Citizenship Laws and International Migration in Historical Perspective*

Graziella Bertocchi
Università di Modena e Reggio Emilia and CEPR

Chiara Strozzi
Università di Modena e Reggio Emilia

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ABSTRACT

We investigate empirically the origin and the evolution of citizenship laws and their relationship with international migration, with a focus on citizenship acquisition at birth. Citizenship laws come from two broad traditions, common and civil law. The former applies the jus soli principle, according to which a child is a citizen as long as he is born in a given country. The latter applies the jus sanguinis principle, according to which a child simply inherits his parents' citizenship. We compile a data set on citizenship rules across countries of the world which also captures their evolution starting from the end of the 19th century. We show that the impact of the original rules on international migration is insignificant for the early, mass migration wave, which confirms to be driven primarily by economic incentives. For post-war data, we investigate the determinants of citizenship laws evolution and find that their convergence can be linked to legal tradition and international migration, but is also affected by border stability, the degree of democracy, colonial history, and cultural factors.

1   Introduction

Each country of the world has established a complex system of legal rules that govern the attribution of citizenship. As a consequence of the increasing pressure of international migration, citizenship laws have moved to center stage on policy agendas. By regulating the inclusion of newcomers within societies that exhibit unprecedented diversity, they represent powerful tools to promote social cohesion and preserve common traditions. A country's citizenship policy has implications not only for its broader immigration policy, but also for its labor market, welfare programs, and international relations.

We investigate the origin of citizenship laws and their evolution from a political economy perspective with a specific focus on the legal rules regulating the access to citizenship for immigrants' children. Such laws come from two broad traditions, common and civil law. The former applies the jus soli (i.e., through birthplace) principle, according to which the child of an immigrant is a citizen, as long as he is born in the country of immigration. The United States are the archetypal example of such an arrangement. The latter applies the jus sanguinis (i.e., through parental descent) principle, according to which a child inherits citizenship from his parents, independently of where he is born. Continental European countries have traditionally applied this kind of legislation.

Our first goal has been to assemble a new data set covering citizenship laws in a large number of countries which also captures their evolution starting from the end of the 19th century. Because of the sharp differences between Continental Europe and America, citizenship policy needs to be evaluated as one of the possible causes of the different historical experience, especially during the early, mass migration era. In the post-war period, citizenship laws have undergone a process of adjustment which is not yet completed. We will investigate which factors, beyond migration flows themselves, can account for the observed patterns of evolution. Our findings suggest that citizenship laws did not contribute to the economic forces that determined the early, mass migration waves, and that in the post-war period citizenship laws responded endogenously and systematically to migration, border stability, the consolidation of democratic institutions, cultural factors, and post-colonial developments.

The rest of the paper is organized as follows. Section 2 reviews the historical and legal background for the issues we raised. Section 3 contains references from the related streams of research within the field of economics. Section 4 describes our data set on citizenship laws around the world and presents our empirical strategy, which is then applied in the next two sections. Section 5 focuses on the potential impact of citizenship laws on international migration in the early, mass migration period. Section 6 studies the recent evolution of citizenship laws and relates it to a number of factors: we focus primarily on legal tradition and immigration, but we also control for border stability, democracy, national culture, colonial history, the level of development, country size, and the nature of the welfare state. Section 7 concludes and indicates directions for future research. The Data Appendix collects information about the data employed.

2   Historical and legal background

Citizenship is a legal status that designates full membership in a state and the associated rights and duties. There are several ways to acquire citizenship: at birth, by naturalization,

by marriage. We focus on citizenship acquisition at birth, which can in turn be acquired in two ways: by birthplace (jus soli) and by bloodline (jus sanguinis). Therefore we concentrate on citizenship acquisitions by second-generation immigrants, i.e., the children born of first-generation immigrants in the immigration country. In jus soli countries, an immigrant's child is automatically a citizen, while in jus sanguinis countries a child inherits citizenship from his parents independently of birthplace. Were a population and a territory to match each other exactly, the above distinction would be irrelevant but it does make a difference in the presence of international migration. In particular, regimes associated with jus soli are presumed to be more inclusive towards newcomers, while regimes based on jus sanguinis tend to assume an ethnic character. While we do not focus specifically on citizenship acquisition through naturalization, we will consider those naturalization policy provisions which are explicitly linked to birth in our coding of the countries' laws. Furthermore, it is generally understood that naturalization policy tends to be more inclusive in those countries where citizenship at birth is also more inclusive. Therefore, most of our conclusions regarding citizenship laws can be applied to a wider range of immigration policy provisions.

Going back to the origin of the currently observed citizenship laws, in 18th century Europe jus soli was the dominant criterion, following feudal traditions which linked human beings to the lord who held the land where they were born. The French Revolution broke with this heritage and with the 1804 civil code reintroduced the ancient Roman custom of jus sanguinis. Continental modern citizenship law was subsequently built on these premises. During the 19th century the jus sanguinis principle was adopted throughout Europe and then transplanted to its colonies. By imitation, Japan also adopted jus sanguinis in this phase. On the other hand, the British preserved their jus soli tradition and spread it through their own colonies, starting with the United States where it was encoded in the Constitution. By the end of the 19th century, jus soli had become the norm in all common law countries, while jus sanguinis regulated citizenship law in civil law countries. The adoption of these principles can therefore be viewed as exogenous. However, the next century witnessed a continuous process of transformation of citizenship laws across the world, with a marked acceleration after WW2. Therefore, current citizenship laws must be viewed as the endogenous outcome of a complex process involving several factors.

Political scientists and legal scholars have long acknowledged the relevance of citizenship rules and have made significant contributions toward the understanding of the factors that shape them. In the face of the increasing scale and pace of international migration, the pioneering work by Marshall (1950), on membership within a bounded nation-state equipped with a common culture, has quickly become outdated. Current citizenship rules reflect a more complex interaction among factors such as the historical migration experience, the geopolitical order, and political institutions.

The available sociopolitical theories have pointed to two main factors as the determinants of citizenship laws dynamics: legal tradition, and the disconnection between territory and population which is provoked by migration flows (Weil, 2001). When a legal tradition is perceived to fulfil the interest of the state in terms of migration, the core of national legislation is maintained. In the classic lands of immigration, the US, Canada and Australia, jus soli was therefore sustained for a protracted period of time, while Continental Europe long relied on jus sanguinis to maintain links with the descendants of its emigrants. However, the historical experiences of immigration and emigration gradually affected the original set of rules, with a tendency toward convergence which accelerated after WW2. Weil's main thesis,

based on a survey of 25 nationality laws, is that most jus soli countries became slightly more restrictive while jus sanguinis countries have moved towards soli. For instance, the UK and Ireland, as countries of emigration, progressively added sanguinis provisions, while at the same time traditional jus soli countries such as Australia and, again, the UK, pressed by unsustainable inflows of migrants, turned toward more restrictive terms to gain citizenship by birthplace. On the other hand, the presence of a growing immigrant stock pushed jus sanguinis countries toward the adoption of a more inclusive concept of citizenship. While France anticipated this tendency by almost two centuries, most European countries in more recent days have at the very least formally included double jus soli (i.e., automatic citizenship acquisition for third-generation immigrants) in their legislation. Finally, when the stock of emigrants is large, there may be an opposite pressure to restrict the prerequisites to acquire citizenship by descent. The tendency therefore is toward convergence around a combination of jus soli and jus sanguinis provisions which, again according to Weil, extends far beyond Europe, and occurs independently of the legal tradition, as long as a country starts perceiving itself as a country of immigration rather than of emigration, and provided that the following two additional conditions are satisfied: the consolidation of democratic values and the stabilization of state borders. This is because a commitment to democracy naturally leads to a more assimilative attitude toward aliens, while the stabilization of borders tends to reduce the pressure to preserve a national identity through jus sanguinis. Achieving border stability after the fall of the Berlin wall was a decisive factor in pushing Germany towards the long-delayed adoption of jus soli elements in the face of a large stock of disenfranchised immigrants. Likewise, the attempt to preserve an ethnic heritage through jus sanguinis plays a crucial role in countries such as the former socialist in Eastern Europe and Asia, which have gone through a recent period of turmoil. The same tendency had emerged earlier on during the post-colonization phase. To sum up, convergence of citizenship laws to a mix of jus soli and sanguinis has been linked to the presence of a large immigrant stock, stable borders and a consolidated democracy, and is prevented when one of these conditions are not satisfied.

One additional factor has been the subject of debate: the influence of national character and culture. The theory advanced by Brubaker (1992) focuses on France and Germany as two antagonistic kinds of nationhood, the former representing an institutional, political and assimilationist entity, the latter being characterized by a Volk-centered, ethno-cultural, differentialist approach. German and French nationhoods also differ in their definitions of citizenship. German citizenship law has always been restrictive toward non-Germans, while France, confident in transforming immigrants into French people, was expansionist toward them. Weil (2001), however, does not find evidence of the existence of a causal link between national identity and nationality laws.

Finally, since citizenship rights are linked to the ability to enjoy welfare benefits, and to determine them through voting, citizenship policy has been associated with the nature of the welfare state, with a thick welfare state - as in Germany, or the Scandinavian countries - representing a potential obstacle to the application of jus soli (Joppke, 1998). The relative thickness of the concept itself of citizenship, if compared to residency, is a related consideration: in the US, for instance, citizenship is relatively thin, in the sense that it confers few additional benefits if compared with residency.

In the next subsections we will discuss a few specific country cases in more detail, drawing mostly from Joppke (1998) and Aleinikoff and Klusmeyer (2000, 2001).

2.1 The United States

As previously mentioned, jus soli was encoded in the US Constitution through the 1868 Fourteenth Amendment, with the specific purpose to protect the rights of black slaves. Consistently with its history as a country of immigrants, and with a general positive attitude toward economic liberalism, the US approach is still remarkably inclusive in all its aspects, ranging from immigration policy to naturalization requirements. Debate about possible restrictions did arise recently, but never led to actual change. In particular, jus soli came under attack in the 1980s regarding its applicability to the children of illegal immigrants. A relatively young and thin welfare state contributes to the fiscal sustainability of jus soli in this country. As a result of these combined elements, current citizenship law in America now differs considerably from that of another classic land of immigration such as Australia, where jus soli had similarly been introduced by the colonists. In the post-war period, Australia went through numerous legislative and administrative reforms, which make citizenship rights critically depend on the date of birth of a subject. Australians born before 1949 were simply British subjects. Jus soli survived until 1986, while afterward a person born in Australia must have at least one parent who is either an Australian citizen or a permanent resident in order to acquire citizenship.

2.2 Latin America

Most of Latin America also experienced, toward the end of the 19th century, substantial immigration flows, in the face of a citizenship law built around the principle of jus sanguinis which had been transplanted by the European powers. It is therefore in a relatively early stage, during the first half of the 20th century, that the legislation went through a substantial overhaul that introduced jus soli as the predominant criterion. Mexico, for instance, embraced jus soli in a Constitutional Amendment introduced in 1937. Moreover, in 1997 citizenship acquisition through jus sanguinis was restricted to children of Mexican parents born in Mexico even though, at the same time, a 1997 reform allowed Mexican emigrants to keep their Mexican nationality even after naturalizing abroad. The latter provision was introduced to facilitate the integration of Mexican emigrants in the countries of destination, without severing their bond with their homeland. Jus soli is still the prevalent rule in Latin America even if the area is no longer attracting immigrants.

2.3 The United Kingdom

British nationality law has been deeply affected by its imperial experience. Because of its colonial history, the concept of nationality in the UK was, up to WW2, particularly extensive, since all subjects of the British Empire had equal access to British citizenship simply by establishing residence in the UK. In 1948 6 separate forms of citizenship were created (i.e., British Dependent Territories Citizen, British Overseas Citizen, British Subject, British Protected Person, Commonwealth Citizen, Citizen of the Republic of Ireland). Following a post-war wave of colonial immigration, this open-door policy was progressively restricted, even though special status is still attributed to citizens of the British Commonwealth. Redefinitions of national citizenship have been effectively employed, since the 1980s, as a form of immigration policy meant to stop Commonwealth inflows. Nationality in the UK is currently

regulated by the British Nationality Act of 1984, which restricts jus soli by establishing that a child born in the UK qualifies for British citizenship only if at least one parents is a British citizen or resident.

2.4 France

The emergence of the nation-state in Continental Europe was the main factor that shaped citizenship law in this area. The revolutionary experience was particularly important for France where jus sanguinis was first introduced with the 1804 Civil Code and maintained for the entire course of the 19th century, even though military consideration introduced early on elements of jus soli. In order to secure immigrants' children born in France to the draft, in 1889 double jus soli became automatic. After WW2, large-scale immigration, especially from North Africa, raised concern regarding assimilation. Citizenship issues and the rights of immigrants became the object of heated debate in French politics. In 1993 Chirac introduced a restrictive revision to the legislation, that required a formal citizenship request from second-generation immigrants. With the Left regaining political power in 1997, however, the restrictions introduced in 1993 were considerably revised, with the automatic assignment of citizenship at age 18 to those immigrants' children born in France who had neither requested, nor declined it.

The case of France is especially interesting for the frequent comparison with the German one. In particular, Brubaker (2002) has influentially argued that the different path followed by these two countries has been shaped by their cultural difference, with France sticking to its tradition of inclusive, state-constituted nation, and Germany to its exclusive, non-statal, ethnic identity. This distinction will be furtherly discussed in the next subsection.

2.5 Germany

The single most relevant event in the history of German citizenship law is certainly the fall of the Berlin wall, which paved the way for the achievement of stable national borders. Prior to that, the massive guest-worker immigration of the post-war period, mostly from Turkey but also from Southern Europe, had started to put under strong pressure, but to no avail, the original Wilhelminian citizenship law of 1913, which established strong sanguinis ties with German overseas emigrants. With the foundation of the GDR and the consolidation of the Eastern Block, Germany found itself in the paradoxical situation of having to live with millions of disenfranchised foreigners born on its soil at home, and at the same time with millions of ethnic Germans living behind the Iron Curtain. Achieving border stability was a decisive factor in pushing Germany towards the long-delayed adoption of jus soli elements. A first step in this direction was the new Foreigner Law in 1990, which turned naturalization from the discretionary exception into the rule. A major overhaul of the legislation, following an intense political struggle, was finally approved in 1999. Since January 1, 2000, jus soli has been the norm in Germany (under the mild requirement that one parent has lived in the country for eight years).

In the evaluation of the German experience, other factors that may have delayed the introduction of jus soli are, as previously suggested, the strong ethnic-genealogical character of the German national identity, and the thick nature of the German welfare state. The latter aspect may have played a role in shaping the evolution of citizenship policies in several

other European countries and especially the Scandinavian ones, where jus sanguinis was functional to the large past emigration flows, but had recently to adapt to the quickly changing conditions, especially for high-immigration Sweden. As documented by Weil (2001), restricted forms of double jus soli are de facto applied, by now, in the vast majority of European countries.

2.6   Decolonization

Post-war decolonization had a major impact on citizenship rules applied around the world, and not only through the indirect impact on the metropolitan countries we previously examined. The vast majority of the African colonies that were subject to civil-law countries practicing jus sanguinis stuck to this principle after independence. On the other hand, many former UK colonies rejected the British tradition of jus soli and switched to an often strongly ethnically-tinged version of jus sanguinis. Sierra Leone's 1961 Constitution establishes that citizenship is transmitted only by descent and only to children whose father and a grandfather were Sierra Leoneans of African-Negro descent. In situations where instability was pushed to an extreme degree by the young age and the arbitrary borders of these countries, and was compounded with deep ethnic division, jus sanguinis tended to prevail as a way to control more easily the formation of national entities. At the same time, however, and not only in the former British colonies, the associated exclusive notion of ethnic and tribal identity caused enormous problems in countries where colonial rule had left shaky democratic institutions. To these days, ethnic lies at the roots of a chronic manipulation of citizenship rules in favor of one ethnic group over others. It must be observed that colonial rule had typically created in this area two different legal regimes: while the white colonists were subject to the transplanted, Western legal codes, natives were left under the jurisdiction of tribal customary law. After decolonization the dichotomy between modern and customary law persisted, with a crucial role being played by the latter in citizenship matters. The 1964 Congolese Constitution, in an effort to exclude Rwandan immigrants (who were initially forced in by the Belgians from the over-populated Rwanda-Hurundi, and again by the Hutu-controlled regime after the 1981 revolution), recognized citizenship only for persons whose parents were members of one of the tribes established within the territory by 1908. In 1981 Mobutu signed a new law on nationality requiring an ancestral connection to the population residing in the territory as far back as 1885. Marginalization and de-facto statelessness of significant strata of the population is the unavoidable outcome of these policies.

2.7   The disintegration of the USSR

Another major wave of citizenship law codification followed the disintegration of the USSR. The area had been sealed toward international migration but, as for all empires, there had been considerable migration within. The Soviet Union had occupied Estonia, Latvia and Lithuania in 1940. During the following decades millions of Russians, as well as Ukrainians and Belorussians, were encouraged to settle in Latvia and Estonia (less so in Lithuania) in order to Russify them. To these days, large Russian-speaking, stateless, sizeable minorities are still present. After independence, the new citizenship laws of these three states reflected this heritage with an emphasis, although to varying degrees, on jus sanguinis as the basis for acquiring citizenship. Lithuania, which was the least affected by Soviet immigration

policy, showed the most inclusive, and Latvia the most exclusive attitude toward ethnic Russians. The issue for these states was how to balance a need to reconstitute their national identity around an ethnic model, and a commitment to democratic values with respect to the rights of minorities. Estonian and Latvian laws were sharply criticized by international organizations on the grounds of human rights. In the anticipation of EU integration, these recommendations were indeed fulfilled in the more recent legislation of the Baltics, while most other countries of the area still persist with discriminatory policies. For the case of the Russian Federation, the salient fact in shaping current citizenship policy is the perception that many of its citizens are outside its borders, spread around the former regions of the USSR. Again, this perception as a country of emigrants pushes toward the persistence of jus sanguinis as the main principle, even though small concessions to jus soli have been made.

3 Related economic literature

This paper represents a first application to the question of citizenship policy of the comparative-legal approach. More generally, it contributes to a research program which has focused on the historical determinants of institutions. It is therefore related to several separate branches of the literature.

The historical experience of international migration has recently been the focus of a number of studies, which have addressed both the causes and the consequences of migration flows. O'Rourke (1991), Hatton (1995, 2003), Taylor and Williamson (1997) and Hatton and Williamson (1998, 2002) examine world migration over the past four centuries, exploring its determinants as well as its impact on the host countries' labor markets and income distribution. Recent developments in the debate on immigration are surveyed by Borjas (1994).

Within the literature on the historical determinants of institutions, the endogeneity of franchise extension has been studied Acemoglu et al. (2000), Borguignon and Verdier (2000), Gradstein and Justman (1999), Bertocchi and Spagat (2001) and Bertocchi (2003), who address this issue from different perspectives but not from that of migration, which constitutes a potential channel. Engerman and Sokoloff (2000) and Acemoglu et al. (2001) do consider colonial migration as one of the factors shaping institutions and in turn economic development. Galor and Mountford (2004) focus on the impact of trade on domestic demography, but do not consider the parallel channel of migration.

A related stream of the literature has focused on the relationship between migration and the welfare state. Empirical investigations include OECD (2002), Borjas (1999) and Smith and Edmonston (1997), while theoretical contributions have been provided by Razin et al. (2002) and Canova and Ravn (1998). Other authors (Benhabib, 1996, Storesletten, 2000, Gradstein and Shiff, 2004) have studied different forms of immigration policies, also in a political economy perspective but again without focusing on citizenship granting. Finally, the constitutional political economy research line has addressed the question of citizenship but in a broader context (see Mueller, 2003).

The stream of research into which this paper perhaps fits more naturally is the literature on legal origins initiated by La Porta et al. (1998). The basic premise of this research line is the recognition that laws in different countries are adopted or transplanted from a few legal traditions, that the resulting legislative bodies reflect both the influence of the legal origin

and the subsequent revision specific to individual countries, and that legal origins matter for a variety of economic issues.[1] An explicit recognition of the role of the legal rules concerning citizenship acquisition is still missing from this literature. In addition, we do not only look at the impact of the legal tradition, but also at the way current laws are determined.[2]

Recent work by Alesina and Spolaore (1997) and Bolton and Roland (1997) on the optimal determination of the size of nations, and thus state borders, is also relevant to our approach, both because country size in this literature is the same as population size and is potentially influenced by migration and by the legal status of immigrants, and also because borders - and more specifically border instability - are shown to play an important role in our story, through their impact on a specific dimension of a country's policy.

4 The data

4.1 Citizenship laws of the world

The main innovative input in our empirical investigation is the creation of a data set covering current citizenship laws around the world. The main source for the information we codified is a directory compiled by the Investigations Service of the United States Office of Personnel Management in 2001, which provides synopses of the citizenship laws currently practiced in 190 countries.[3] In particular, the report lists the various methods by which a person may obtain citizenship of a country, with explicit reference to the most recent legislation. Information is provided about the possibility to obtain citizenship by jus soli and/or by jus sanguinis, by naturalization and by marriage, and also on dual citizenship and loss of citizenship. The sources for this directory were Embassies, the Library of Congress, and the Department of State. We supplemented this information with additional one from the CIA World Factbook (2002), the United Nations High Commission for Refugees (2003) and the survey in Weil (2001).

We classified countries in three groups, by varying degree of inclusiveness of their citizenship laws. After coding countries according to their current laws, we combined the resulting data set with the legal-origin series provided by La Porta et al. (1999). Since citizenship by the place of one's birth is a tenet of common law while jus sanguinis is associated with civil law, we can directly infer information on the original citizenship laws practiced in a country from the legal origin of that country. This double classification allows us to capture the evolution of a country's legislation from the original to the current legal code.

The starting point for our investigation is – roughly speaking - the end of the 19th century. By that time, the process of nation-state formation, and the associated codification effort, were completed in Continental Europe, while at the same time the new phase of colonization

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[1]While La Porta et al. (1998) focus on legal protection of investor rights, legal theories have been tested in other areas of the law. See, for example, La Porta et al. (1999) on the quality of government and Botero et al. (2003) on labor regulation.

[2]The legal origins literature had been criticized on various grounds. Roe (2000) argues that civil law is simply a proxy for social democracy, while Rajan and Zingales (2003) stress the lack of dynamic elements. See also Coffee (2001) on the relative importance of law and norms, and Berkowitz et al. (2003) on the relevance of transplantation for the effectiveness of legal institutions.

[3]For a few countries information is incomplete. Examples are Albania, Comoros, Ethiopia, Iraq, Palestine, Tajikistan.

had extended the transplantation of legal tradition which the earlier colonization era had initiated. In other words, by the end of the 19th century most countries of the world had established specific provisions regarding citizenship acquisition within a relatively well-developed legal system, which was exogenously determined with respect to each country's socio-economic structure. On the other hand, this time period was immediately followed by the age of mass migration, which set into motion a slow process of adaptation of the legal codes to the immigration and emigration realities, as well as to other factors. While this process of revision started as early as in the 1930s, for instance, in Latin America, it is only after WW2 that the process of adaptation intensified.

The details of the classification method we adopted are the following. For current laws, the first group is represented by countries subject to jus soli, i.e., where the right to citizenship for a person born in the territory is automatic and unrestricted, regardless of the parents' citizenship or status.[4] A second group is represented by countries subject to jus sanguinis.[5] For many countries, the current legislation reflects a mix of jus soli and jus sanguinis. We therefore introduce a third group that includes all countries where elements of jus soli are recognized, albeit in a restrictive form, and coexist with varying degrees of jus sanguinis. A frequent provision that limits jus soli is double jus soli (which means that citizenship is automatic only for third-generation immigrants, i.e., for the children of immigrants who were also born in the country). Another is the ability, for a child born in a country were jus sanguinis prevails, to acquire citizenship at some later point (e.g., the age of maturity) subject to either residence requirements or application.[6] Naturalization policy is also relevant, because in jus sanguinis countries to facilitate naturalization for immigrant parents may represent a substitute mechanism to attribute citizenship to children. The general attitude toward inclusiveness revealed by a country's regulation of citizenship at birth is also reflected in its naturalization laws, with jus soli countries traditionally making naturalization much easier, at least for resident aliens. Within jus sanguinis countries, naturalization requirements again tend to be correlated with the revisions introduced for citizenship at birth. Basic rules may include a period of residence, renunciation of other citizenship, familiarity with the language and customs of the country, the availability of adequate means of support. From our perspective, the single most important element in naturalization law is the existence of a provision that birth in the country matters for naturalization, which can in fact be interpreted as an element of jus soli and therefore justifies the inclusion of a country within Group 3.[7]

Since we focus on the degree of inclusiveness of the law, our classification does not

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[4]Typically those countries that adopt jus soli combine it with jus sanguinis provisions for the children of their citizens born outside of their territory (although limitations to the ability to transmit citizenship acquired in this manner to the next generation usually apply through, for example, residence requirements).

[5]In the application of jus sanguinis, countries may differ on some factors, for example on the father's vs. mother's right to transmit citizenship by descent, the requirement of citizenship for one or both parents, the relevance of the marital status of the parents. Most of these factors depend on the interaction between local family law and citizenship law. A common exception to the general principle of jus sanguinis is automatic citizenship attribution to children of unknown parents.

[6]In the entire EU, with the exceptions of Austria, Greece and Luxembourg, access to citizenship by second and third generation is facilitated. Examples of countries that fall into Group 3 on the basis of various more restrictive jus soli provisions are the Baltics, the Netherlands, and Portugal.

[7]Examples of countries entering Group 3 because birth matters for naturalization are Afghanistan, Austria, Burkina Faso, the Czech Republic, and Greece.

emphasize how narrowly in turn jus sanguinis can be specifically applied. Examples of restrictions are limitations on the number of emigrant generations to which the right is extended, residence requirements for parents, and the requirement that parents must be citizens other than by descent. Nevertheless, the following discussion will not neglect these aspects.

To conclude, jus-soli countries in Group 1 are the most inclusive toward immigrants, jus-sanguinis countries in Group 2 are the least inclusive, and Group 3, with a mix of provisions, stands in between.

For the original laws, from the La Porta et al. (1999) classification we retained only the two main families of common and civil law, which we identified with jus soli and jus sanguinis, respectively. Therefore, we did not distinguish, within the broader civil law tradition, among the French, German, and Scandinavian versions, since they do not present any significant difference for the issue of citizenship. Moreover, while La Porta et al. (1999) introduce a separate class for socialist-law countries, since we were able to collect information on the citizenship laws practiced in these countries before the communist era, we assigned them to their own class of common or civil law.[8]

Finally, for the set of countries for which we had collected information on both original and current citizenship law, we selected those for which migration data were actually available at least for the post-war period.[9] Our final output is a data set including 159 countries, which is summarized in Table 1, where we report summary statistics (Part 1.a) for both the original and the current citizenship laws, as of 2001. In the original law classification (CL_OR), code 1 denotes jus soli, and 2 jus sanguinis countries. In the current law classification (CL_2001), 1 denotes jus soli, 2 jus sanguinis, and 3 restricted jus soli countries. The table is also organized by continent (Part 1.c), to facilitate the detection of possible geographic regularities. The countries that went through a socialist phase are also identified by the dummy Soc, with 17% of the countries shown to belong to this group, while 31% were UK colonies as identified by the dummy UKCol (for those countries that were British colonies after 1918), and 27% are located in sub-Saharan Africa (SSA). The frequencies we computed for the complete sample (Part 1.b) reveal that at the beginning of the time period we focus on, i.e., the end of the 19th century, jus soli was the rule in 51 (32%) countries, while jus sanguinis dominated in the remaining 108 (68%). Among jus soli countries, we find the United States and Canada, all the Oceanian countries and, within Africa, Asia and Latin America, the British colonies. Within Africa, 17 out of 48 countries (35.4%) were under jus soli. Within Europe, only the UK and Ireland belonged to this group. Therefore, jus sanguinis predominated in most of Europe, including its Eastern part, and throughout the world in the countries which were subject to other-than-British colonial rule. A comparison with the information on the colonial past of the countries involved reveals that there is substantial but not complete overlap between the British-colony dummy and the original citizenship law variable, which reflects the common-law legal origin.

As of 2001, i.e., under the current classification, countries are distributed as follows: 36 (22.6%) countries apply jus soli, 87 (54.8%) jus sanguinis, 36 (22.6%) display restricted jus soli combined with jus sanguinis. The United States, Canada, Ireland, New Zealand, but not

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[8]In fact, all socialist countries in the sample, with the only exception of Myanmar, come from the civil law tradition. Nevertheless, we did experience, in the empirical analysis, with a socialist-country dummy.

[9]See the Data Appendix on migration data. Migration data were not available for the 13 relatively small countries, such as Andorra, Antigua, Nauru, and Seychelles.

any longer the UK and Australia, still adhere to the jus soli principle. The newcomers to this group are, very notably, the vast majority of the Latin American countries (22 out of 26, or 84.6%). Nevertheless, jus sanguinis still predominates, with 68.8% of the countries in Africa (where, however, the proportion was originally already as high as 64.6%), 83.3% in Asia (up from 61.9%), and 41.2% in Europe (a sharp decline form 94.1%). Finally, the newly-emerged group where a mix of provisions is applied is particularly well represented in Europe, with 55.8% of the European countries including the formerly jus-soli United Kingdom. Indeed over half the countries belonging to Group 3 (52.8%) are located in Europe. Australia also has joined this group since 1986, following the UK pattern.

An interesting exercise, that spans over a century of world history, is to compare the differential patterns of evolution that our data generate. A large number of countries (57, i.e., 35.8%) have started and ended as jus sanguinis, reflecting therefore a pattern of stability. In other words, it is 65.5% of the originally jus sanguinis countries that have remained so, including most on non-British Africa and Asia, and most of Eastern Europe. Only 15 (9.4%) are steadily jus soli countries: this means that only 41.7% of the originally jus soli countries have not changed their policies. The most important of these countries, in terms of population size, are the US, Canada and New Zealand. There is also a large proportion of countries (30, i.e., 18.9%) that have actually switched from jus soli to jus sanguinis, by completely eliminating birthplace as a criterion: 43.3% of them are former African colonies of the UK, which made this radical choice at independence. The remaining are former colonies or protectorates of the UK located in Asia and elsewhere. On the other hand, no country switching from jus sanguinis to soli could possibly eliminate jus sanguinis provision entirely, so this pattern is never observed. At first glance, one could conclude that, despite the pressure of international migration, jus sanguinis appears to be more resilient than jus soli. However, convergence to the soli/sanguinis mix is displayed by 57 (35.8%) countries, with 6 (3.8%) converging from jus soli by restricting it, and 51 (32%) converging from jus sanguinis by adding jus soli elements - and sometimes even full jus soli - to their original jus sanguinis regime. The former set includes Australia, the UK, but also India and South Africa. The latter includes most of Latin America, which made this choice early on and made it radically, and 18 (52.9%) European countries with the Baltics and the Russian Federation, which are still at an intermediate stage.

While our classification does not emphasize how generously jus sanguinis is applied, it is important to point out a few facts: as jus soli became more widespread in Latin America, jus sanguinis was often restricted. On the other hand, the UK and Ireland extended it, for the reasons previously explained.

Another aspect that our classification does not reveal is the timing of the whole process. Citizenship laws went through a first wave of early reforms in Latin America, where jus soli was introduced after the mass immigration from Europe. Another period of change was represented by the post-war decolonization phase, where most former colonies reorganized their code by rejecting the birthplace rights introduced by the British. By contrast, the period following the disintegration of the USSR did not bring about, at least initially, relevant changes in the orientation of the local legislation, which had always consistently followed jus sanguinis; if anything, in the Baltics and their neighbors jus sanguinis was actually pushed to the extreme as a way to rescue an ethnic heritage and exclude the ethnic Russians. A process of convergence to restricted soli provisions is only starting now. The last, major phenomenon which has been influencing citizenship laws in recent days is the globalization

of international migration and its increasing impact on Continental Europe. This has been inducing, during the past 15 years or so, a relatively fast adaptation process which is not yet completed. If we look at the specific experience of several countries, we also notice that the process of evolution always involved several, gradual steps, and that it was not always a linear one.[10] In order to capture these aspects, we also classified changes in the citizenship legislation by the time period in which they occurred (before or after 1974). This information is also presented in Table 1 (CL_1974), showing that by 1974 48 countries had jus soli, 100 jus sanguinis, and only 11 had a mixed regime.

4.2   Border changes

Border stability has been indicated as a factor that favors the inclusion of jus soli elements, while jus sanguinis may be preferred in the presence of border instability. In order to measure the impact of border stability on citizenship laws, we constructed three border-change dummies based on data collected from Polity IV (2002). In particular, from the Polity IV variable CHANGE we recorded information on the following 4 types of events, capable of affecting state borders, starting from the year 1943.[11] State Disintegration refers to the end of a polity when the territorial dimensions and borders are substantially changed due to a disputed disintegration and the appearance of newly independent successor states (an example is Yugoslavia in 1991). State Transformation refers to the beginning of a polity when the territorial dimensions and borders are substantially changed such that a new state is formed that is substantially different from the old (examples are Germany 1990, East Germany 1945, West Germany 1945, Russia 1992, Vietnam 1976). State Demise refers to the demise of a state and the ending of its policy due to its voluntary dissolution or its incorporation in another state (e.g., Germany 1945, East Germany 1990, West Germany 1990, USSR 1991, North Vietnam 1976, South Vietnam 1975). Finally, State Creation refers to state independence or formation. This last group of observations is clearly the most numerous since it includes all the new countries gaining independence - and therefore state borders - in the post-war decolonization phase, the new countries formed in Europe after the fall of the Berlin wall, plus a few additional observations not linked to these two waves. Clearly there is substantial overlap among the observations recorded in the Polity IV data set. We adapted these data to our needs by matching them to the 159 countries appearing in our citizenship laws data set. For instance, we count as a single event, occurring to Germany, the state transformation of East and West Germany in 1945 but also the state demise of Germany in the same year. Likewise, we treat as another single event, occurring again to Germany, the state transformation of Germany in 1990 and the state demise of East and West Germany in the same year. On the other hand, the separation of Bangladesh from Pakistan counts for two events, because it concerns two countries which are in our sample. Additional information when necessary was obtained from the CIA (2002). Overall, we distilled 104 events, occurred to 98 countries. This discrepancy arises because a few countries were subject

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[10]For example, Indonesia emerges from our classification as a stable jus sanguinis country but in fact it did adopt jus soli for a limited time period (1946-58). Malta has a French legal origin and is now a jus sanguinis country. However, it applied a restricted form of jus soli before 1964, full jus soli from 1964 to 1989, only to switch to jus sanguinis in 1989. Pakistan continued in the British tradition of jus soli, while Bangladesh abolished it as soon as it gained independence in 1971.

[11]Even if most of our data start in 1950, we included a few earlier events that fit within the phase of post-colonial independence.

to more than one border changes during the time period under examination.[12] On this basis we constructed three border-change dummies, one for decolonization, one for the fall of the Berlin wall, one for other types of boundary changes. This information is summarized in Table 1: 80 of the countries in our sample went through a post-colonial redefinition of their borders, while 17 had their borders affected by the fall of the Berlin wall, and 7 went through other types of border changes.[13] Again a comparison with the information on the colonial past of the countries involved reveals considerable overlap between the British-colony dummy and the decolonization border-change dummy, since the British Empire was so extended.

4.3 Empirical strategy

From this brief survey of recent world history, we can reach a few preliminary conclusions. Jus soli appears to fit the needs of the traditional countries of immigration, but only until immigration is desirable and fiscally sustainable, as illustrated by the diverging experience of the US and Australia. The presence of birthplace rights, proxying for civil rights and perhaps welfare benefits, may actually be viewed as a factor that encourages immigration. Where jus sanguinis is the rule, an upsurge of immigration flows, and the consequent rise in the stock of immigrants, pushes toward the introduction of jus soli. This has been true for Latin America, and now for Europe. However, countries which are young, have a strong ethnic identity, and/or perceive their borders as unstable, tend to adhere to jus sanguinis. Democratization tends to promote integration and, as a consequence, jus soli. The following empirical analysis will derive a number of testable hypotheses from the above discussion. Our empirical strategy, which will be implemented in Sections 5 and 6, is illustrated as follows.

The first variable that can be meaningfully linked to citizenship laws is migration. Table 2 presents a long-term perspective of migration patterns for the 1870-1998 period for 14 countries, some from the Old and some from the New World. The source is Maddison (2001). The table confirms the magnitude of the early, mass migration wave, with high rates of net migration for the 1870-1913 period. Migratory movements slow down drastically in the inter-war period, to resume in the 1950s. The table also reveals that, while over the 1870-1913 period jus sanguinis countries display negative migration rates on average, and jus soli countries display positive ones, after WW2 and the globalization of the migration phenomenon jus sanguinis countries also become countries of immigration. However, a similar conclusion can be drawn if we divide countries between Western Europe and Western Offshoots. With few exceptions, all geographically concentrated in Latin America, legal provisions start a process of marked change only after WW2, with strict jus sanguinis being gradually relaxed to allow increasing elements of jus soli.

From the comparative legal literature, we know that the main legal traditions can be safely taken as exogenous and, thanks to this assumption, can be used as regressors to estimate their impact on economic variables. However, if we apply this approach to citizenship laws, in order to satisfy the exogeneity assumption we must limit our perspective to the time period which predates the beginning of their change. On the other hand, once the evolution process has started, citizenship laws must be treated as endogenous, and entered

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[12]This is the case for example of Germany, divided in 1945 and reunited in 1990, and of Pakistan and Bangladesh, which went through post-colonial state formation first, and division later.

[13]Examples are again the split between Pakistan and Bangladesh, and the unification of Vietnam.

in a regression as a dependent variable.

Based on these general considerations, we will organize our empirical strategy in two separate steps. First, for the early, mass migration period, which is historically well defined and can be safely associated with exogenously-given citizenship laws, we will test the specific hypothesis that citizenship laws - the original ones - have affected migration flows, through a standard pooled regression. Our empirical investigation on this point is presented in Section 5. Second, for the post-war period, which has witnessed the process of evolution and adaptation of the original citizenship laws, we will test with an ordered logit model how current citizenship laws are distributed among the three groups we defined, including among the regressors the legal tradition and immigration rates.[14] This will allow us to disentangle the impact of the two main candidate determinants, as they emerge from the descriptive analysis of our data set and from the political science literature. Moreover, we will evaluate the potential impact on the laws of a second set of factors which have also been suggested: namely, the consolidation of democracy, border stability, national culture, and the nature of the welfare state. Finally, we will introduce additional controls such as colonial history, country size, and the general level of economic development, which have often been found relevant in related research on the determinants of institutions. This part of the empirical work is in Section 6.

A final consideration concerns the choice of the relevant measure of migration. Ideally, since gross immigration has been suggested as a factor that favors the application of jus soli, while emigration should tighten jus sanguinis provisions, one would want to gauge their importance separately. Data availability, however, is a serious constraint, and not only for the early period. Reliable and complete information is available only for net immigration even for the post-war period (see Data Appendix). On the other hand, migration theory has demonstrated that the same factors that should favor immigration into a country should also discourage emigration from the same country (see Stark, 1995). Therefore, net immigration is an acceptable simplification of the reality, being highly positively-correlated with gross immigration, and negatively-correlated with emigration, with net immigration countries pushing towards more inclusive legislation.

5 The impact of citizenship laws on migration flows in the early period

The age that precedes the First World War is usually depicted as the age of free and unrestricted immigration. While Britain was the main source of emigration during the first half of the century, Germany, Scandinavia and then Southern and Eastern Europe joined in during the second half. The main destination was North America, followed by South America and Australasia. Most of the migrants were young, many took advantage of friends and relatives networks, and economic incentives were the main determinants of their decision. Emigration rates were initially highest for Ireland, which then witnessed a decline from the 1860s. Emigration from Germany also declined from the 1880s, when Southern Europe started its growth.

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[14]Barro and McCleary (2004) estimate a binary linear probability and a binary probit model for the presence of state religion.

Data availability has severely constrained any empirical research on the factors affecting international migration in this period. There are, however, a few notable exceptions. A stream of the literature has focused on emigration from a number of European countries. These studies typically analyze bilateral flows from one source country to one destination, or aggregate migration from a particular source country or to a particular destination. Hatton (1995, 2003) estimates a time-series model of emigration from the United Kingdom and concludes that over the long run emigration was determined largely by the relative wage. Hatton and Williamson (1998, 2002) focus on emigration from 12 European countries for the 1860-1913 period. In their regression analysis they explain decade-average emigration rates as a function of 4 key fundamentals: the wage gap (i.e., the log of the PPP-adjusted real wage in the source country relative to that of a weighted average of destinations, for homogeneous occupations), which displays a strong negative effect; the source country birthrate lagged 20 years, as a proxy for adult cohort size, which displays a large positive effect; the stock of previous emigrants (measured as the stock of previous immigrants in destination countries at the beginning of each decade, per thousands of the source country population), which displays a positive effect; and the share of labor in agriculture, which displays a weak negative effect. With a broader focus on international migration and its impact on income convergence, Taylor and Williamson (1997) collect data on (decade averages of) gross and net migration rates for 17 countries including 12 current European OECD member countries plus 3 New World members - Australia, Canada and the USA - and 2 New World non-members - Argentina and Brazil - for the 1870-1910 period. They estimate the contribution of international migration to convergence through a counterfactual simulation approach (namely, they compare the role of migration in the decline of income dispersion with the no-migration counterfactual).

We assembled a unique set of data based on the same 17 countries considered by Taylor and Williamson (1997) for the 1870-1910 period. For each country we collected data on (decade averages of) net and gross migration rates, the wage gap with respect to the other countries (also in terms of decade averages), the agricultural share (in decade averages), and the young adult share at the beginning of each decade. This allowed us to perform a regression analysis which adapts the basic specification in Hatton and Williamson (1998), even though we extend their framework to international migration across 17 countries. Moreover, for each country we were also able to establish the original citizenship laws by employing information on their legal origin.

A first look at the data is provided by Table 3, which reports net migration rates (migrants/1,000 population) for the countries in our sample. The source is Taylor and Williamson (1997). In principle, jus soli should encourage immigration, by expanding the opportunities of the second generation, while jus sanguinis should do the opposite. Indeed, over the period of interest, jus sanguinis countries display negative migration rates on average, while jus soli countries display positive ones. This holds true despite large differences in the performance of countries within each group (particularly noticeable for Argentina and Ireland). However, the same pattern is replicated and reinforced when we group countries according to geography, which for that time period implies huge income differences. We following analysis will test the comparative weights of these factors.

Table 4 reports summary statistics and Table 5 the correlations between the dependent and independent variables. To be noticed is the high correlation (0.75) between the two dependent variables, net (NetMigr) and gross (GrMigr) migration. Focusing on net migra-

tion, it shows a positive and significant correlation with the wage gap (wageg), lagged net migration (L_net), and a dummy for Argentina (ARG), and a negative correlation with a dummy for Ireland (IRL). The share of the young population (pop) is also significantly and positively correlated with the Ireland dummy. The agricultural share (agr) and the wage gap are inversely correlated. These features match previous work and economic intuition. The high correlation between the jus soli dummy (soli) and the wage gap (0.74) is the most striking feature of the table. This collinearity problem could be solved only by adding further information, which is simply not available for this early period. One should be cautious in attributing to jus soli, i.e., British common law, the observed wage differential, since an almost equally high association (0.65) can be found between the wage gap and a New World dummy (NW) including civil-law Argentina and excluding common-law Ireland, as revealed by the data in Table 3. Finally, the correlation between the jus soli dummy and net migration is positive but insignificant.

The two country dummies were inserted to capture the special cases of Ireland and Argentina. In the Irish case, the extremely high emigration rate in our sample period can be explained by a specific, earlier shock, the great famine of the 1840s, which caused back then the emigration of two million Irish people (see O'Rourke, 1991). This migrant stock constituted a further stimulus to emigrate for the generations to come, through a powerful network effect.[15] The peculiarities of the Argentina experience with immigration are narrated by Landes (1998). In colonial times, i.e., until 1816, Argentina was a land of cattle and sheep, with an underdeveloped agricultural sector and chronic shortage of manpower, as a result of an unequal land distribution and a restrictive immigration policy. Immigration took off when agriculture was reorganized and started its expansion during the last quarter of the 19th century. Growth was reinforced by the introduction of refrigeration, which pushed meet exports, bringing more people in. In short what is special of Argentina is the positive association between immigration and the agricultural share.

Table 6 reports our pooled regression results with net migration as the dependent variable.[16] In all the specifications we tried, the coefficient of the wage gap – which closely reflects the distribution of the countries between the Old and the New World - remains positive and significant, confirming its crucial role as uncovered in previous studies. In the first specification we report, which includes the economic determinants but not the jus soli dummy, the wage gap has a positive and highly significant coefficient, as expected; the lagged value of the dependent variable, reflecting network effects, is also significantly positive, and the two individual country dummies have highly significant coefficients with the right sign. The share of the young population, which proxies for the emigration intensive cohort and should therefore appear with a negative sign in a regression for net immigration, has the wrong sign but it is insignificant, and the agricultural share is omitted from this specification.[17] The second specification adds the jus soli dummy to the previous regressors, but its coefficient is insignificant, besides having the wrong sign. The only effect of the dummy, unsurprisingly, is to make the coefficient of the wage gap larger but less significant.

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[15]See Faini and Venturini (1994) for an account of the contrasting experience of Italy.

[16]Analogous regressions were run with gross migration as the dependent variable, and delivered the same qualitative results.

[17]Both the agricultural share and its square were always insignificant in other variants, confirming a pattern already found by Hatton and Williamson (1998) and attributable to the presence of offsetting effects of this variable on immigration.

Overall, we can conclude that there is no evidence of citizenship status playing a significant role in explaining the massive migration flows that characterized the early period and were driven overwhelmingly by income differentials and network effects.

6   The evolution of citizenship laws in the post-war period

As previously documented, citizenship laws have evolved considerably in the past few decades, and the political-science literature has suggested a number of factors which may have induced this evolution. Together with the legal tradition, migration flows are perceived as the main force behind legislative revision. A few tendencies do emerge from a preliminary look at the available 1950-1999 migration data. Latin America is no longer a land of immigration, while the United States, Canada and Australia still display large immigration rates. Within Europe, and especially Southern Europe, we see a reversal from negative to positive immigration rates, which is very noticeable in the second sub-period. Within Africa, we observe extremely large and volatile in and out flows, which can be linked to major events such as wars and famines. The oil countries absorb enormous inflows, which can be motivated both by the small size of the local population, and by the large economic opportunities generated by oil extraction. Very large and volatile in and out flows are observed for the smallest countries (often recently-formed city-states or island-states).

Table 7 shows the means and standard deviations of the variables for the cross section of countries in the sample, plus the number of observations and the minimum and maximum value observed for each variable. We introduce at this stage a dummy variable for countries originally subject to soli (soli) which converts the same information contained in the variable CL_OR. Information on the definition and source of each variable is available in the Data Appendix.

Pair-wise correlations between the independent variables are presented in Table 8. Starting with our core variables for legal origin and migration we find that, as expected, our dummy for a jus soli origin is significantly positively correlated with the dummy for British colonies, but the correlation is far from perfect (0.69), indicating that categorizations of countries by former colonial status are similar to but not identical to classifications by legal systems. Unsurprisingly the same variable is also positively correlated with the decolonization border-change dummy (0.31) and negatively correlated with the socialist country dummy (-0.28), which we introduce even though we also assigned to socialist countries their own legal origin. High and negative is also its correlation with the size of the largest religious group, REL (-0.43). Moreover, the socialist country dummy shows a very high positive correlation with the Berlin wall border-change dummy (0.69), and noticeable is also its correlation with secondary-school enrollment SEC (positive) and the GINI coefficient (negative). The dummy for British colonies is correlated with decolonization (0.41). Migration is positively correlated with the log of per-capita income, gdp (0.33), and also with the proportion of Muslims, Musl (0.32), because of the weight of the oil countries. We capture democracy with the political-rights variable PR, whose pattern confirms previous findings: its correlation is high and positive with income, secondary enrollment, and the proportion of Catholics (Cath) and Protestants (Prot), negative with the share of agriculture, decolonization, the proportion

of Muslims, and ethno-linguistic fractionalization (avelf).[18] Besides what already noticed, our border-change dummies display additional features: decolonization is inversely related to income and directly related to fractionalization, while Berlin wall is strikingly related to secondary enrollment (0.64). We tried to capture cultural characteristics with a wide array of variables. Fractionalization also shows a negative relation with income and a positive one with the agricultural share. The proportion of Catholics is quite obviously negatively related to the proportion of Muslims and positively related to the size of the largest religious affiliation. Secondary enrollment is high in rich, industrial and ethnically homogeneous countries. The size of the government sector (Gov) is meant as an indicator of thickness of the concept of citizenship, but appears to be negatively correlated with democracy. Finally, we introduced a few indicators of the general level of development. The log of per capita GDP, as previously noted, is related positively to secondary enrollment, political rights and immigration, negatively to agriculture, fractionalization, and decolonization. Conversely, the agricultural share of labor tends to be higher in poor countries and in countries with less democracy and education, that went through decolonization, and are more fractionalized. Overall, these conclusions are in line with previous research and economic intuition. It is also clear that several of our variables are closely interrelated and that it may be difficult to disentangle their independent effect on the evolution of citizenship laws. This is especially true for the variables meant to control for the level of development.

We can now derive a number of hypotheses regarding the impact of each factor, starting with legal tradition and immigration. Legal tradition is identified here by the citizenship laws, and more broadly the legal system, in place at the turn of the 19th century. The impact of this factor on the current legislation is captured by the coefficient of the jus soli dummy, whose predicted sign is positive. We also expect immigration to push a country's legislation toward the inclusion of elements of jus soli. The coefficient of net migration should therefore display a positive sign. However, regression results should be taken with caution for a number of reasons. First of all, to reach a consensus over a change in the legislation may often take several decades, and may well follow an initial period in which the natives' reaction to the new immigration reality is less than welcoming: these considerations could weaken and even reverse the impact on the law. Second, we exploited the panel nature of our data set but, for each sub-period, we still entered an average of net immigration rates over 25 years, which can hide very important fluctuations. For instance, most European countries showed small or negative, but relatively stable, immigration rates for the first half of the period under consideration, while have been exhibiting quickly increasing inflows in more recent years. Most of the revision to the legislation has in fact occurred in the past 15 years or so. Therefore, we entered a Southern Europe dummy (SE, see Table 1) which should display a positive sign because of the influence of the second sub-period. Likewise, Latin America switched to jus soli before the current sample period, so its position is not justified by the current relatively moderate immigration flows and again we should expect a positive sign for the corresponding dummy (LA). A dummy for oil countries (oil) is also introduced to account for the fact that most of them have been experiencing huge immigration inflows which had no impact on the legislation (still often based on Islamic family law): this would be confirmed by a negative coefficient for the dummy. Moreover, migration data reveal that countries with a small population tend to have large and erratic migration flows, with a

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[18]The same results are obtained if we use other measures of democracy such as the civil liberty index.

disproportionately small impact on their legislation, so we introduced a dummy for small countries (SC) in our regression, for which we expect a negative sign.

The next set of potential determinants should play the following role in a regression. The establishment of a consolidated democracy, viewed as a factor that favors the assimilation of foreigners on an equal rights basis, should exert a positive effect even though, one again, even in a democratic country exclusionary forces against outsiders may persist for a protracted period of time.

Border stability is also perceived as a prerequisite for the introduction of birthrights for the immigrants, since having gone through a recent border change should favor the persistence of jus sanguinis, or its introduction when jus soli was the rule. Therefore, we expect a negative sign for the three border-change dummies. We introduced a specific dummy for Germany since we perceived its reunification as a very specific case of border change, with opposite consequences.[19] We also considered the possible impact of variables which have been found significant in related research on the determinants of institutions, so we experimented with a sub-Saharan Africa dummy (SSA) and with the British colony dummy, both as a possible alternative to our decolonization border-change dummy, and therefore with a potential negative effect on inclusiveness.[20]

The possible impact of cultural factors was proxied by a number of different regressors. The percentage of the population in the largest religious affiliation should signal the homogeneity of a national culture. We also tested the impact of each of the most widely embraced religious faith and of ethno-linguistic fractionalization in an effort to capture other dimensions of cultural differences.[21] Among these proxies, the one that could capture more accurately Brubaker's hypothesis regarding the difference between France and Germany is the fraction of the Protestant population, which is much higher in Germany. At the same time, while France has higher ethno-linguistic fractionalization, Germany is more diverse in the religious dimension. The level of education might also affect, positively, the attitude towards immigrants. The data will tell us if cultural homogeneity is more conducive to inclusiveness than diversity.

The size of government is meant to proxy for the nature of the welfare state, with a thicker, more expensive and more redistributive structure representing an obstacle to the inclusion of immigrants.

Finally, we also control for the level of development with a set of variables meant to capture different ways to measure it: per-capita GDP, but also inequality, primary and secondary education, and the share of the labor force in agriculture. The rationale for including these variables is that a richer country might be more open to immigration. However, most of these variables tends to be associated with net immigration, and also with democracy and fractionalization (as demonstrated by Barro, 1999, and Easterly and Levine, 1997), so they are unlikely to add independent explanatory power to a regression.

Our preliminary results are presented in Table 9, where we run an ordered logit regression with current citizenship laws (CL) as the dependent variable. We exploit the panel dimension of our data set by considering the two sub-periods. Citizenship laws are ordered by inclusiveness in three groups, with jus soli at the top, jus sanguinis at the bottom, re-

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[19]Note however that Germany also went through an initial division, and that it is classified as a restricted jus soli country even though it only switched to this regime at the very end of the sample period.

[20]Summary statistics for all these dummies are in Table 1.

[21]For the costs and benefits of ethnic diversity see Lazear (1999) and Ottaviano and Peri (2003).

stricted jus soli in between.[22] The sample over which we run the regression excludes the observations where migration rates were larger than 20 in absolute value. This is meant to correct for outliers which can be determined by additional factors that we do not explicitly account for, such as wars, political prosecution, famines, and other environmental disasters. The UN definition of migrant covers cases where the decision to migrate is taken freely by the individual concerned, for reasons of personal convenience and without intervention of an external compelling factor.[23] Therefore it should not include refugees, displaced or others forced or compelled to leave their homes. Often, however, the distinction between these two cases is a blurred one.

In the first column of Table 9, the jus soli dummy displays a positive and significant (at 10%) coefficient, as expected. The net migration rate also appears to exert a significantly (at 5%) positive effect on inclusiveness. To be noticed is that, in unreported regressions including only the core variables, i.e., original laws and migration, the latter tended to display a negative impact, which confirms the crucial role of the other regressors in determining the observed evolution. The coefficient of the dummy for Latin America has the correct, positive sign and is extremely significant, while the small country dummy is insignificant and with the wrong sign. Interaction terms are found significant for the sub-Saharan Africa and the British colony dummies is association with net migration, which both show negative signs. The effect of democracy is positive and significant, as expected, while the size of government is positively and significantly associated with inclusiveness, contrary to our intuition, perhaps because it proxies for European-style social-democracies. Among our border-change dummies, decolonization appears with a negative, highly-significant sign, while Berlin wall is omitted from this specification. Finally, our cultural variables reveal that ethno-linguistic fractionalization has a positive effect on inclusiveness, probably because a more diverse society tends to be more open. The fraction of Protestants has a negative but insignificant coefficient. We experimented with other regressors which did not add any useful information and were therefore omitted from this specification. This was the case for the Germany, the oil, and the Southern Europe dummies. The level of development also did not exert any robust impact, which is not surprising given the complex pattern of correlations previously illustrated. The last three columns of Table 9 show, for each coefficient and each group, the marginal effects, whose analysis confirms what already described (in particular, for all regressors except Latin America the second and the third marginal effects share the same sign).

Overall, our preliminary empirical investigation over a large number of countries for the post-war period confirms that the legal tradition and migration do explain evolution of citizenship laws towards a higher degree of inclusiveness, but only after controlling for a number of factors which reflect the level of democracy and border stability, as suggested by political scientists. The influence of cultural factors, at least in the sense of Brubaker, is hard to detect with our proxies, but we do find some evidence that Brubaker may be right because Protestantism appears to be an obstacle to inclusiveness, while ethno-linguistic fractionalization encourages it, and this could contribute to explain the difference between France and Germany. Moreover, we show that post-colonial history also contributes significantly, and not in the direction that legal theory would suggest, because our results involving the British colony dummy show that a jus soli/common law transplanted heritage need not be retained

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[22]An alternative probit model delivered very similar qualitative results which are not presented here.
[23]UN Convention on the Rights of Migrants, Article 2(2).

after independence.

7   Conclusion

We have studied the origin and the evolution of citizenship laws around the world from the end of the 19th until the turn of the 20th century. For the early, mass migration era, we found that citizenship policy did not contribute to the economic forces that determined it. In the post-war period, citizenship laws are shown to respond endogenously and systematically to migration, as well as to border stability, democratic institutions, cultural factors and post-colonial developments. Some of the implications of legal theory are therefore contradicted by our results in this specific area of the law.

Citizenship laws are still changing. One of our plans for future research is to project the future evolution of citizenship policy around the world for the next half century, by using UN projections of international migration, and combining these data with the available work which has tried to predict the future course of democratization (Barro, 1999) and of border changes (Alesina and Spolaore, 1997).

Another question which we leave for future research is the following: Is there a direct economic impact of citizenship laws evolution? And, in particular, do citizenship laws affect the welfare state, by changing the identity of the median voter? Razin et al. (2002) add migration to the theory of the size of government developed by Meltzer and Richard (1981) and show that the extent of redistribution may depend on whether or not immigrants can vote. Continental Europe is historically characterized by a thick welfare state and has recently been experiencing increasing immigration. In this context, the current evolution of the concept of citizenship and the consequent broadening of the voting franchise could introduce a new channel for a further deterioration of public accounts. Therefore, this issue needs further investigation because of its implications for policy.

Finally, citizenship laws can be viewed as the link, within a legal system, between the public and the private sphere of influence. Many issues that fall within the former - such as commercial law, labor regulation, and government activities - have already been investigated following La Porta et al. (1998). We plan to extend our methodology to the study of other evolving bodies of the law, such as family law, rules of inheritance, and women's rights.

DATA APPENDIX

The early period

Migration: Migration data for the early period are collected by Mitchell (2003) from 1815 for Europe, the Americas and Africa (but only South Africa and Zimbabwe for the 1910-1999 period appear for Africa), from 1843 for Oceania. Asia is not included. Data on both emigration and immigration are available (although defined in several different ways). His sources are essentially Ferenczi and Willcox (1929). The nature of the statistics varies greatly from country to country and many data are missing. Therefore, we employed the series of decade averages of net and gross immigration rates elaborated by Taylor and Williamson (1997) for 17 countries for the 1870-1910 period, also on the basis of Ferenczi and Willcox

(1929). **Jus soli countries:** We construct a dummy which equals 1 if a country is originally subject to jus soli, 0 otherwise. **Wage gap:** We computed the wage gap by taking decade averages of the log of the wage ratio, where the numerator is a country's real wage and the denominator is world average of the other countries' real wages. The source of the wage data is Williamson (1995). **The agricultural share:** We computed decade averages of annual figures obtained through linear interpolation of the available figures. The source is Banks (2001), with the exceptions of Argentina, Ireland and Brazil where data come from Mitchell (2003). **The young adult share:** For each country, we computed the share of the young (i.e., aged 15-29) population from Census data reported in Mitchell (2003), taking for each decade the Census closer to the year ending in 0. Note the following exceptions: for Ireland the age reported is 15-34, for the Netherlands 10-29 (except in 1900), for Spain 16-30.

The current period

Migration: The UN Demographic Yearbook Database, compiled by the UN Statistics Division, provided international migration data starting from its first 1949/50 issue, with information on emigration and immigration. However, they stopped collecting migration data in 1995 due to the bad quality of the data collection process. They are currently testing a revised questionnaire in the hope to resume collection starting with 2000 data. The available historical data were not even included in the UN Demographic Yearbook Historical Supplement, 1948-1997 (2000), and are therefore unavailable online. However, the UN Population Division provides estimates of international net migration rates in 5-year intervals from 1950, with projections until 2050, for 192 countries. Data on net immigrants are also available. These data are accessible through the UN Common Database electronically. These are the data we used for our regressions, taking an average over the 1950-1999 period. For the last interval, 1995-1999, which included projected data, we selected the UN medium variant projection, which assumes medium fertility, normal mortality and normal international migration. The OECD (2002) has also been collecting migration data from members countries, but only since 1980. The information reported is very rich, including series on inflows and outflows of foreigners (for 94 origin countries and 14 destinations), asylum seekers, stocks of foreigners and of foreign born, naturalization rates, flows (in and out) of foreigners by country of origin, stocks of foreign and foreign-born population by country of origin, and naturalization by country of previous nationality. However, many countries are still missing from several series, with complete series only available for 21 member countries. **Jus soli countries:** We construct a dummy variable which equals 1 if the country was originally (i.e., at the end of the 19th century) subject to jus soli, 0 otherwise. **Democracy:** We use an average of the index of political rights, 1972-99, taken from Freedom House (1996) and adapted so that 7 indicates the best score. **State border changes:** Three dummies for decolonization, the fall of the Berlin wall and other border changes are constructed from Polity IV's (2002) CHANGE, supplemented with CIA (2002) information, for the 1943-1999 period. **Religion:** We report 4 variables: the percentage of the population belonging to the largest religious affiliation, taken from Alvarez et al. (1999); the percentage of Muslims, of Protestants, and of Catholics, all in 1980, taken from La Porta et al. (1999). **Ethnolinguistic fractionalization:** We employ a composite index of ethno-linguistic fractionalization which includes ELF60 and other 4 indexes. See Easterly and Levine (1997). **Size of government**: We take an average of the 1950-1999 government share of GDP in current

prices from the Penn World Table (2002). **GDP per capita**: We enter the log of an average of real GDP per capita at current international prices for 1950-1999 from the Penn World Table (2002). **Inequality:** We use an average of the Gini index of income distribution (GINI), over the available time period. See Deininger and Squire (1996). **Education:** We employ primary and secondary school enrollment data from Banks (2001), averaged over the available time period. **The agricultural share:** We average the agricultural share of the labor force over the available time period. The source is Banks (2001). **Socialist countries:** Information is from La Porta et al. (1999). **Oil countries:** OPEC countries plus Oman, Angola, Qatar, Barhain, and Brunei. **Sub-Saharan Africa countries**: Information is from UN (2002). **Latin America countries and Southern European countries**: Information is from the UN (2002). Southern Europe includes Croatia, Greece, Italy, Malta, Portugal, Slovenia, and Spain. **British colonies:** We have a dummy variable coded 1 for countries that were British colonies any time after 1918, 0 otherwise. Information is from Correlates of War 2 Project (COW2) (2004). **Small countries:** We have a dummy variable coded 1 for small countries, defined as in Easterly and Kraay (2000) in terms of population size (i.e., countries with a population size of less than 1 million over all available years between 1960 and 1995.

REFERENCES

Acemoglu, D. , Johnson, S. and Robinson, J.A., 2001, The Colonial Origins of Comparative Development: An Empirical Investigation, American Economic Review 91, 1369-1401.

Acemoglu, D. and Robinson, J., 2000, Why Did the West Extend the Franchise? Democracy, Inequality and Growth in Historical Perspective, Quarterly Journal of Economics 115, 1167-99.

Aleinikoff, T. A. and Klusmeyer, D. (eds.), 2001, Citizenship Today: Global Perspectives and Practices, Carnegie Endowment for International Peace, Washington.

Aleinikoff, T. A. and Klusmeyer, D. (eds.), 2000, From Migrants to Citizens: Membership in a Changing World, Carnegie Endowment for International Peace, Washington.

Alesina, A. and Spolaore, E., 1997, On the Number and Size of Nations, Quarterly Journal of Economics 112, 1027-1056.

Alvarez, M., Cheibub, J.A., Limongi, F., Przeworski, A., 1999, ACLP Political and Economic Database, December.

Banks, A., (2001), Cross-National Time Series, 1815-1999, Center for Comparative Political Research State University of New York, Binghamton.

Barro, R.J., 1999, Determinants of Democracy, Journal of Political Economy 107, Part 2, S158-S183.

Barro, R.J. and McCleary, R.M., 2004, Which Countries Have State Religion?, NBER Working Paper N0. 10438.

Benhabib, J., 1996, On the Political Economy of Migration, European Economic Review 40, 1737-1744.

Berkowitz, D., Pistor, K. and Richard, J.-F., 2003, Economic Development, Legality, and the Transplant Effect, European Economic Review 47, 165-195.

Bertocchi, G., 2003, The Law of Primogeniture and the Transition from Landed Aristocracy to Industrial Democracy, CEPR Discussion Paper 3723.

Bertocchi, G. and Spagat, M., 2001, The Politics of Co-optation, Journal of Comparative Economics 29, 2001, 591-607.

Bolton, P. and Roland, G., 1997, The Breakup of Nations: A Political Economy Analysis, Quarterly Journal of Economics 112, 1057-1090.

Borjas, G., 1994, The Economics of Immigration, Journal of Economic Literature 32, 1667-1717.

Borjas, G., 1999, Immigration and Welfare Magnets, Journal of Labor Economics 17, 607-637.

Botero, J., Djankov, S., La Porta, R., Lopes-de-Silanes, F. and Shleifer, A., 2003, The Regulation of Labor, NBER Working Paper 9756.

Bourguignon, F. and Verdier, T., 2000, Oligarchy, Democracy, Inequality and Growth, Journal of Development Economics 62, 285, 313.

Brubaker, R., 1992, Citizenship and Nationhood in France and Germany, Harvard University Press, Cambridge.

Canova, F. and Ravn, M.O., 1998, Crossing the Rio Grande: Migrations, Business Cycles and the Welfare State, CEPR Discussion Papers 2040.

Central Intelligence Agency, The World Factbook 2002, CIA, Washington.

Coffee, J.C., Jr., 2001, Do Norms Matter?: A Cross-Country Examination of the Private Benefits of Control, Columbia Law School Working Paper No. 183.

Correlates of War 2 Project, 2004, Department of Political Science, The Pennsylvania State University.

Deininger, K. and Squire, L., 1996, A New Data Set Measuring Income Inequality, The World Bank Economic Review 10, 565-91.

Easterly, W. and Kraay, A., 2000, Small States, Small Problems? Income, Growth, and Volatility in Small States, World Development 28, 2013-2027.

Easterly, W. and Levine, R., 1997, Africa's Growth Tragedy: Policies and Ethnic Divisions, Quarterly Journal of Economics 112, 1203-1250.

Engerman, S. and Sokoloff, K.L., 2002, Factor Endowment, Inequality, and Paths of Development Among New World Economies, NBER Working Paper 9259.

Faini, R. and Venturini, A., 1994, Italian Emigration in the Prewar Period, in Hatton T. and Williamson J. (eds), Migration and the International Labour Market 1850-1913, 72-90, Routledge, London.

Ferenczi, I. and Willcox, W.F., 1929, 1931, International Migrations, Vols. 1 and 2, National Bureau of Economic Research, New York.

Freedom House, 1996, Freedom in the World. Political Rights and Civil Liberties. Freedom House, New York.

Galor, O. and Mountford, A., 2004, Trading Population for Productivity, Brown University Working Paper No. 38-01.

Gradstein, M. and Justman, M., 1999, The Industrial Revolution, Political Transition, and the Subsequent Decline in Inequality in 19th Century Britain, Explorations in Economic History 36, 109-127.

Gradstein, M. and Schiff, M., 2004, The Political Economy of Social Exclusion with Implications for Immigration Policy, IZA Discussion Paper No. 1087.

Hatton, T.J., 2003, Emigration from the UK, 1870-1913 and 1950-1998, IZA Discussion Paper No. 830.

Hatton, T. J., 1995, A Model of U.K. Emigration, 1870-1913, Review of Economics and Statistics 77, 407-415.

Hatton, T.J. and Williamson, J.G., 2002, What Fundamentals Drive World Migration?, CEPR Discussion Paper 3559.

Hatton, T.J. and Williamson, J.G., 1998, The Age of Mass Migration: Causes and Economic Impact, Oxford University Press, New York.

Heston, A., Summers, R. and Aten, B., 2002, Penn World Table Version 6.1, Center for International Comparisons at the University of Pennsylvania (CICUP), October.

Joppke, C. (ed.), 1998, Challenge to the Nation-State: Immigration in Western Europe and the United States, Oxford University Press, Oxford.

Landes, D. S., 1998, The Wealth and Poverty of Nations, Norton, New York.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.W., 1999, The Quality of Government, Journal of Law, Economics and Organization 15, 222-279.

La Porta, R., Lopes-de-Silanes, F., Shleifer, A. and Vihny, R.W., 1998, Law and Finance, Journal of Political Economy 106, 1113-1155.

Lazear, E., 1999, Culture and Language, Journal of Political Economy 107, Part 2, S95-S125.

Maddison, A., 2001, The World Economy. A Millennial Perspective, OECD, Paris.

Marshall, T.S., 1950, Citizenship and Social Class, Cambridge University Press, Cambridge.

Meltzer, A. and Richard, S. 1981, A Rational Theory of the Size of Government, Journal of Political Economy 89, 914-927.

Mitchell, B.R., 2003, International Historical Statistics, 1750-2002, Vol. I: Europe, Vol. II: The Americas, Vol. III: Africa, Asia & Oceania, Palgrave Macmillan, New York.

Mueller, D.C., 2003, Rights and Citizenship in the European Union, CESIFO Working Paper No. 896.

OECD, 2002, Trends in International Migration, OECD, Paris.

O'Rourke, K., 1991, Did the Great Irish Famine Matter?, Journal of Economic History 51, 1-22.

Ottaviano, G. and Peri, G., 2003, The Economic Value of Cultural Diversity, mimeo, UC Davis.

Polity IV, 2002, Political Regime Characteristics and Transitions, 1800-2002, Center for International Development and Conflict Management, University of Maryland.

Rajan, R. and Zingales, L., 2003, The Great Reversals: The Politics of Financial Development in the 20th Century, Journal of Financial Economics 69, 5-50.

Razin, A., Sadka, E. and Swagel, P., 2002, Tax Burden and Migration: A Political Economy Theory and Evidence, Journal of Public Economics 85, 167-190.

Roe, M., 2000, Political Preconditions in Separating Ownership from Corporate Control, Stanford Law Review 53, 539-606.

Smith, J.P. and Edmonston, B.(eds.), 1997, The New Americans: Economic, Demographic, and Fiscal Effects of Immigration, National Academic Press, Washington.

Stark, O., 1995, The Migration of Labor, Blackwell.

Storesletten, K., 2000, Sustaining Fiscal Policy through Immigration, Journal of Political Economy 108, 300-323.

Taylor and Williamson, 1997, Convergence in the Age of Mass Migration, European Review of Economic History 1, 27-63.

UN Common Database, 2002, United Nations, New York.

UN Convention on the Rights of Migrants, 1990, United Nations, New York.

UN Demographic Yearbook, Vol. 1949/50 to Vol. 1996, United Nations, New York.

UN Demographic Yearbook Historical Supplement (1948-1997), 2000, United Nations, New York.

UN High Commissioner for Refugees, Country of Origin and Legal Information, 2003, United Nations, Geneva.

United States Office of Personnel Management, Investigations Service, Citizenship Laws of the World, 2001.

Weil, P., 2001, Access to Citizenship: A Comparison of Twenty-Five Nationality Laws, in Aleinikoff, T. A. and Klusmeyer, D. (eds.), Citizenship Today: Global Perspectives and Practices, 17-35, Carnegie Endowment for International Peace, Washington.

Williamson, J. G., 1995, The Evolution of Global Labor Markets since 1830: Background Evidence and Hypotheses, Explorations in Economic History 32, 141-196.

Table 1a
Original and current citizenship laws, border changes, plus other dummies: summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
CL_2001	159	2	0.675053	1	3
CL_1974	159	1.7673	0.564733	1	3
CL_OR	159	1.67925	0.468242	1	2
Soc	159	0.1761	0.382109	0	1
oil	159	0.08805	0.284263	0	1
UKCol	159	0.30818	0.463199	0	1
SE	159	0.04403	0.205799	0	1
LA	159	0.16352	0.37101	0	1
SSA	159	0.27044	0.445591	0	1
SC	159	0.15094	0.359125	0	1
Decol	159	0.50314	0.50157	0	1
BW	159	0.10692	0.309986	0	1
OBC	159	0.04403	0.205799	0	1

Table 1b
Original and current citizenship laws: frequencies

CL_OR	Freq.	Percent
1	51	32.08
2	108	67.92
Total	159	100
CL_1974	Freq.	Percent
1	48	30.19
2	100	62.89
3	11	6.92
Total	159	100
CL_2001	Freq.	Percent
1	36	22.64
2	87	54.72
3	36	22.64
Total	159	100

Table 1c
Original and current citizenship laws, border changes, plus other dummies:
summary statistics by continent

Africa					Europe					Northern America				
Variable	Obs	Mean	Std. Dev.	Min	Max	Variable	Obs	Mean	Std. Dev.	Min	Max	Variable	Obs	Mean	Std. Dev.	Min	Max
CL_2001	48	2.02083	0.56454	1	3	CL_2001	34	2.52941	0.56329	1	3	CL_2001	2	1	0	1	1
CL_1974	48	1.875	0.569621	1	3	CL_1974	34	2.02941	0.3881	1	3	CL_1974	2	1	0	1	1
CL_OR	48	1.64583	0.483321	1	2	CL_OR	34	1.94118	0.23883	1	2	CL_OR	2	1	0	1	1
Soc	48	0	0	0	0	Soc	34	0.44118	0.50399	0	1	Soc	2	0	0	0	S0
oil	48	0.08333	0.27931	0	1	oil	34	0	0	0	0	oil	2	0	0	0	0
UKCol	48	0.35417	0.483321	0	1	UKCol	34	0.05882	0.23883	0	1	UKCol	2	0	0	0	0
SC	48	0.16667	0.376622	0	1	SC	34	0.08824	0.2879	0	1	SC	2	0	0	0	0
Decol	48	0.9375	0.244623	0	1	Decol	34	0	0	0	0	Decol	2	0	0	0	0
BW	48	0	0	0	0	BW	34	0.35294	0.48507	0	1	BW	2	0	0	0	0
OBC	48	0	0	0	0	OBC	34	0.02941	0.1715	0	1	OBC	2	0	0	0	0

Asia					Latin America					Oceania				
Variable	Obs	Mean	Std. Dev.	Min	Max	Variable	Obs	Mean	Std. Dev.	Min	Max	Variable	Obs	Mean	Std. Dev.	Min	Max
CL_2001	42	2.07143	0.406823	1	3	CL_2001	26	1.23077	0.58704	1	3	CL_2001	7	2	0.8165	1	3
CL_1974	42	1.92857	0.34165	1	3	CL_1974	26	1.23077	0.58704	1	3	CL_1974	7	1	0	1	1
CL_OR	42	1.61905	0.491507	1	2	CL_OR	26	1.73077	0.45234	1	2	CL_OR	7	1	0	1	1
Soc	42	0.28571	0.45723	0	1	Soc	26	0.03846	0.19612	0	1	Soc	7	0	0	0	0
oil	42	0.21429	0.4153	0	1	oil	26	0.03846	0.19612	0	1	oil	7	0	0	0	0
UKCol	42	0.42857	0.50087	0	1	UKCol	26	0.30769	0.47068	0	1	UKCol	7	0.57143	0.53452	0	1
SC	42	0.09524	0.297102	0	1	SC	26	0.23077	0.42967	0	1	SC	7	0.42857	0.53452	0	1
Decol	42	0.59524	0.496796	0	1	Decol	26	0.19231	0.40192	0	1	Decol	7	0.71429	0.48795	0	1
BW	42	0.11905	0.32777	0	1	BW	26	0	0	0	0	BW	7	0	0	0	0
OBC	42	0.14286	0.354169	0	1	OBC	26	0	0	0	0	OBC	7	0	0	0	0

Table 2
Net Migration (1,000), 1870-1998

	1870-1913	1914-49	1950-73	1974-98
Jus Sanguinis	**-7,581**	**-2,060**	**9,914**	**9,982**
France	890	-236	3,630	1,026
Germany	-2,598	-304	7,070	5,911
Italy	-4,459	-1,771	-2,139	1,617
Japan	n.a.	197	-72	-179
Others*	-1414	54	1,425	1,607
Jus Soli	**11,441**	**5,834**	**12,058**	**22,376**
United Kingdom	-6,415	-1,405	-605	737
Australia	885	673	2033	2151
New Zealand	290	138	247	87
Canada	861	207	2,126	2,680
United States	15,820	6,221	8,257	16,721
Western Europe	**-13,996**	**-3,662**	**9,381**	**10,898**
Western Offshoots	**17,856**	**7,239**	**12,663**	**21,639**

*Includes Belgium, Netherlands, Norway, Sweden and Switzerland.
Source, Maddison, 2001.

Table 3
Net Migration Rates (migrants/1,000 population), 1870-1910

Jus Sanguinis Countries	**-0.66**
Argentina	10.57
Belgium	1.50
Brazil	0.67
Denmark	-2.42
France	-0.09
Germany	-0.65
Italy	-6.47
Netherlands	-0.53
Norway	-4.73
Portugal	-0.96
Spain	-1.04
Sweden	-3.78
Jus Soli Countries	**0.73**
Australia	5.95
Canada	6.23
Great Britain	-2.02
Ireland	-10.12
United States	3.62
Old World	**-2.61**
New World	**5.41**

Source: Taylor and Williamson, 1997.

Table 4
Summary statistics (Sample 1870-1910, 17 countries)

Variable	Obs	Mean	Std. Dev.	Min	Max
NetMigr	68	0.023823	6.19181	-16.04	19.07
GrMigr	65	-0.464153	8.777336	-17.97	25.47
pop	64	0.270124	0.032725	0.233383	0.358457
agr	55	43.41364	15.38051	8.9	69.73
soli	68	0.294117	0.459032	0	1
wageg	68	-0.083697	0.432457	-0.8938	0.7666
L_net	67	-0.031343	6.221681	-16.04	19.07
ARG	68	0.058823	0.237043	0	1
IRL	68	0.058823	0.237043	0	1
NW	68	68 .2941176	.4590328	0	1

Table 5
Pairwise correlations (sample: 1870-1910, 17 countries)

	NetMigr	GrMigr	pop	agr	soli	wageg	L_net	NW	ARG	IRL
NetMigr	1									
GrMigr	0.7486*	1								
pop	-0.1641	-0.034	1							
agr	-0.2589	-0.1429	-0.157	1						
soli	0.0831	0.1834	0.2367	-0.3950*	1					
wageg	0.4741*	0.5816*	0.1081	-0.4872*	0.7466*	1				
L_net	0.5836*	0.6227*	-0.2912*	-0.1842	0.1047	0.3754*	1			
NW	0.6286*	0.8263*	0.1243	-0.0773	0.4333*	0.6484*	0.5346*	1		
ARG	0.4766*	0.5890*	0.0203	-0.2555	-0.1614	0.0277	0.3655*	0.3873*	1	
IRL	-0.4581*	-0.3168*	0.5017*	-0.0292	0.3873*	0.0052	-0.4101*	-0.1614	-0.0625	1

* significant at 5%

Table 6
Regression results (sample: 1870-1910, 17 countries)

	(1) NetMigr	(2) NetMigr
wageg	5.341 (4.47)**	6.369 (3.23)**
pop	14.002 (-0.83)	13.2 (-0.78)
L_net	0.204 (2.04)*	0.21 (2.08)*
ARG	13.896 (3.70)**	13.38 (3.47)**
IRL	-10.179 (4.30)**	-9.135 (3.19)**
soli		-1.283 (-0.66)
constant	-3.264 (-0.72)	-2.621 (-0.56)
Observations	63	63
Adj. R^2	0.60	0.59

Absolute value of t statistics in parentheses
* significant at 5%; ** significant at 1%

Table 7
Summary statistics (sample: 1950-1999, 159 countries)

Variable	Obs	Mean	Std. Dev.	Min	Max
CL_2001	159	2	.6750527	1	3
CL_1974	159	1.767296	.5647333	1	3
CL_OR	159	1.679245	.4682415	1	2
soli	159	.3207547	.4682415	0	1
NetMigr	159	.084174	7.663306	-16.85	60
Decol	159	.5031447	.5015699	0	1
BW	159	.1069182	.3099856	0	1
OBC	159	.0440252	.2057992	0	1
CATH	159	30.82075	35.24031	0	97.3
PROT	157	13.01911	21.53529	0	97.8
MUSL	159	23.3166	35.93079	0	99.9
REL	123	70.7935	22.81009	18	99.5
avelf	133	.3546288	.3000129	0	.8902469
PR	159	4.345912	2.2332	1	7
PRIM	158	.1200723	.0596488	.0255083	.6000708
SEC	158	.040908	.0331728	.0025783	.1496
agr	98	41.7185	20.02325	4.43871	80.34286
gdp	148	7.625142	1.05096	5.58697	10.05989
gov	148	20.45593	10.10482	3.354983	58.62574
GINI	77	40.02129	9.799176	22.26895	61.21333
Soc	159	.1761006	.3821093	0	1
oil	159	.0880503	.2842634	0	1
UKCol	159	.3081761	.4631986	0	1
SE	159	.0440252	.2057992	0	1
LA	159	.163522	.3710098	0	1
GER	159	.0062893	.0793052	0	1
SSA	159	.2704403	.4455907	0	1
SC	159	.1509434	.3591248	0	1

Table 8
Pairwise correlations (sample: 1950-1999, 159 countries)

	avelf	Cath	Musl	Prot	REL	PRIM	SEC	gdp	agr	GINI	soli	Decol	BW	OBC	NetMigr	Gov	PR	Soc	UKCol
avelf	1																		
Cath	-0.17	1																	
Musl	0.141	-0.4951*	1																
Prot	-0.0467	-0.1305	-0.3418*	1															
REL	-0.1329	0.3234*	0.2237*	-0.2762*	1														
PRIM	-0.0046	0.1682*	-0.1615*	0.1659*	-0.0391	1													
SEC	-0.3034*	-0.1442	-0.0436	0.0999	-0.2112*	0.1817*	1												
gdp	-0.5006*	0.0658	-0.1124	0.1914*	-0.0985	-0.0265	0.5836*	1											
agr	0.5244*	-0.1781	0.1777	-0.1815	0.0413	-0.3377*	-0.5556*	-0.6508*	1										
GINI	0.217	0.2347*	0.0321	-0.1232	0.0597	0.3979*	-0.1879	-0.2950*	0.2653*	1									
soli	0.2389*	-0.2526*	-0.0227	0.2103*	-0.4304*	0.1769*	-0.0266	-0.0927	0.0687	0.1023	1								
Decol	0.4883*	-0.3364*	0.2892*	-0.0219	-0.2430*	0.1264	-0.3193*	-0.5304*	0.2930*	0.2622*	0.3056*	1							
BW	-0.0905	-0.0633	-0.0477	-0.0651	-0.2054*	-0.2723*	0.6384*	0.3551*	-0.0716	-0.1942	-0.2378*	-0.3482*	1						
OBC	-0.13	-0.1526	0.1206	-0.0616	0.0127	-0.1268	-0.0876	-0.1078	0.0813	-0.176	0.0496	0.0906	0.025	1					
NetMigr	0.0608	-0.1642*	0.3183*	-0.0783	0.0945	-0.0734	0.0432	0.3273*	-0.0949	-0.1372	0.0311	0.017	0.0226	-0.0179	1				
Gov	0.1066	-0.1764*	0.1799*	-0.0977	-0.0029	-0.1554	0.0703	-0.1017	0.0757	0.0507	-0.0507	0.1687*	0.2710*	0.0608	0.0256	1			
PR	-0.3791*	0.3073*	-0.4349*	0.3857*	0.0068	0.1458	0.3354*	0.4804*	-0.5198*	-0.2022	0.1077	-0.4637*	0.1075	-0.0218	0.017	-0.3332*	1		
Soc	-0.1920*	-0.1435	-0.1461	-0.1758*	-0.1651	-0.2448*	0.4387*	0.2724*	0.0764	-0.4432*	-0.2823*	-0.3001*	0.6950*	0.0618	-0.0611	0.2454*	-0.1474	1	
UKCol	0.1095	-0.1930*	0.118	0.0325	-0.2216*	0.1496	-0.0252	-0.1001	0.0193	0.1968	0.6907*	0.4121*	-0.2208*	0.1335	0.0987	0.0701	-0.0314	-0.2586*	1

Table 9
Regression results - Ordered logit (sample: 1950-1999, 146 countries)

	Coefficients	Marginal effects[a]		
		CL=1	CL=2	CL=3
soli	0.959	-0.235	0.068	0.167
	(1.69)*	(-1.77)*	(2.03)**	(1.53)
NetMigr	0.209	-0.052	0.019	0.033
	(1.99) **	(-1.99)**	(1.73)*	(1.97)**
SSA	1.609	-0.379	0.088	0.291
	(2.32)**	(-2.62)***	(2.39)**	(2.16)**
SC	0.276	-0.069	0.023	0.046
	(0.44)	(-0.44)	(0.51)	(0.41)
LA	4.436	-0.681	-0.122	0.804
	(6.64)***	(-13.73)***	(-2.82)***	(13.43)***
UKCol	-0.432	0.107	-0.043	-0.064
	(0.64)	(0.65)	(-0.60)	(-0.67)
Gov	0.061	-0.015	0.006	0.009
	(3.24)***	(-3.25)***	(2.37)**	(3.22)***
PR	0.409	-0.102	0.038	0.064
	(2.96)***	(-2.97)*	(2.23)**	(2.98)***
avelf	1.675	-0.418	0.156	0.262
	(1.91)*	(-1.92)**	(1.66)*	(1.93)*
Prot	-0.012	0.003	-0.001	-0.002
	(1.52)	(1.52)	(-1.40)	(-1.50)
Decol	-1.881	0.438	-0.134	-0.304
	(2.64)***	(3.05)***	(-2.71)***	(-2.66)***
SSA_NetMigr	-0.240	0.0598	-0.022	-0.037
	(1.96)*	(1.96)**	(-1.70)*	(-1.96)**
UKCol_NetMigr	-0.308	0.077	-0.029	-0.048
	(2.37)**	(2.37)**	(-1.97)**	(-2.34)**

Observations: 211
Absolute value of z statistics in parentheses.   *significant at 10%; ** significant at 5%; *** significant at 1%
Cut-off point 1: 3.787   Cut-off point 2: 5.139
Pseudo R^2: 0.3265
Count R^2: 0.725
(a) dy/dx is for discrete change of dummy variable from 0 to 1

LIST OF VARIABLES

agr = agricultural labor share
ARG = dummy for Argentina
avelf = average index of ethno-linguistic fractionalization
BW = dummy for Berlin wall border changes
Cath = share of Catholics
CL = citizenship law at the end of each sub-sample
CL_1974 = citizenship law as of 1974
CL_2001 = citizenship law as of 2001
CL_OR = original citizenship law
Decol = dummy for decolonisation border changes
gdp = log of per capita GDP
GER = dummy for Germany
GINI = Gini coefficient
Gov = government consumption/GDP
GrMigr = Gross migration rate
IRL = dummy for Ireland
L_net = lagged NetMigr
LA = dummy for Latin America
Musl = share of Muslims
NetMigr = Net migration rate
NW=dummy for New World
OBC = dummy for other border changes
oil = dummy for oil countries
pop = young adult share
PR = index of political rights
PRIM = primary school enrollment rate
Prot = share of Protestants
REL = share of largest religious affiliation
SC = dummy for small countries
SE = dummy for Southern Europe
SEC = secondary school enrollment rate
Soc = dummy for socialist countries
soli = dummy for jus soli
SSA = dummy for sub-Saharan Africa
UKCol = dummy for British colonies
wageg = wage gap