leading to either nation-wide or local-specific rights.

The first four dimensions (scope, nationality requirement, minimum-residence requirement, and passive suffrage) reflect a single underlying variable: a country’s friendliness toward noncitizen voting rights. Therefore, I build a noncitizen voting rights scale using those four observable variables and following the summated rating model (Jacoby, 1991, 33-38). The variable shows 19 different values, with about 60% of the observations having the minimum value (equivalent to no voting rights for noncitizens).

Building a scale allows me to get a reliable estimate of the level of noncitizen voting rights that takes into account the variation in all its dimensions, avoiding any loss of granularity that would result from using binary, categorical or ordinal variables. Furthermore, the use of a scale has the advantage of allowing me to operate with a continuous, standardized dependent variable for testing hypotheses. Table 2 details inter-item and item-scale correlations, and provides the values of α for each variable. All variables and the scale vary in the same direction: the higher the values, the higher the level of noncitizen voting rights. The high value of Cronbach’s α (0.96) confirms the scale’s reliability. Principal component analysis and Horn’s parallel analysis further confirm that the data are unidimensional and hence the adequacy of using a summated rating scale.³ Figure 1 plots the distribution of noncitizen voting rights over time, by country, for all countries included in my sample. In total, there are 30 franchise reforms (of which 28 are franchise extensions).

I am not only interested in the level of noncitizen voting rights, but also on the passing of franchise reforms that include more noncitizens. In order to test hypothesis about franchise reforms I create a binary dependent

³See Appendix 5.3 for details on the operationalization of the different components and results of Principal Component Analysis and Horn’s Analysis.

Table 2: Inter-item and item-scale correlations, and α values for the noncitizen voting rights scale

	Scope	Nationality requirement	Residence requirement	Passive suffrage
Scope	1			
Nationality requirement	0.8219	1		
Residence requirement	0.8996	0.8404	1	
Passive suffrage	0.8506	0.811	0.8875	1
Scale	0.9426	0.935	0.9572	0.955
α	0.9524	0.9562	0.9449	0.9461

variable that takes the value of 1 the year when the value of the noncitizen voting rights scale increases, and 0 in all other cases.

3.2.2 Operationalization of independent variables

To test the effect of partisanship I include the following variables: (i) the proportion of cabinet seats held by leftist parties in a given year, weighted by the number of days; and (ii) the share of votes received by far-right parties in the most recent legislative elections, weighted by quarter. These are suitable measures of left incumbency and strength of the far right provided by the Comparative Political Data Sets I and III (Armingeon et al., 2014a,b), which offer data for 35 OECD and post-Soviet countries in Western Europe (20), Eastern Europe (10), North America (2), Oceania (2) and Asia (1) for the period 1960-2012.⁴

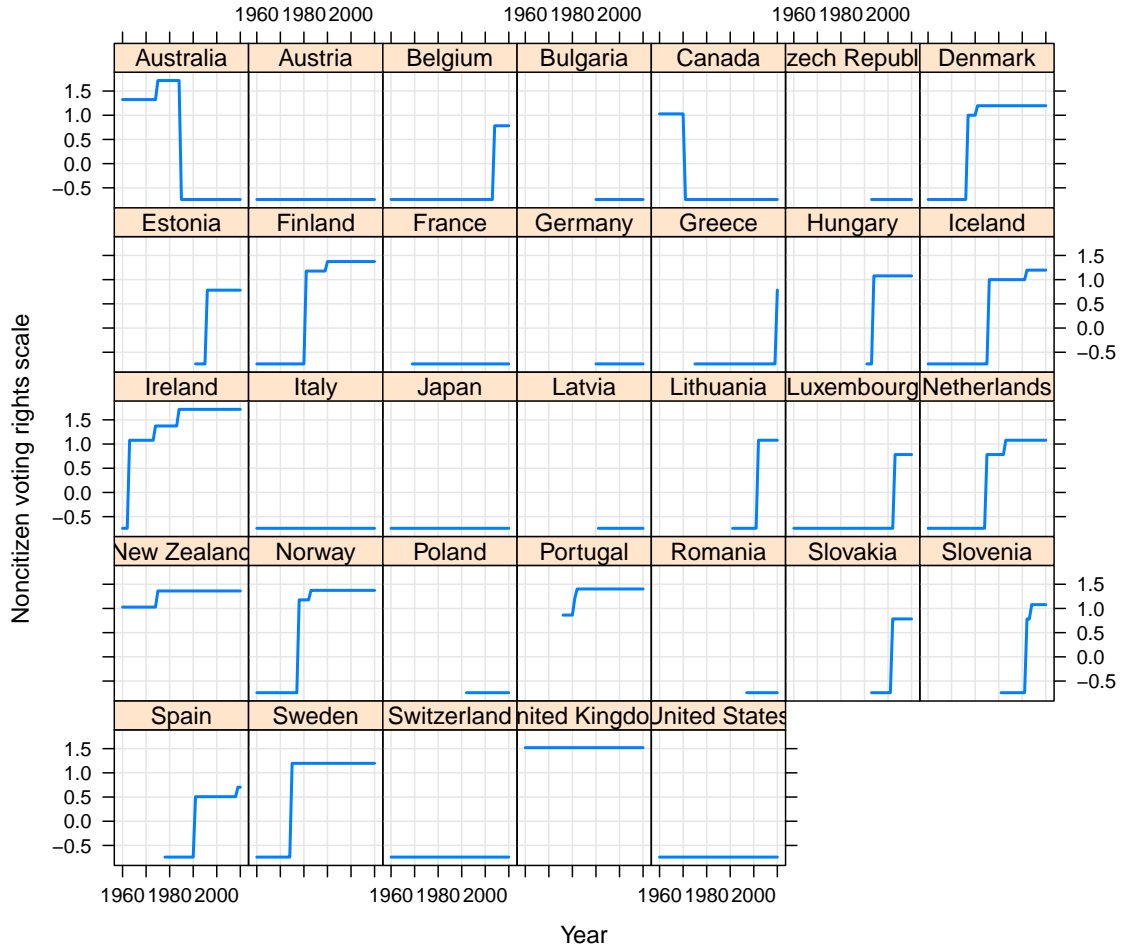
In order to test the effect of inequality, I include data on market Gini coefficients as provided by the Standardized Income Inequality Database (Solt, 2014). To minimize the prevalence of missing data, I use linear interpolation by panel for some short periods of time for which there is no data. Missing data remains at the beginning of the period for 8 countries.

I also need a measure of the size of a country’s immigrant population. The measurement and especially the comparison of the number of immigrants across countries and time is very complex, partly because different countries use different measurement techniques and report hardly comparable statistics (Fassmann et al., 2009). The World Bank provides a dataset with time-series estimations of the stock of foreign-born people as percentage of the total population, for each country and for each year multiple of 5 in the period 1960 – 2010 (World Bank, 2012). Since the stock of immigrants is unlikely to change dramatically or non-monotonically over short periods of 4 years, I use linear interpolation by panel to reduce the number of missing cases. The dataset, based mostly on census data, provides information not of the number of noncitizens but of those who were born abroad. This variable is however highly correlated with the measures that the EU and the OECD provide for the period 1999 – 2009 for the number of noncitizens, by country: they have correlation coefficients with my measure of 0.93 and 0.95, both with $p < 0.001$. In order to test for the bell-shaped effect of immigration, I include a quadratic term in the models.

To test the pro-immigrant judiciary hypothesis I look at the strength of judicial review, as defined by Maddex (2007). He offers an ordinal variable with three values corresponding to no judicial review, limited judicial and/or

⁴I exclude from my study Cyprus and Malta, for which Armingeon et al. (2014b) provide data only from 1990 onward, whereas they became democratic earlier.

Figure 1: Noncitizen voting rights scale by country and year



constitutional review, and judicial and/or constitutional review. The only country in my sample which is not included in his data is Luxembourg, for which I assign values following the same methodology and using data from [Lijphart \(1999\)](#).

In order to test for the political system hypotheses, I include a measure of the country’s electoral system, with values of 0 when it is majoritarian, 1 when it is mixed, and 2 when it is proportional. The data is available from [Golder \(2005\)](#). As for federalism, I use a scale indicating the degree of federalism and decentralization in the country, ranging from 0 (the country is unitary and centralized) to 5 (the country is federal and decentralized). The data is from [Lijphart \(1999\)](#). For those cases that are not included in his dataset, I follow his methodology and code them as follows: Bulgaria, the Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, and Slovenia are scored 1; Slovakia is scored 1 until 2002 and 2 afterwards; and the UK is scored 1 until 1997 and 2 afterwards.

In order to test for the effect of a human rights norms, I follow [Earnest \(2008, 2014\)](#) in constructing a scale of obligation to a series of international human rights treaties using Simmons’ methodology for a “commitment scale” ([Simmons, 2000](#)). I assign 1 point for the signature and 2 points for the ratification of each of seven

relevant human rights treaties.⁵ Since not all treaties are available to states for ratification at all time and for all countries, the score for each observation is divided by the maximum score that state could have at that moment, making the scale vary between 0 and 2.

In order to test the hypothesis of a transnational civil society I include the number of international non-governmental organizations (INGO) relative to population. Following [Earnest \(2008\)](#), I use Anheier and Stares' measure of membership density of INGO: the log of the number of INGO per one million inhabitants. Taking the log allows me to avoid the skewness toward countries with small populations. Data on the number of INGO per country and year is available from the Yearbook of International Organisations ([Union of International Associations, 2011](#)). Since the Union of International Associations reports figures only for 1960, 1977, 1981, and 1984 – 2010, I impute values for most missing observations using linear interpolation by panel. Data on population per country and year is obtained from [World Bank \(2012\)](#).

To test the hypotheses about diffusion mechanisms I include dummy variables measuring states' belonging to the relevant international organizations (the European Union, the Council of Europe, the Nordic Council, or the Commonwealth of Nations). I also include the share of all other countries in the world at a given year that enfranchise noncitizens at some level.⁶ As [Figure 2](#) makes clear, this proportion has largely increased over the past 50 years, although this increase has not been monotonic.

In order to test the competition hypothesis, I need a measure of how necessary immigrants are for a country's economy. Unfortunately, there is no time-series measure of such variable. Nonetheless, the Economist Intelligence Unit offers a "need for migrants" index that goes from 0 to 100 and measures "a country's possible need for migrants, in order to sustain economic growth [...] outside the current stock of migrants, and apart from net migration flows" ([Economist Intelligence Unit, 2008](#), 3), as of 2007, for 30 countries in my sample. The index is built from quantitative and qualitative (expert judgements) evidence, including items like the old age dependency ratio or a measure of internal regional mobility.

Finally, to test the substitution hypothesis, I need data on the extent to which naturalization laws allow noncitizens to obtain the nationality of the country where they reside. No time-series measure of this variable is available, but the Migrant Integration Policy Index or MIPEX ([Huddleston and Niessen, 2011](#)) offers estimates of the "access to nationality" as of 2010, based on country-expert judgements on four dimensions, namely eligibility, acquisition conditions, security of status, and dual nationality. The index goes from 0 to 100, and is available for 26 countries in my sample.

⁵I build this scale considering states' commitment to the International Covenant on Civil and Political Rights (1966); the Optional Protocol to the ICCPR (1966); the International Covenant on Economic, Social and Cultural Rights (1966); the International Convention on the Protection of All Migrant Workers and Members of their Families (1990); the American Convention on Human Rights (1969); the Additional Protocol to the American Convention on Human Rights in the area of Economic, Social, and Cultural Rights (1988); the European Convention on Human Rights (1950); and the Convention on the Participation of Foreigners in Public Life at Local Level (1992).

⁶I count the number of existing countries every year by looking at countries with representation before United Nations' General Assembly.

Figure 2: Proportion of countries in the world that give some voting rights to noncitizens, by year.

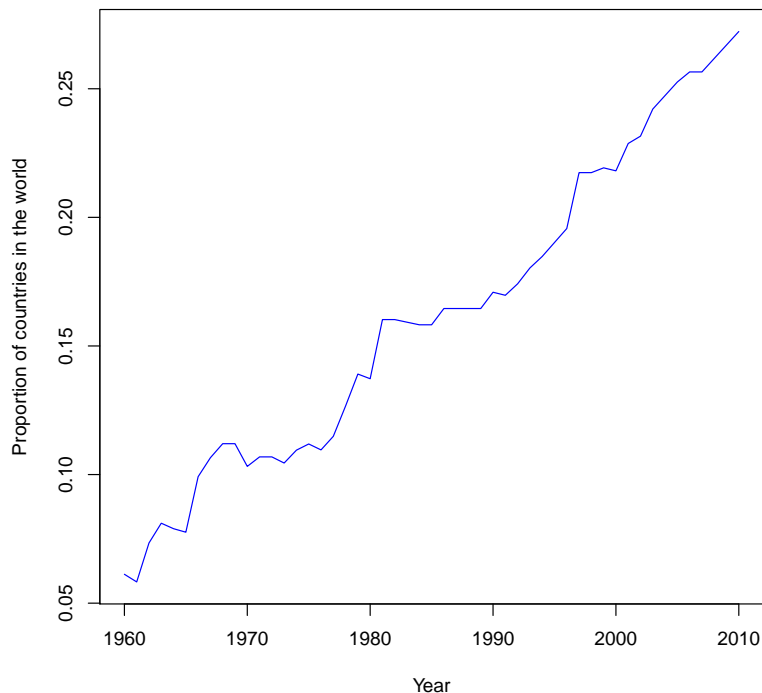


Table 3: Summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Noncitizen voting rights scale	0.025	0.971	-0.741	1.717	1275
Noncitizen voting rights extensions	0.023	0.149	0	1	1275
Left-wing incumbent	0.333	0.366	0	1	1275
Strength of far-right parties	0.029	0.066	0	0.452	1275
Stock of immigrants	0.089	0.07	0.002	0.342	1275
Inequality	0.283	0.04	0.197	0.378	1220
Judicial review	1.406	0.755	0	2	1275
Federalism	2.376	1.575	1	5	1275
Proportional representation	1.42	0.86	0	2	1275
Human rights commitment	1.254	0.533	0	2	1275
International NGOs relative to population	4.956	1.416	0.843	8.356	1270
Share of states that enfranchise	0.173	0.06	0.049	0.272	1275
European Union membership	0.449	0.498	0	1	1275
Council of Europe membership	0.765	0.424	0	1	1275
Commonwealth of Nations membership	0.16	0.367	0	1	1275
Nordic Council membership	0.2	0.4	0	1	1275
MIPEX access to nationality index	45.077	14.675	22	71	26
EIU need for immigrants index	60.29	4.845	48.7	68.5	30

3.3 Estimation strategy

I use a two-fold estimation strategy to test my theory. First, I use a panel model with a lagged dependent variable and country as well as year fixed effects, where the dependent variable is the level of noncitizen voting

rights, as measured by my scale:

$$Y_{i,t} = \alpha + \beta X_{i,t} + \theta Y_{i,t-1} + \gamma_i + \tau_t + \epsilon_{i,t} \quad (1)$$

Where $Y_{i,t}$ is the level of noncitizen voting rights for a given country in a given year, $X_{i,t}$ is a vector of covariates for that observation, γ_i is a country fixed effect, τ_t is a year fixed effect, and $\epsilon_{i,t}$ is an error term. A number of issues related to time-series cross-section (TSCS) studies need to be taken into account. The errors term is unlikely to satisfy the usual assumptions under OLS because of panel heteroskedasticity, cross-country correlation among the error terms, and autocorrelation of the error terms (Beck and Katz, 1996). My approach to these difficulties goes along the lines of what Beck calls “the modern approach”, i.e. treating them not as nuisances to be fixed but as interesting features to be modelled (Beck, 2001). I therefore use “panel-corrected standard errors” (Beck and Katz, 1995) to model unrestricted spatial correlation, and cluster the standard errors at the country level. Furthermore, since we are likely to have serial correlation, I estimate country-specific autocorrelation coefficients from an AR(1) process to adjust the standard errors. I also follow the advice given by Beck and Katz (1996) and include a lagged dependent variable ($Y_{i,t-1}$) and country and year fixed effects (τ_t). Note that while the inclusion of fixed effects terms in time series cross-section models with few years may lead to bias (Nickell, 1981), for panels with long time periods like this one such bias becomes small and is preferable to the one introduced by potential solutions (Beck and Katz, 2011; Judson and Owen, 1999).

Secondly, I use an event history or hazard model to examine the factors behind the timing of franchise extensions. Here, the dependent variable is a binary variable that takes the value of 1 the year when the level of noncitizen voting rights increases and 0 otherwise. I follow the advice of Beck et al. (1998) and treat my binary time series cross section observations as grouped duration data. A country enters the sample in 1960 or when it becomes independent/reunified and democratic, and it only exits the sample only in 2010 since no country achieves the maximum possible level of noncitizen voting rights. In the language of hazard models, I consider countries to be always “at risk” of a “failure” (an extension of the franchise to give voting rights to noncitizens). I estimate the following Cox proportional hazards model:

$$h_i(t) = h_0(t) \exp(\alpha + \beta X_{i,t} + \theta Y_{i,t-1} + \gamma_i) \quad (2)$$

Where $h_0(t)$ is the baseline hazard rate, the form of which is left unparametrized (Box-Steffensmeier and Jones, 2004). The model is specified with the exact partial likelihood method which assumes that time is discrete⁷

The two estimation strategies examine different aspects of the enfranchisement of noncitizens. The panel model looks at the evolution of the level of noncitizen voting rights across time and space. The hazard model examines the timing of franchise reforms giving more voting rights to noncitizens.

⁷This is appropriate since we only have yearly observations, but the findings are robust to use of the Breslow method too.

3.4 Results

3.4.1 Results from the panel model

Model 1 in Table 4 presents the results of the panel model without the quadratic term, and Model 2 adds the quadratic term. Both models support hypothesis 1 – left-wing incumbents are associated with significantly higher levels of noncitizen voting rights. Moreover, Model 2 shows that there is a bell-shaped effect of immigration on noncitizen voting rights, with these being highest at intermediate levels of immigration. This supports my theory that there is an electoral incentive behind the enfranchisement of noncitizens and that there is indeed a negative effect for very high levels of immigration. Hypotheses 2 and 3 find no support in these models – while the coefficients show negative signs as my theory predicted, they are not statistically significant.

The level of judicial review shows a statistically significant and negative effect on the enfranchisement of noncitizens, thus supporting ideas of courts as instances nationalizing citizenship and immigration policy. The models give mixed evidence vis-a-vis diffusion hypothesis, with a statistically significant and negative effect of the share of states that enfranchise, and a positive effect of some inter-governmental organizations (only the Council of Europe in the full model).

3.4.2 Results from the hazard model

Models 3 and 4 in Table 5 present the results of the hazard model as specified in equation 2, with and without the quadratic term for immigration. Here the dependent variable is a binary indicator of whether the country extended the franchise to include noncitizens or not. Therefore, the focus here is not on explaining the level or generosity of noncitizen voting rights in a given country and year, but the timing of franchise reforms that benefit noncitizens.

Both models shows that a left-wing incumbent is positively associated with the timing of franchise extensions, thus supporting hypothesis 1. Contrary to hypotheses 2 and 3 the model shows no effect of the strength of far-right parties and inequality on the timing of franchise extensions. As for hypothesis 4, Model 3 shows a positive effect of immigration on the timing of franchise extensions, but this effect loses significance once we include the quadratic term. The Bayesian information criterion reports that Model 2 fits the data better, so we must conclude that immigration has no effect on the timing of franchise reforms.

Judicial review and proportional representation show a negative effect on the timing of franchise extensions, while federalism has a positive one. The variable Commonwealth of Nations has no standard error because it is time invariant, and the variable Share of states that enfranchise is not included in the model because doing so causes the model to not converge.

To sum up, the evidence presented above indicates that left-wing governments are more likely to enfranchise noncitizens, and that immigration has a bell-shaped effect on the inclusiveness of a country’s noncitizen voting rights regime.

Table 4: Panel regression results
 Dependent variable: level of noncitizen voting rights

	Model 1	Model 2
Left-wing incumbent	0.022** (0.01)	0.020** (0.01)
Strength of the far-right	-0.052 (0.14)	-0.071 (0.14)
Income inequality	-0.002 (0.00)	-0.001 (0.00)
Stock of immigrants	-0.043 (0.30)	0.926** (0.46)
(Stock of immigrants) ²		-2.711** (1.22)
Judicial review	-0.155*** (0.03)	-0.148*** (0.03)
Federalism	-0.021 (0.03)	-0.016 (0.03)
Proportional representation	0.025** (0.01)	0.021* (0.01)
Human rights commitment	0.022 (0.01)	0.027** (0.01)
International NGO	-0.000 (0.03)	-0.001 (0.03)
Share of states that enfranchise	-168.173*** (4.47)	-168.877*** (4.38)
European Union	0.012 (0.02)	0.013 (0.02)
Council of Europe	0.081*** (0.02)	0.078** (0.02)
Commonwealth of Nations	10.082*** (0.34)	-0.049 (0.08)
Nordic Council	9.961*** (0.31)	-0.100 (0.13)
Lagged dependent variable	0.417*** (0.02)	0.412*** (0.02)
Year fixed effects	✓	✓
Country fixed effects	✓	✓
Number of countries	33	33
Number of observations	1215	1215
R^2	0.973	0.973

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Panel-corrected standard errors, assuming panel-specific first-order auto-correlation (AR1)

3.4.3 Exploring the competition and substitution hypothesis through cross-national comparisons

The competition and substitution hypotheses cannot be tested in a TSCS study because we only have data for 2007, and it is unreasonable to assume that either the need or the accessibility for immigrants remain constant over time. Nonetheless, the available data on the need and the accessibility for immigrants can be used to check whether there is cross-sectional empirical evidence supporting these two hypotheses. I do so by plotting the above-mentioned measures of need for immigrants and accessibility to nationality, on the one hand, by my scale

Table 5: Hazard model results
 Dependent variable: franchise reform to include noncitizens

	Model 1	Model 2
Left-wing incumbent	1.961** (0.83)	1.946** (0.83)
Strength of the far right	-0.797 (9.46)	-0.620 (9.65)
Inequality	-0.030 (0.10)	-0.049 (0.11)
Stock of immigrants	26.964* (15.49)	7.494 (24.55)
(Stock of immigrants) ²		81.168 (85.71)
Judicial review	-2.701** (1.25)	-2.765** (1.26)
Federalism	20.898*** (0.33)	20.712*** (0.34)
Proportional representation	-21.419*** (1.39)	-21.695*** (1.44)
Human rights commitment	1.057 (1.01)	1.056 (1.03)
International NGO	1.466 (1.63)	1.596 (1.64)
European Union	-1.111 (0.97)	-0.953 (0.98)
Council of Europe	1.997 (1.70)	2.035 (1.71)
Commonwealth of Nations	13.483 (.)	12.755 (.)
Nordic Council	115.288*** (1.98)	114.727*** (2.02)
Lagged dependent variable	-2.148 (1.39)	-2.113 (1.34)
Country fixed effects	✓	✓
Number of countries	33	33
Number of observations	1215	1215
BIC	393.429	307.102

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Robust standard errors clustered at the country level

of noncitizen voting rights (for the year in which the EIU and MIPEX indices are available for).

As Figure 3 shows, there is no systematic relationship between a country's need for immigrants and the extent to which it gives voting rights to noncitizens. We have therefore some suggestive evidence against the hypothesis that countries grant voting rights to noncitizens in order to attract high-skilled immigrants. Moreover, Figure 4 shows that the relationship between MIPEX's index of immigrants' access to nationality and the noncitizen voting rights scale is positive and statistically insignificant, while hypothesis 13 predicts a negative relationship. This provides some suggestive evidence to reject the substitution hypothesis, i.e. that what drives the enfranchisement of noncitizens is a will to promote the political incorporation of immigrants without undermining an exclusionary conception and practice of national belonging.

Figure 3: Relationship between EUI’s “need for immigrants index” and noncitizen voting rights (2007)

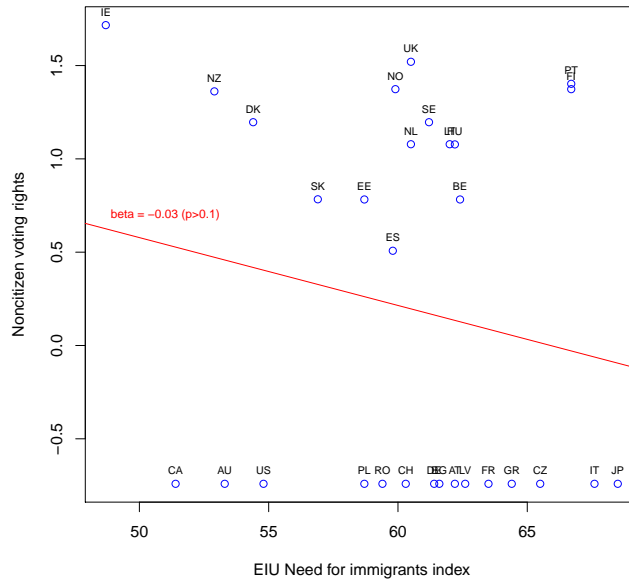
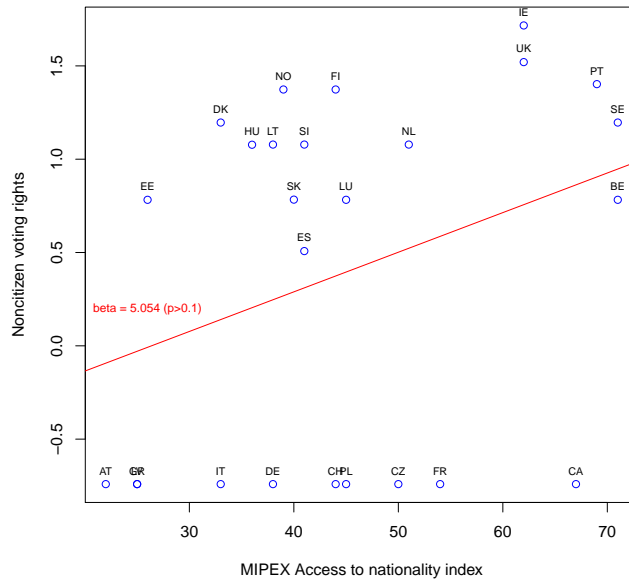


Figure 4: Relationship between MIPEX “access to nationality” index and noncitizen voting rights (2007)



4 Conclusion

What explains the existing variation across time and space in the enfranchisement of noncitizens? Using data from a diverse set of 33 democracies in the period 1960-2010, I have argued that the enfranchisement of noncitizens is not a selfless act from those with political power, as much of the specific literature about noncitizens seems to imply. Neither is it the result of a revolutionary threat, an explanation that has been successfully lever-

aged formally and empirically to account for earlier franchise reforms benefiting the working class. Rather, the enfranchisement of noncitizens responds to partisan competition under some politico-economic constraints (in particular the size of the immigrant population). In this sense, and using the distinction outlined by [Przeworski \(2009\)](#), we can say that noncitizens do not conquer but are granted voting rights.

In contrast to previous work emphasizing transnational and international pressures, my theory and the empirical evidence presented above place decision-making by self-interested, national elites at the center of the analysis. By looking at the level of immigration, the strength of the far right and income inequality as constraints to the incumbent's decision on the enfranchisement of noncitizens, my theory builds on previous theories of immigrant rights and of other types of franchise extensions. The regression analyses of panel data and a hazard model show a positive and statistically significant effect of left-wing incumbents (which my theory predicts will benefit in general from the enfranchisement of noncitizens) on noncitizen voting rights. These electoral gains could come in the form of support from the newly enfranchised noncitizens themselves and/or from immigrant-friendly citizens. I have noted above a number of studies that show how, in different countries, immigrants tend to vote for the left. On the other hand, [Pérez-Nievas et al. \(2014\)](#) show that, in Spain, voters of parties in the left were in 2008 more likely to support noncitizen voting rights, which were approved by the socialist government one year later.

Also supportive of my theory of the enfranchisement of noncitizens is the bell-shaped effect of immigration levels on noncitizen voting rights. The level of rights is *ceteris paribus* maximized at intermediate levels of immigration. This is consistent with the theory that with very few immigrants the electoral incentive is too small, whereas with too many immigrants the risk is too high. These results are interesting under the light of the “numbers vs. rights hypothesis” ([Ruhs and Martin, 2008](#)), which predicts a linear and negative relationship between the number of immigrants and the rights the host country grants to them. The finding runs also contrary to a potential threat-of-revolution explanation, which would expect a linear and positive relationship between numbers and rights.

The results also indicate that, while the coefficients for the strength of the far right and the level of inequality have the signs my theory predicts, these variables do not show a statistically significant effect. While they may be real constraints in some cases, in general the strength of the far right and the level of inequality do not show an effect on the enfranchisement of noncitizens. This goes contrary to what other studies have found when analyzing changes to citizenship policy more broadly ([Koopmans et al., 2012](#); [Howard, 2010](#)).

With regards to alternative hypotheses, the level of judicial review shows a significant negative effect on noncitizen voting rights. It seems that courts are not, for the case of voting rights, institutions protective of the rights of noncitizens but rather of the link between electoral rights and citizenship. This perhaps counter-intuitive finding is supportive of what several case studies have pointed at ([Hofhansel, 2008](#); [Triandafyllidou, 2014](#)).

Contrary to the statements of the transnationalist literature, my work shows that nation-states remain central in the advancement of noncitizen voting rights. However, as [Odmalm \(2005\)](#) states, “the state is simultaneously the provider, opponent and guarantor of [immigrants'] rights to participate politically”. This is especially

relevant if –as my work has shown– noncitizens are not enfranchised out of governmental generosity or as a result of a transformation of nation-states, but as an instrument for electoral competition.

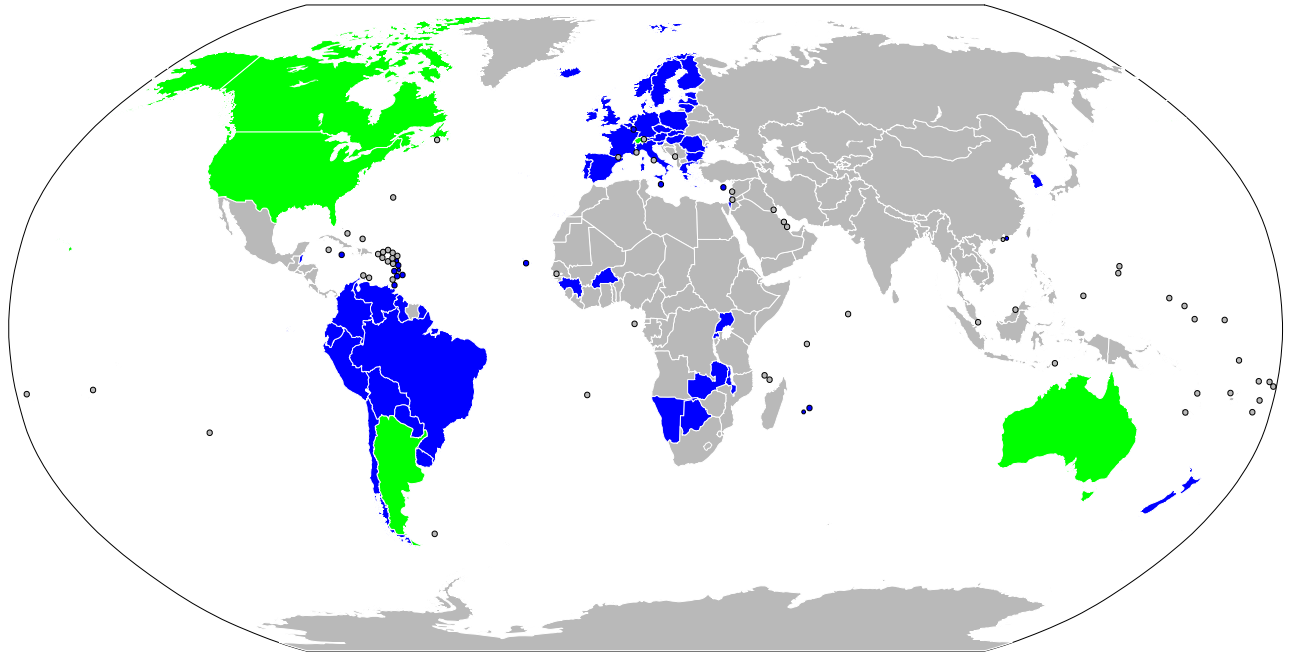
The enfranchisement of noncitizens has a significant potential for making democracy more inclusive, especially in countries with significant immigrant minorities. To the extent that elected officials respond to the “selectorate”, the enfranchisement of noncitizens has important implications for immigrant minorities and for the population as a whole. Nonetheless, there are sources of tension that make the enfranchisement of noncitizens an ambiguous solution to the political exclusion of immigrant minorities. First, as shown by several historical cases, noncitizen voting rights can be revoked. It is therefore misleading to assume Tocqueville’s view of an inexorably expanding electorate.⁸ Noncitizen voting rights can be brought to an end as a result of the rise of xenophobia and nationalism (as illustrated by the end of noncitizen voting rights in the US in the 19th century), the rise of domestic national minorities (as illustrated by the end of federal-level noncitizen voting rights in Canada), and changes in the constitutional interpretations of citizenship (as shown by the intervention against noncitizen voting rights by the constitutional courts of Germany in 1991, Austria in 2004, and Greece in 2013). Moreover, voting rights may be paradoxically linked not to the de-ethnicization of citizenship (Joppke, 2003) but to its re-ethnicization. For instance, enfranchising noncitizens on the basis of criteria such as those present in the United Kingdom or Portugal reinforces an understanding of national belonging based on language and/or a colonial past.

⁸“There is no more invariable rule in the history of society: the further electoral rights are extended, the greater is the need of extending them; for after each concession the strength of the democracy increases, and its demands increase with its strength.” (Tocqueville, 1945).

5 Appendix

5.1 Noncitizen voting rights in the world as of January 1, 2011

Figure 5: Enfranchisement of noncitizens in the world, according to the level of government that takes the decision to extend the franchise



In blue, countries where the national government enfranchises noncitizens.
In green, countries where some subnational governments enfranchise noncitizens.

5.2 Evidence suggesting that immigrants are over-represented in the lower end of the income distribution

Table 6: Distribution of foreign-born people by occupation in OECD countries circa 2000

	ISCO 1 Legislators, senior officials, and managers	ISCO 2 and 3 Professionals, technicians and and associate professionals	ISCO 4-9 Other occupations, from clerks to elementary occupations
Australia	10.60%	31.49%	55.55%
Austria	6.31%	19.22%	74.14%
Belgium	14.33%	25.93%	59.03%
Denmark	1.05%	21.53%	50.15%
Finland	2.10%	31.68%	59.83%
France	8.89%	26.83%	63.16%
Greece	4.11%	10.82%	81.76%
Hungary	10.01%	35.53%	53.98%
Ireland	15.88%	28.30%	50.01%
Luxembourg	6.75%	26.84%	56.73%
Mexico	14.29%	29.72%	40.80%
Netherlands	8.12%	31.04%	56.52%
New Zealand	13.15%	28.99%	49.87%
Norway	6.81%	32.82%	60.06%
Poland	10.10%	33.74%	54.61%
Portugal	6.68%	27.25%	65.30%
Spain	6.78%	17.70%	75.17%
Sweden	3.00%	25.50%	60.43%
Switzerland	5.98%	19.21%	38.21%
United Kingdom	16.32%	30.72%	52.29%
Total	9.78%	26.37%	58.74%

Note: The data are based in censuses and population registers from around 2000. Occupation categories follow the International Standard Classification of Occupations. Numbers do not add up to 100% because I exclude data for foreign-born people who work in the armed forces and those whose occupation is unknown. Source: OECD Statistics.

Table 7: Distribution of noncitizens by level of education in OECD countries circa 2000

	Lower than (upper) secondary education	Secondary and post-secondary, non-tertiary education	Tertiary education
Australia	34.30%	31.02%	24.97%
Austria	55.60%	35.22%	9.18%
Belgium	42.87%	19.76%	16.54%
Canada	27.39%	30.82%	41.78%
Czech Republic	19.34%	50.88%	21.61%
Denmark	28.67%	29.39%	17.79%
Finland	60.85%	21.93%	17.22%
France	63.11%	22.86%	14.03%
Greece	46.15%	38.37%	11.88%
Hungary	34.28%	46.03%	19.69%
Ireland	25.05%	26.67%	39.56%
Italy	55.52%	30.97%	13.52%
Japan	21.04%	35.93%	24.36%
Luxembourg	30.12%	36.53%	17.63%
Netherlands	53.12%	27.82%	17.82%
Norway	9.82%	25.60%	18.76%
Poland	13.16%	44.33%	27.87%
Portugal	62.10%	22.47%	15.43%
Slovak Republic	22.21%	42.82%	11.85%
Spain	59.46%	21.95%	17.77%
Sweden	24.58%	34.36%	24.73%
Switzerland	34.19%	24.99%	15.52%
Turkey	33.00%	35.21%	26.70%
United States	47.62%	30.84%	21.54%
Total	45.99%	29.72%	20.74%

Note: The data are based in censuses and population registers from around 2000. The classification of education levels corresponds to ISCED 0-2, ISCED 3-4, and ISCED 5-6 respectively. In some cases the numbers corresponding to one country do not add up to 100% because the country reports data for individuals whose education level is unknown (not included here). Source: OECD Statistics.

5.3 Construction and validity of the noncitizen voting rights scale

I built the noncitizen voting rights scale using country-year data on the following four dimensions, looking only at enfranchisement measures decided by the national government:

- Scale. Government level at which noncitizens are allowed to cast their votes, with the following values:
 - 0: No noncitizen voting in any government level.
 - 1: Noncitizen voting only at the local (and intermediary) level.
 - 2: Noncitizen voting at the local (and intermediary) as well as the national levels.
- Scope A. Nationality requirement to be fulfilled for a noncitizen to be granted voting rights.
 - 0: No voting rights for noncitizens.
 - 1: Voting rights for citizens of one only country (e.g. former colony).
 - 2: Voting rights for citizens of several or many countries (e.g. reciprocity agreements).
 - 3: No nationality requirement.
- Scope B. Minimum residence requirement before a noncitizen is granted voting rights, in years.
 - 0: 10 years or more.
 - 1: 9 years.
 - 2: 8 years.
 - 3: 7 years.
 - 4: 6 years.
 - 5: 5 years.
 - 6: 4 years.
 - 7: 3 years.
 - 8: 2 years.
 - 9: 1 year.
 - 10: Less than 1 year.
- Passive suffrage. Whether noncitizens' suffrage is active and passive or only passive.
 - 0: No suffrage.
 - 1: Only active suffrage.
 - 2: Active and passive suffrage.

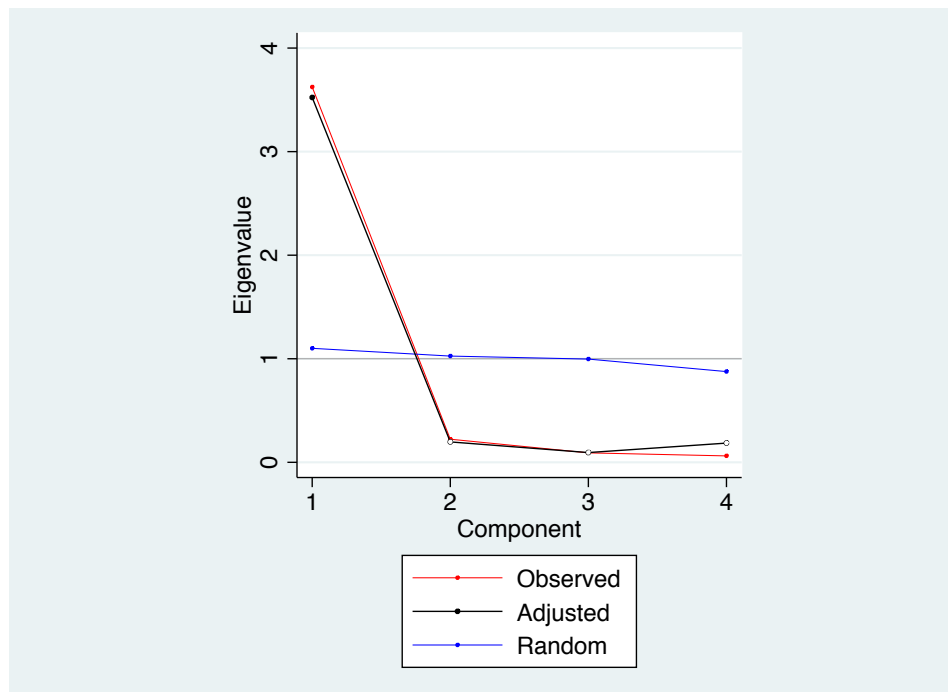
Table 2 details inter-item and item-scale correlations, and provides the values of α for each variable. All variables and the scale vary in the same direction: the higher the values, the higher the level of noncitizen voting rights. Furthermore, the very high value of Cronbach's α (0.96) confirms the scale's reliability.

Although we have sound theoretical reasons to identify a single latent variable common to those four dimensions, we technically cannot be certain from the results showed in Table 2, despite the high α value, that our data is unidimensional. As [Jacoby \(1991, 40\)](#) puts it, “the summated rating model dismisses the possibility of multidimensionality on a priori grounds. [... It] is very useful as a scaling technique, but poor as a scaling criterion”. In order to test this I use principal component analysis. Table 8 shows that the eigenvalue of the first component (3.59) is much higher than that of the second one (0.20), which indicates that the first component explains most of the variation in the data. Nonetheless, I use Horn's parallel analysis ([Horn, 1965](#); [Hayton et al., 2004](#)) to make sure that one single component is sufficient, i.e. that the data are unidimensional. Horn's parallel analysis generates a random data matrix with the same variance-covariance structure, and shows the number of components with which the actual data performs better than the simulated data. As Figure 6 shows, one single component is enough. This proves that the observed data are unidimensional and hence the adequacy of using a summated rating scale.

Table 8: Principal component analysis of the noncitizen voting rights cale

Component	Eigenvalue	Difference	Proportion	Cumulative
Component 1	3.62366	3.40056	0.9059	0.9059
Component 2	0.2231	0.131883	0.0558	0.9617
Component 3	0.0912163	0.0291901	0.0228	0.9845
Component 4	0.0620262	.	0.0155	1

Figure 6: Horn's parallel analysis



References

- Acemoglu, D. and J. A. Robinson (2000). Why did the west extend the franchise? democracy, inequality, and growth in historical perspective. *Quarterly Journal of Economics*, 1167–1199.
- Aidt, T. S. and P. S. Jensen (2014). Workers of the world, unite! franchise extensions and the threat of revolution in europe, 1820–1938. *European Economic Review* 72, 52–75.
- Andres, H. (2007). Le droit de vote des étrangers: une utopie déjà réalisée sur les cinq continents. *Migrations sociétés* 19(114), 65–81.
- Anwar, M. (2001). The participation of ethnic minorities in british politics. *Journal of Ethnic and Migration Studies* 27(3), 533–549.
- Armingeon, K., R. Careja, D. Weisstanner, S. Engler, P. Potolidis, and M. Gerber (2014a). Comparative political data set i 1990–2012. *Institute of Political Science, University of Berne*.
- Armingeon, K., R. Careja, D. Weisstanner, S. Engler, P. Potolidis, and M. Gerber (2014b). Comparative political data set iii 1990–2012. *Institute of Political Science, University of Berne*.
- Basri, E., S. Box, et al. (2008). *The global competition for talent: Mobility of the highly skilled*. OCDE.
- Bauböck, R. (2005). Expansive citizenship—voting beyond territory and membership. *Political Science and Politics* 38(04), 683–687.
- Bearce, D. H. and S. Bondanella (2007). Intergovernmental organizations, socialization, and member-state interest convergence. *International Organization* 61(04), 703–733.
- Beck, N. (2001). Time-series-cross-section data: What have we learned in the past few years? *Annual Review of Political Science* 4(1), 271–293.
- Beck, N. and J. N. Katz (1995). What to do (and not to do) with time-series cross-section data. *American political science review* 89(03), 634–647.
- Beck, N. and J. N. Katz (1996). Nuisance vs. substance: Specifying and estimating time-series-cross-section models. *Political analysis* 6(1), 1–36.
- Beck, N. and J. N. Katz (2011). Modeling dynamics in time-series-cross-section political economy data. *Annual Review of Political Science* 14, 331–352.
- Beck, N., J. N. Katz, and R. Tucker (1998). Taking time seriously: Time-series-cross-section analysis with a binary dependent variable. *American Journal of Political Science*, 1260–1288.
- Bendix, R. and S. Rokkan (1968). The extension of citizenship to the lower classes. *State and Society: A Reader in Comparative Political Sociology*, 233–256.
- Benhabib, S. (2004). *The rights of others: Aliens, residents, and citizens*, Volume 5. Cambridge University Press.
- Bergh, J. and T. Bjørklund (2011). The revival of group voting: explaining the voting preferences of immigrants in norway. *Political Studies* 59(2), 308–327.
- Blais, A., L. Massicotte, and A. Yoshinaka (2001). Deciding who has the right to vote: a comparative analysis of election laws. *Electoral studies* 20(1), 41–62.
- Box-Steffensmeier, J. M. and B. S. Jones (2004). *Event history modeling: A guide for social scientists*. Cambridge University Press.
- Bueno de Mesquita, B., A. Smith, R. M. Siverson, and J. D. Morrow (2003). *The logic of political survival*. Cambridge, MA: MIT Press.
- Castles, S., M. J. Miller, and G. Ammendola (2005). The age of migration: International population movements in the modern world.
- Checkel, J. T. (2005). International institutions and socialization in europe: Introduction and framework. *International organization* 59(04), 801–826.
- Cornelius, W. A. and T. Tsuda (2004). Controlling immigration: the limits of government intervention. *Controlling immigration: A global perspective* 3, 7–15.

- Dahl, R. A. (1973). *Polyarchy: Participation and opposition*. Yale University Press.
- David, H. and A. McGrew (2000). *The Global Transformations Reader. An introduction to the globalization debate*.
- Day, S. (2009). Japan: the contested boundaries of alien suffrage at the local level. *Democratization* 16(3), 558–584.
- Dolmas, J. and G. W. Huffman (2004). On the political economy of immigration and income redistribution. *International Economic Review* 45(4), 1129–1168.
- Dorigo, G. and W. Tobler (1983). Push-pull migration laws. *Annals of the Association of American Geographers* 73(1), 1–17.
- Earnest, D. C. (2006). Neither citizen nor stranger: Why states enfranchise resident aliens. *World Politics* 58(02), 242–275.
- Earnest, D. C. (2008). *Old nations, new voters: nationalism, transnationalism, and democracy in the era of global migration*. SUNY Press.
- Earnest, D. C. (2014). Expanding the electorate: Comparing the noncitizen voting practices of 25 democracies. *Journal of International Migration and Integration* 16(1), 1–25.
- Earnest, D. C. (2015). The enfranchisement of resident aliens: Variations and explanations. *Democratization*.
- Economist Intelligence Unit (2008). Global migration barometer: methodology, results and findings.
- Engerman, S. L. and K. L. Sokoloff (2005). The evolution of suffrage institutions in the new world. *The Journal of Economic History* 65(04), 891–921.
- Epp, C. R. (1998). *The rights revolution: Lawyers, activists, and supreme courts in comparative perspective*. Cambridge University Press.
- Fassmann, H., U. Reeger, and W. Sievers (2009). *Statistics and Reality: Concepts and measurements of migration in Europe*. Amsterdam University Press.
- Freeman, J. R. and D. Snidal (1982). Diffusion, development and democratization: enfranchisement in western europe. *Canadian Journal of Political Science* 15(02), 299–330.
- Golder, M. (2005). Democratic electoral systems around the world, 1946–2000. *Electoral Studies* 24(1), 103–121.
- Goodman, R. and D. Jinks (2004). How to influence states: Socialization and international human rights law. *Duke Law Journal*, 621–703.
- Guiraudon, V. (1999). The marshallian triptych re-ordered: the role of courts and bureaucracies in furthering migrant social rights. In *European Institute-European Forum Papers*, Number 99/1.
- Hammar, T. (1990). *Democracy and the nation state: aliens denizens and citizens in a world of international migration*. Brookfield Vermont/Aldershot England Avebury 1990.
- Hayduk, R. (2006). *Democracy for all: Restoring immigrant voting rights in the United States*. Taylor & Francis.
- Hayton, J. C., D. G. Allen, and V. Scarpello (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational research methods* 7(2), 191–205.
- Hofhansel, C. (2008). Citizenship in austria, germany, and switzerland: Courts, legislatures, and administrators. *International migration review* 42(1), 163–192.
- Hooghe, M. (2005). Ethnic organisations and social movement theory: the political opportunity structure for ethnic mobilisation in flanders. *Journal of Ethnic and Migration Studies* 31(5), 975–990.
- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika* 30(2), 179–185.
- Howard, M. M. (2006). Comparative citizenship: an agenda for cross-national research. *Perspectives on politics* 4(03), 443–455.
- Howard, M. M. (2010). The impact of the far right on citizenship policy in europe: explaining continuity and change. *Journal of Ethnic and Migration Studies* 36(5), 735–751.

- Huddleston, T. and J. Niessen (2011). *Migrant integration policy index: index III*. British Council; Migrant Policy Group.
- Jack, W. and R. Lagunoff (2006). Dynamic enfranchisement. *Journal of Public Economics* 90(4), 551–572.
- Jacobs, D. (1998). Discourse, politics and policy: The dutch parliamentary debate about voting rights for foreign residents. *International Migration Review*, 350–373.
- Jacobs, D. and M. Swyngedouw (2002). The extreme-right and enfranchisement of immigrants: main issues in the public “debate” on integration in belgium. *Journal of International Migration and Integration/Revue de l’intégration et de la migration internationale* 3(3-4), 329–344.
- Jacobson, D. (1996). *Rights across borders: Immigration and the decline of citizenship*. Brill.
- Jacoby, W. G. (1991). *Data theory and dimensional analysis*. Number 77-78. Sage.
- Johnston, A. I. (2001). Treating international institutions as social environments. *International Studies Quarterly* 45(4), 487–515.
- Joppke, C. (2001). The legal-domestic sources of immigrant rights the united states, germany, and the european union. *Comparative Political Studies* 34(4), 339–366.
- Joppke, C. (2003). Citizenship between de-and re-ethnicization. *European Journal of Sociology* 44(03), 429–458.
- Judson, R. A. and A. L. Owen (1999). Estimating dynamic panel data models: a guide for macroeconomists. *Economics letters* 65(1), 9–15.
- King, G. and L. Zeng (2001). Logistic regression in rare events data. *Political analysis* 9(2), 137–163.
- Koopmans, R., I. Michalowski, and S. Waibel (2012). Citizenship rights for immigrants: National political processes and cross-national convergence in western europe, 1980–2008. *American Journal of Sociology* 117(4), 1202–1245.
- Layton-Henry, Z. (1990). *The political rights of migrant workers in Western Europe*, Volume 25. SAGE Publications Limited.
- Lee, E. S. (1966). A theory of migration. *Demography* 3(1), 47–57.
- Lijphart, A. (1999). *Patterns of democracy: Government forms and performance in thirty-six countries*. Yale University Press.
- Lizzeri, A. and N. Persico (2004). Why did the elites extend the suffrage? democracy and the scope of government, with an application to britain’s” age of reform”. *The Quarterly Journal of Economics*, 707–765.
- Llavador, H. and R. J. Oxoby (2003). Partisan competition, growth and the franchise. *UPF Economics and Business Working Paper* (730).
- Lupu, N. and J. Pontusson (2011). The structure of inequality and the politics of redistribution. *American Political Science Review* 105(02), 316–336.
- Maddex, R. L. (2007). *Constitutions of the World*. Cq Press.
- Marshall, M. G., K. Jagers, and T. R. Gurr (2010). Polity iv data series version 2010. *College Park, MD: University of Maryland*. Retrieved from <http://www.systemicpeace.org/polity/polity4.htm>.
- Marshall, T. H. (1950). *Citizenship and social class*, Volume 11. Cambridge.
- McCarty, N., K. T. Poole, and H. Rosenthal (2006). *Polarized America: The dance of ideology and unequal riches*, Volume 5. MIT Press.
- Moya Malapeira, D. and A. V. Ferrer (2010). *Sufragio y participación política de los extranjeros extracomunitarios en Europa*. Fundació Carles Pi i Sunyer.
- Munteanu, I., V. Popa, and O. Simek (2001). *Developing new rules in the old environment*. Local government and public service reform initiative.
- Nickell, S. (1981). Biases in dynamic models with fixed effects. *Econometrica: Journal of the Econometric Society*, 1417–1426.

- Niessen, J., T. Huddleston, L. Citron, A. Geddes, and D. Jacobs (2007). Migrant integration policy index.
- Odmalm, P. (2005). *Migration Policies and Political Participation: Inclusion Or Intrusion in Western Europe?* Palgrave Macmillan Houndmills.
- O'Leary, S. and T. Tiilikainen (1998). *Citizenship and nationality status in the new Europe*. Carswell Legal Pubns.
- Park, S. (2006). Theorizing norm diffusion within international organizations. *International politics* 43(3), 342–361.
- Pérez-Nievas, S., C. D. Vintila, L. Morales, and M. Paradés (2014). *La representación política de los inmigrantes en elecciones municipales: Un análisis empírico*, Volume 72. CIS-Centro de Investigaciones Sociológicas.
- Przeworski, A. (2009). Conquered or granted? a history of suffrage extensions. *British Journal of Political Science* 39(02), 291–321.
- Raskin, J. B. (1993). Legal aliens, local citizens: the historical, constitutional and theoretical meanings of alien suffrage. *University of Pennsylvania law review*, 1391–1470.
- Richman, J. T., G. A. Chattha, and D. C. Earnest (2014). Do non-citizens vote in us elections? *Electoral Studies* 36, 149–157.
- Rubio-Marin, R. (2000). *Immigration as a democratic challenge: citizenship and inclusion in Germany and the United States*. Cambridge University Press.
- Ruhs, M., B. Anderson, and D. Phil (2010). *Who needs migrant workers?: labour shortages, immigration, and public policy*. Oxford University Press Oxford.
- Ruhs, M. and P. Martin (2008). Numbers vs. rights: Trade-offs and guest worker programs1. *International Migration Review* 42(1), 249–265.
- Sassen, S. (1996). *Losing control?: Sovereignty in an age of globalization*. Columbia University Press.
- Sassen, S. (2002). The repositioning of citizenship: Emergent subjects and spaces for politics. *Berkeley journal of sociology*, 4–26.
- Simmons, B. (2000). Why commit? explaining state acceptance of international human rights obligations. *Unpublished manuscript (University of California at Berkeley, Department of Political Science 2002)*.
- Solt, F. (2014). The standardized world income inequality database. *Working Paper*.
- Soysal, Y. N. (1994). *Limits of citizenship: migrants and postnational membership in Europe*. University of Chicago Press.
- Stark, O. and B. Blackwell (1991). *The migration of labor*. Basil Blackwell Cambridge, MA.
- Timmer, A. S. and J. G. Williams (1998). Immigration policy prior to the 1930s: Labor markets, policy interactions, and globalization backlash. *Population and Development Review*, 739–771.
- Tocqueville, A. d. (1945). *Democracy in america*. 2 vols. *New York: Vintage*.
- Togeby, L. (1999). Migrants at the polls: an analysis of immigrant and refugee participation in danish local elections. *Journal of Ethnic and Migration Studies* 25(4), 665–684.
- Triandafyllidou, A. (2014). Reform, counter-reform and the politics of citizenship: Local voting rights for third-country nationals in greece. *Journal of International Migration and Integration* 16(1), 43–60.
- Tung, K.-C. R. (1985). Voting rights for alien residents-who wants it? *International Migration Review*, 451–467.
- Union of International Associations (1967-2011). *Yearbook of International Organizations*.
- Vernby, K. (2013). Inclusion and public policy: evidence from sweden's introduction of noncitizen suffrage. *American Journal of Political Science* 57(1), 15–29.
- Waldrauch, H. (2003). Electoral rights for foreign nationals: a comparative overview of regulations in 36 countries. *National Europe Center Paper no. 73*.
- Walzer, M. (1983). *Spheres of justice: A defense of pluralism and equality*. Basic Books.

Weil, P. (2001). Access to citizenship: a comparison of twenty-five nationality laws. In A. Aleinikoff and D. Klusmeyer (Eds.), *Citizenship today: Global perspectives and practices*, pp. 17–35.

World Bank (2012). *World Development Indicators 2012*. World Bank Publications.