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ABSTRACT

Citizenship and Integration*

Several European countries have reformed their citizenship policies over the past decades. There is much to learn from their experience of how citizenship works; for whom it works; and what rules and policies matter for integration. The article surveys recent quasi-experimental evidence and field experiments from the social sciences on the link between eligibility rules, take-up and integration outcomes. Across countries and reforms, the evidence shows that faster access to citizenship increases take-up and improves the economic, educational, political and social integration of immigrants. Other eligibility rules like civic knowledge tests or application fees also impact who naturalizes and therefore benefits from citizenship. Birthright citizenship, which is much less common in Europe, turns out to be a powerful tool for getting second-generation immigrants off to a good start. Together, citizenship acts as a powerful catalyst benefiting immigrants as well as host countries.

JEL Classification: J15, J2, J31, J61, K37

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1 Introduction

Migration flows and the share of the foreign-born population have increased substantially in recent decades – both in the traditional immigration countries like Australia, Canada, or the United States but also in other advanced economies. As a result, many host countries in Europe now have a sizable foreign-born population: the share is 16.1% in Germany, 14% in the United Kingdom and 12.4% in France – comparable to the 13.6% in the United States (OECD, 2022). This trend is likely to continue in the face of demographic ageing and scarce labor in host countries coupled with population growth and adverse conditions in some origin countries.

The increasing diversity of the population has brought the question of immigrant integration to the top of the political agenda. Without integration, whether economically, politically or socially, the immigrant population may remain marginalized and unable to take advantage of the opportunities in the host country. For the host country, failure to integrate immigrants imposes severe challenges ranging from fiscal costs to ghettoization and even social tensions if immigrants are not well integrated or perceived by the native population as a threat to jobs, housing or the local culture, for instance.

Integration is clearly a complex phenomenon that is not easily captured with a single measure (e.g., Hainmueller et al., 2015). Most scholars distinguish between economic, social, or political integration. Economic integration includes integration in the labor market, but also in the housing market, education or training. Social integration may include the intensity of interaction with natives, engagement in local clubs and organizations, but also covers long-run decisions like partner choice, marriage behavior, and fertility. Political integration captures interest and actual participation in political processes and organizations as well as voting behavior etc. In addition, some scholars conceptualize integration in terms of identity, language, and norms or values, which captures how much immigrants feel as part of the culture and customs of the host country. The dimension may be labeled as cultural integration (Algan et al., 2010) or linguistic and psychological integration (Hainmueller et al., 2015). Clearly, integration along these various dimensions depends on immigrants' preferences and choices; but we argue that they depend just as much on the opportunities the host country offers to support and encourage integration.

Such opportunities are shaped in part by policies to facilitate immigrant integration. Among those, the option to become a citizen of the host country plays a prominent role. Citizenship is the most important privilege a host country can bestow on its immigrant population. Becoming a citizen and hence, a full member of the host society has obvious benefits in terms of political rights

and standing for high political offices. But do these benefits also reach beyond the political realm? Some think that the importance of citizenship for integration has declined as the rights of other titles like permanent residency have expanded over time.¹ In many countries, permanent residents have security of residence and some protection against expulsion: they also enjoy many of the same benefits and access to public transfers as citizens, for instance. And yet, it is only citizens that enjoy the full protection and support by the host state; and citizenship facilitates sponsoring and securing citizenship for family members.

If one accepts the idea that citizenship matters even today, the question arises how to design citizenship policies: who has access, when and which criteria have to be fulfilled? The design of citizenship policies is often shaped by two opposing views on the role of citizenship. The first one, popular in the political and public debate, argues that citizenship is the crown for a successfully completed integration process. Viewed from this perspective, the requirements for naturalization should be strict, such as long residency requirements, mandatory language or civic knowledge tests, in order to reward integration efforts and select the immigrants most willing to invest in integration. Once immigrants are awarded citizenship, they have reached the end point of their integration process.

A very different perspective argues that citizenship acts as a catalyst for immigrant integration. In this perspective, obtaining host-country citizenship promotes the subsequent integration of immigrants, because it inspires them to invest in a future in the host country, changes the role models they aspire to or because it reduces discrimination by natives, for instance. If citizenship is a catalyst, very long residency requirements delay integration and possibly deter subsequent investments as would stringent language or civic knowledge tests.

Yet, research on whether, how and for whom citizenship matters, and which citizenship policies work, comes with specific methodological challenges. Immigrant-native achievement gaps in school or the labor market are typically lower for traditional immigration countries with liberal citizenship rules like Canada or Australia than for countries with more restrictive citizenship policies like Germany or Switzerland (Sweetman and Van Ours, 2014). While this comparison is suggestive, there are many other differences across countries with more liberal and more restrictive policies that could explain the differential outcomes for immigrants. These other cross-country differences are likely to influence the immigrant selection, the environment immigrants find themselves in, and hence, the choices families with a migratory background make. Access to citizenship sometimes

¹Shachar et al. (2017) provide a recent overview of the debate around citizenship from different scholarly perspectives.

varies within a country: children with one native and one foreign-born parent obtain citizenship automatically, for example. Yet, selection into mixed marriages is likely to create a different family environment than in families with two foreign-born parents (Meng and Gregory, 2005). Moreover, not all immigrants have an interest or see any net benefit in obtaining the passport of the host country. Hence, the integrative power of citizenship further depends on who decides to take up the opportunity and how that decision is shaped by eligibility rules.

The early literature on citizenship relied on cross-sectional data comparing naturalized citizens with other immigrants who were either not eligible or did not apply for naturalization (e.g. Chiswick, 1978; DeVoretz and Pivnenko, 2005 for North America; Bevelander and Veenman, 2008 for the Netherlands; Bevelander and Pendakur, 2011; Scott, 2008 for Sweden; and Fougère and Safi, 2009 for France). More recently, studies have employed panel data to study the relationship between naturalization and subsequent labor market performance using individual fixed effects to control for selection effects (Bratsberg et al., 2002; Bratsberg and Raaum, 2011; Steinhardt, 2012). While insightful, this literature faces some limitations. The variation comes from the migrant's decision to naturalize and the estimation relies on observable controls and possibly fixed effects to address the selection into naturalization. It is unclear whether panel approaches are enough to eliminate any selection bias. Moreover, rational expectations would imply that some decisions like investments in human capital or the selection of a spouse might be undertaken even before the person actually naturalizes. In addition, the literature does not provide answers to several important questions: who actually benefits from more liberal access to citizenship? And which citizenship policies work? The literature has largely focused on labor market integration, while the discussion above showed that integration is multidimensional and goes well beyond the labor market.

Recent research has made substantial progress in illuminating the effects of citizenship by leveraging large-scale reforms in several European countries. Such reforms offer a unique opportunity to deepen our insights about how citizenship works, for whom it works and which rules matter. There is much to learn from these quasi-experiments and field experiments about the integration process, the take-up decisions of immigrants and the eligibility rules that matter. This paper surveys the main insights the recent literature exploiting citizenship reforms and experimental variation has generated for immigrant integration.

2 Why Citizenship Matters

Obtaining the citizenship of a country goes well beyond having the right to vote and be able to stand for elections of high-ranked public offices. Citizenship is often the prerequisite for restricted public sector jobs, being eligible for certain welfare transfers or other benefits and full travel mobility. For EU countries, the privilege also extends to other EU member states through the freedom of movement within the European Union. We first discuss how citizenship affects the labor market position of first-generation immigrants. We then explain why it has further implications for social integration; and then turn to the question of how citizenship might affect the integration of immigrant children.

2.1 Citizenship and Labor Market Performance

Economic theory suggests a number of reasons why citizenship and the timing of eligibility could improve the situation of first-generation immigrants in the labor market (see, e.g. [Chiswick, 1978](#); [Bratsberg et al., 2002](#); [Gathmann and Keller, 2018](#)). First, citizenship is required for a number of civil servant or public sector jobs. In some countries like Germany, these restrictions apply to a much wider range of occupations: prior to 2012, non-EU citizens had only restricted access to regulated professions like lawyers, notaries, pharmacists, or physicians. More generally, citizenship removes any restrictions on career mobility that immigrants typically face. Take the example of Germany again: prior to 2005, a temporary work permit did not allow immigrants to be self-employed for the first eight years; or switch occupations within the first three years. Obtaining citizenship also removes barriers to geographic mobility that many immigrants, especially from developing countries, face. In the European Union, non-EU immigrants with a permanent residency permit require a visa to travel into EU countries like Ireland that are not part of the Schengen agreement. And a non-EU immigrant with a permanent residency permit cannot move and work in any other member state without obtaining a new residency and work permit from that member state – unless the immigrant has a Blue Card.

Citizenship enables immigrants to work in any job, at any time and place, which should improve the match quality between workers and firms. It would further broaden the employment and career prospects of naturalized immigrants if employers are hesitant to hire a non-EU citizen for a job with extensive traveling or assignments abroad due to additional visa costs and reduced flexibility. To the extent that these jobs and newly attainable career options offer better pay or working conditions

than jobs available to the average immigrant, naturalization improves the labor market prospects of immigrants.

A second reason why access to citizenship is valuable in the labor market is that employers in the private sector might be less willing to invest in a foreign employee who will (or is perceived to) leave the host country in the near future (see e.g. [Lalonde and Topel, 1997](#)). Through naturalization, the immigrant provides a signal of long-term commitment to remain in the host country and thus eliminates explicit or implicit barriers to training or career mobility in the firm.² If match quality and training opportunities by employers are complements to worker skills, both factors raise the returns to training or education and hence, the incentives to invest in human capital. Naturalization guarantees a secure, long-term perspective in the host country, which raises the incentives to invest in destination-specific skills like the local language or vocational degrees. The faster an immigrant becomes eligible for citizenship, the longer the immigrant can reap these higher returns to skill.

Finally, a liberal approach to citizenship might have an important psychological effect on immigrants. The option to naturalize signals the immigrant that he or she is welcomed as a full member of the host society with all rights and responsibilities. As a result, the immigrant is more inclined to identify and follow the host country's role model in terms of labor force attachment, the importance of education, or the need to speak the host country's language.

In sum, incentives on both the demand and supply side of the labor market suggest that access to citizenship could be an important policy instrument to improve the economic assimilation of immigrants.

2.2 Citizenship and Social Integration

Yet, the effects of citizenship will reach well beyond the labor market. We would expect that having the passport of the host country has an impact on the broader social integration of immigrants. Here, we focus on long-term decisions regarding partner choice, marriage, and fertility behavior.³

Access to citizenship should improve the position of immigrants in the marriage market. A passport of the host country is itself a valuable asset, especially among recently arrived immigrants, as foreign spouses of citizens may naturalize faster than other immigrants. In addition, higher income and human capital are also attractive traits and hence, make eligible immigrants more desirable spouses in the marriage market. In a marriage market with search frictions, all three

²[Sajons \(2016\)](#) provides evidence that outmigration rates decline for immigrant families if their newborn child obtains host country citizenship at birth.

³In the following, the discussion on marriage includes formally married couples but also long-term partnerships.

factors would raise the reservation value for accepting a partner as a spouse. As a result, we would expect that eligible immigrants search for a spouse longer, marry later, and potentially find a better match (Becker, 1973; Becker, 1974; Burdett and Coles, 1999; Browning et al., 2014).

Better labor market opportunities with higher lifetime income and more human capital also affects fertility choices through both an income and substitution effect (Becker, 1960; Hotz et al., 1997). The income effect raises the demand for children, while the substitution effect increases the opportunity cost of children and hence, reduces parental demand. If the better economic condition is mostly the result of more human capital and a stronger labor market attachment, the opportunity cost argument is likely to dominate the income effect and fertility declines.⁴ Better career opportunities and incentives for human capital investments also affect the timing of birth. If skills deteriorate during labor market absence, the loss of human capital would push women to postpone childbirth.⁵ Immigrants often come from countries with much higher fertility rates and very different norms about the family and the role of women in society than in the host country. If access to citizenship increases the weight on the prevailing norms and values in the host country, immigrant women are likely to have fewer children and have them at a later age.

How would access to citizenship affect partner choice? Immigrants often marry within their own ethnic or cultural group as endogamous couples find it easier to raise children who share the same cultural values and norms (Bisin et al., 2004). If the culture of the source country favors endogamy, access to citizenship reduces the pressure or preference to marry within one's ethnic or cultural group. How citizenship affects intermarriage rates (or having a native partner) is a-priori unclear. Immigrants who have access to citizenship can naturalize without intermarriage. Yet, naturalization may reduce reservations in the native population, while better language skills, education, and income affect the social network and possibly increase contact with natives. Both might increase the likelihood of intermarriage. Access to citizenship could influence assortative matching along other characteristics like age, education, or income. Researchers typically find positive assortative matching in education which seems related to consumption and leisure complementarities (Stevenson and Wolfers, 2007). Immigrants in turn often downgrade in the marriage market by having a less educated partner; and immigrant women often accept a larger age difference (Adsera and

⁴It is also important to note that families may adjust not only the number of children but also the quality of their offspring by investing more in each child.

⁵In economic models of fertility, another factor influencing the timing of birth are credit markets. With imperfect credit markets, income is difficult to shift intertemporally; as a result, fertility tends to move with the husband's income.

Ferrer, 2014). With access to citizenship, immigrants become more desirable spouses, which could reduce the need to downgrade in the marriage market.

In sum, host country citizenship affects marriage and fertility decisions through all three channels – income, human capital, and norms.

2.3 Citizenship, Investments and School Performance of Immigrant Children

Citizenship should also benefit the children of immigrants who are either born in the host country or moved there as children. The effect could be direct, if the child itself is eligible for citizenship, or indirect if the parents of the child obtain citizenship. The direct effect works through higher returns to human capital and better career options in the labor market, which raise incentives of both parents and children to invest in human capital⁶. The indirect effect works through immigrant parents having better labor market outcomes and possibly more human capital. More household resources benefit children by allowing additional investments for cultural activities or music lessons, for instance. A naturalized parent with better language skills, in turn, can help the child in school or become a role model for the child to succeed in school.

To the extent that naturalization shifts the attitude of natives and immigrants, natives might be less biased or reduce overt discrimination hampering immigrant integration. This argument requires that discrimination is based on nationality and not on appearance, foreign accent or foreign-sounding names. As a result, immigrants may feel more accepted as equal members of society and increase their efforts to succeed and aspire to the norms and role models in the host country (Avitabile et al., 2014; Felfe et al., 2020).

3 Variation in Citizenship Policies and Reforms

This section provides a short overview of the most important requirements to obtain citizenship through naturalization and the provisions for birthright citizenship around the world.

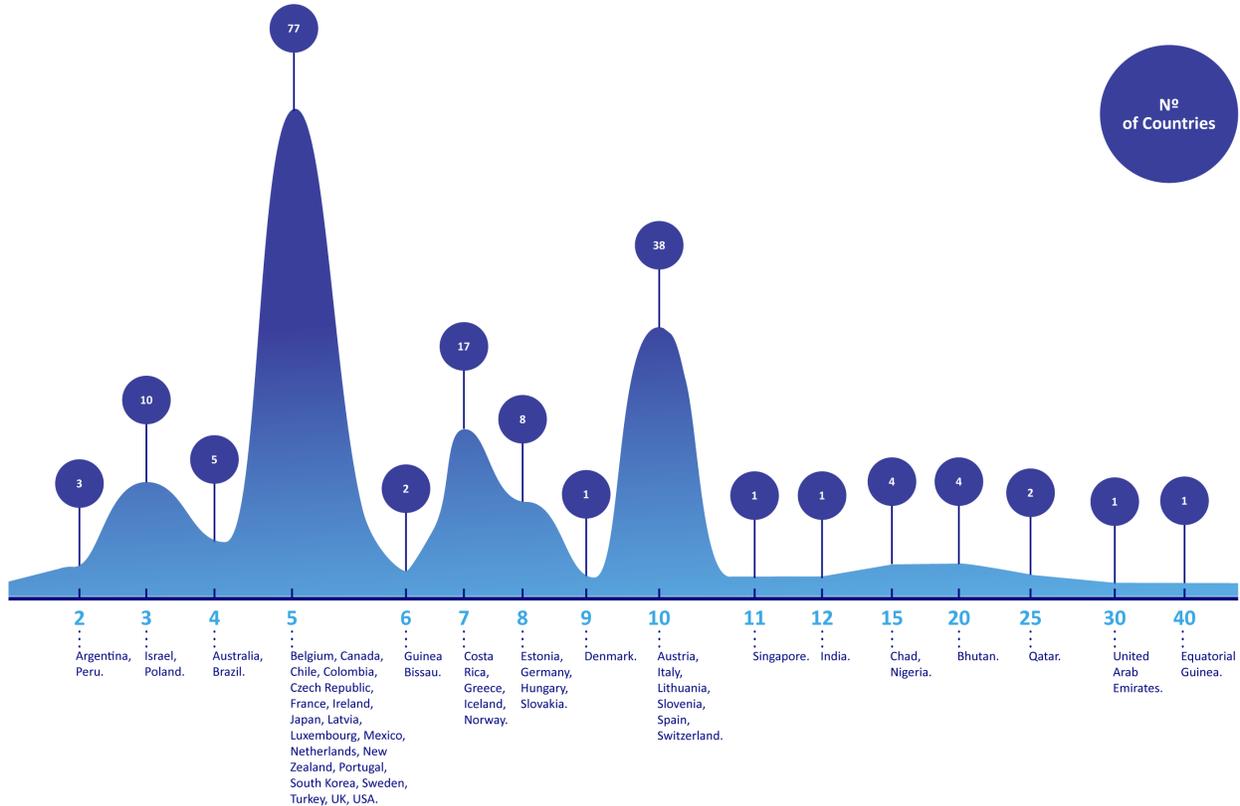
3.1 Acquire Citizenship by Naturalization

Most countries offer the option to naturalize, but they differ substantially in their eligibility requirements. Countries typically require a certain number of years an immigrant has to reside in

⁶The model of the quantity-quality trade-off would predict just that: if the price of child quality declines (due to higher returns in the labor market), parents have fewer children but invest more in them (Becker, 1973; Becker and Tomes, 1976).

the host country legally before they can apply for naturalization. [Figure 1](#) shows that countries differ a lot in their *residency requirement* for naturalization.

Figure 1: Residency Requirements Across Countries



Notes: The number of years refer to 2020. There are 15 countries without residence-based acquisition provisions.

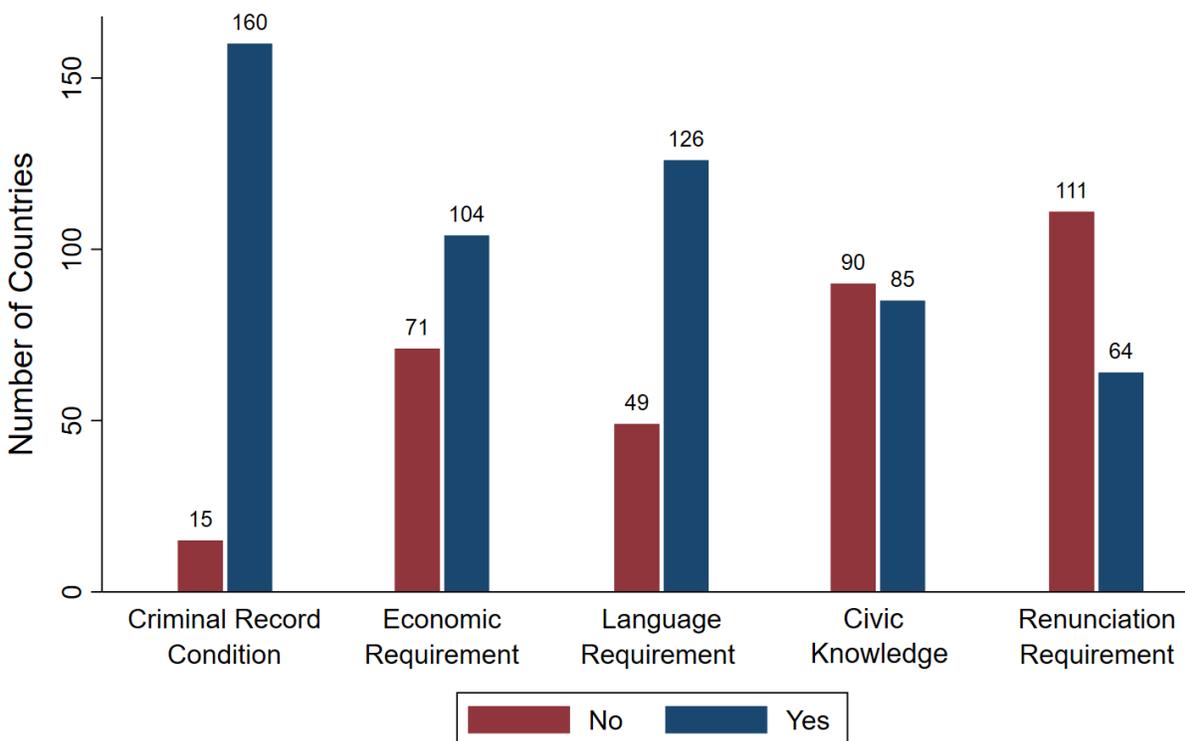
Source: The data come from the GLOBALCIT database at the European University Institute and covers 190 countries (van der Baaren and Vink, 2021).

At the one end of the spectrum, Argentina or Peru allow naturalization after only two years of residency in the country. The most common requirement is five years, which includes countries like Canada, the UK or the United States. On the other side of the spectrum, countries like Austria or Switzerland require a 10-year waiting period; residency requirements can even exceed 20 years in some Middle Eastern countries. Overall, in the vast majority (85%) of countries, the acquisition of citizenship through naturalization is available within a decade of residing legally in the host country.

In addition to the residency criteria, many countries impose additional eligibility requirements. Most common are that applicants do not have a criminal record, are economically self-sufficient, have some basic language skills and civic knowledge about the host country. Finally, several host

countries also require applicants to renounce their source country citizenship while other countries allow dual citizenship. [Figure 2](#) provides an overview of how common these additional requirements are.

Figure 2: Other Requirements for Naturalization



Notes: Criminal record condition: a foreigner needs a good character and/or a clean criminal record. Economic requirement: an applicant needs to have a certain level of income, demonstrate a certain employment duration, or does not rely on welfare transfers (including requirements related to health). Language requirement: a foreigner is required to read, speak and/or understand the national language of the host country. Civic knowledge requirement: a foreigner has to demonstrate some civic knowledge about the host country. Renunciation requirement: a foreigner has to renounce or lose his or her original citizenship in order to naturalize. In each of the five categories, there are 15 countries without residence-based acquisition provisions. *Source:* The data come from the GLOBALCIT database at the European University Institute and covers 190 countries ([van der Baaren and Vink, 2021](#)).

The vast majority (84%) impose that applicants do not have a substantive *criminal record* though the definition whether and which minor charges might be acceptable or not varies across countries.

Many countries (55%) also require that immigrants must demonstrate *economic self-sufficiency*. The requirement ranges from applicants demonstrating the availability of financial resources at the time of application, a certain employment record, or the absence of past, current, or even potential welfare dependency. Some states do not ask for economic self-sufficiency explicitly but instead

impose requirements related to a person’s health. The health requirement typically requires no disability and good mental health and aims to prevent the acquisition of citizenship by people who would not be able to earn an efficient income or might become a burden on a country’s welfare state.

To facilitate integration, most countries (66%) require some knowledge of the local language. The type of *language requirement* differs across countries whether one has to provide a certificate of language skills, pass a language test at a certain level or not. In addition, 85 states (45%) require *civic knowledge* or cultural integration for the residence-based acquisition of citizenship. Some countries require basic knowledge about the country’s government and the rights and obligations of citizens. Others require the immigrant to know about the host country’s culture, history, and customs. Yet others go beyond that and require the active social engagement of immigrants through interactions with the native population, for instance.

Finally, a majority of 111 states (58%) do not require a renunciation of the home country citizenship for the residence-based acquisition of citizenship. This group consists of both countries where renunciation has never been required during the postwar period, such as in Argentina or Canada, as well as those countries that have abolished this requirement recently, such as Italy (1992) or Norway (2020). In 64 states (34%) renunciation or loss of citizenship is typically required for the residence-based acquisition of citizenship. Some countries in this group allow exceptions to this rule. Examples include an exception for spouses and registered partners of citizens in the Netherlands or exceptions for EU/EEA or Swiss citizens in Germany⁷

3.1.1 Variation in Requirements across Immigrant Groups

Residency requirements also vary within a given country for different groups of immigrants. Immigrants married to natives, for example, may naturalize faster than immigrants on a work or education visa.⁸ 168 states (90%) have a provision for the facilitated acquisition of citizenship on the basis of a marriage or partnership with a citizen. In 121 states these provisions do not depend on the gender of the partner or couple. Rather, 78 states impose a residence requirement that is typically shorter than the residence requirement for regular naturalization. The marriage-based residency requirements range between one and five years. In the remaining 43 states, there is no residence requirement for the acquisition of citizenship based on marriage or partnership. Some

⁷In five countries, there is a nominal renunciation requirement, but no proof of renunciation is required and/or there is no penalty for those who have not renounced their original citizenship.

⁸There are other provisions for facilitating access to citizenship for refugees or stateless persons, which we do not consider here. See [van der Baaren and Vink \(2021\)](#).

states allow naturalization right after the marriage is undertaken while others require a certain marriage duration before the partner can apply.

3.2 Birthright Citizenship

Unlike naturalization for first-generation immigrants, birthright citizenship for children of foreign-born parents is much less common. [Figure 3](#) shows that only 59 states (31%) allowed citizenship to be acquired by birth in the country in 2020 – irrespective of the citizenship or birthplace of the parents (*jus soli*). Among those, 37 countries (19%) allowed children of immigrants born in the host country to obtain citizenship automatically without further requirements. Most of these are located on the American continent where immigration has always played a prominent role. Another 16 countries (8%) tie birthright citizenship to the residency requirements of the parent. Germany requires eight years, for instance. The remaining six states (3%) of Brunei, Guinea Bissau, Haiti, Israel, Liberia and Uganda require the parent to belong to a particular ethnic group or race.⁹

3.3 Exploiting Variation in Citizenship Policies

Recent research has exploited large-scale reforms in citizenship policies to estimate the causal effects of access to citizenship on immigrant integration. Here, we briefly discuss four types of variation from three countries: Germany, France and Switzerland. In subsequent sections, we also discuss smaller reforms, which increased or decreased language and civic knowledge requirements.

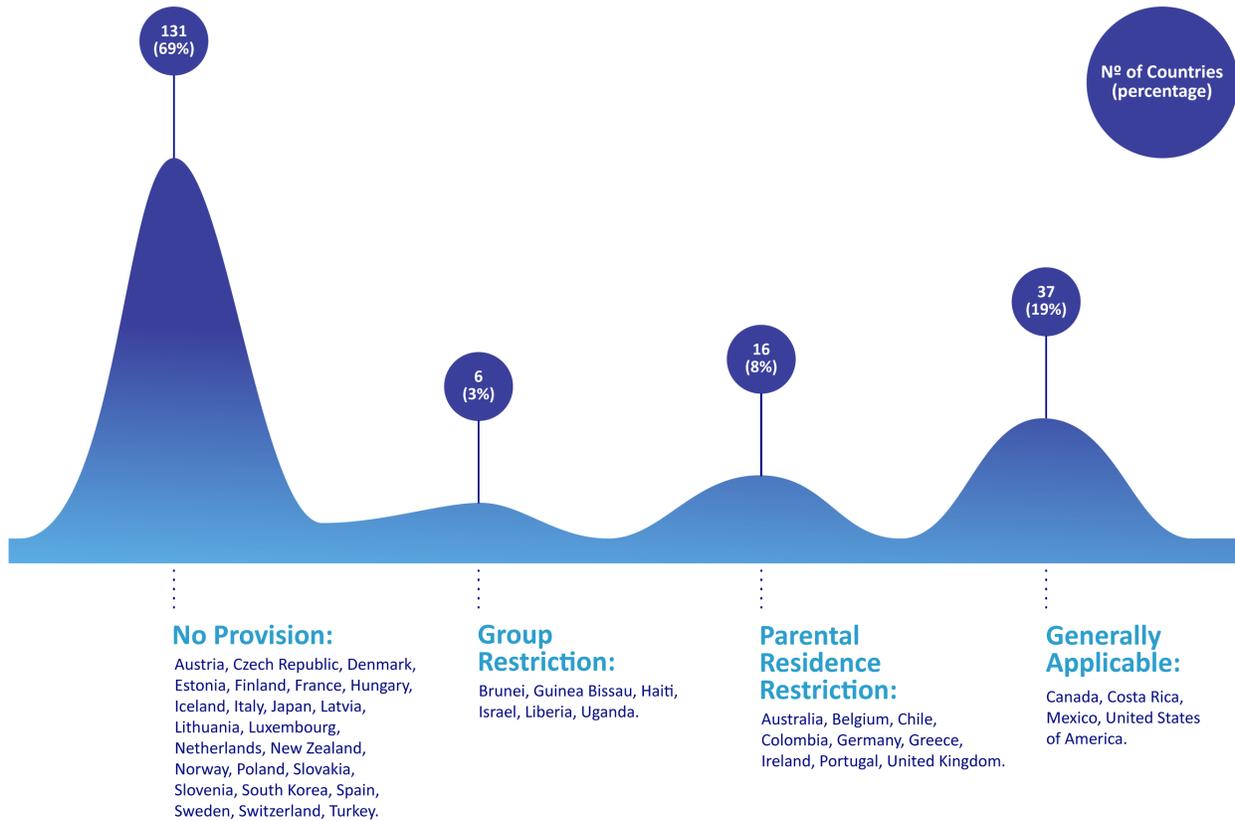
3.3.1 Germany’s Reforms of Citizenship Laws

Traditionally, Germany had a very restrictive citizenship policy which was closely tied to ancestry and ethnic origin (*jus sanguinis*). The passage of the Alien Act (Ausländergesetz (AuslG)) marked a turning point in Germany’s approach to immigration and citizenship. The reform which came into effect on January 1, 1991 defined, for the first time, explicit rules and criteria for naturalization.¹⁰ The new law imposed age-dependent residency requirements for citizenship. Adult immigrants could naturalize after 15 years of residency in Germany. There were two exceptions to this general rule: immigrants who arrived in Germany before the age of 8 could naturalize when they turned

⁹There are additional rules to avoid the statelessness of second-generation immigrants, for acquiring citizenship if the parent is also born in the host country or a fast track to citizenship before the age of majority is reached. See [van der Baaren and Vink \(2021\)](#) for a detailed overview of these additional rules, which we do not consider here.

¹⁰[Gathmann and Keller \(2018\)](#) discuss the circumstances and political support that led up to the reform.

Figure 3: Birthright Citizenship Rules



Notes: No provision: citizenship cannot be acquired on the basis of a person's descent from a citizen parent (*jus sanguinis*) even if he or she is born in the country. Group restriction: acquisition of citizenship is restricted to a particular group (e.g. ethnicity, race, or religion). Parental residence requirement: citizenship can only be acquired if the parent fulfills a residency requirement (e.g. permanent residence status in the country, a parent must have resided in the country for a certain number of years, or a combination of both). Generally applicable: child acquires citizenship based on birth in the host country without further conditions (even if birth registration may need to be carried out in practice).

Source: The data come from the GLOBALCIT database at the European University Institute and cover 190 countries (van der Baaren and Vink, 2021).

16. And immigrants who arrived in Germany when they were between 8 and 14 years-old could naturalize after 8 years of residency.

Applicants for German citizenship had to fulfill several other criteria: first, they had to renounce their previous citizenship upon naturalization.^[11] Second, the applicant must not be convicted of a criminal offense.^[12] Older immigrants who arrived in Germany at age 15 or older had to

¹¹Children of bi-national marriages, for example, did not have to give up their dual citizenship until they turned 18. Exceptions were also granted if the country of origin prohibits the renunciation of citizenship or delayed it for reasons outside the power of the applicant, if the applicant was an acknowledged refugee or if the renunciation imposed special hardships on older applicants.

¹²Applicants with minor convictions, such as a suspended prison sentence up to 6 months (which would be abated at the end of the probation period), a fine not exceeding 180 days of income (calculated according to the net personal

demonstrate economic self-sufficiency, i.e. they should be able to support themselves and their dependents without welfare benefits or unemployment assistance. Younger immigrants who arrived in Germany before the age of 15 had to have completed a minimum of six years of schooling in Germany, of which at least four years had to be general education. It is important to stress that both requirements are less restrictive than the requirements for obtaining a permanent work or residence permit. Finally, an applicant needed to declare her loyalty to the democratic principles of the German constitution. Spouses and dependent children of the applicant could be included in the application for naturalization even if they did not fulfill the criteria individually.

The second important reform came into effect on January 1, 2000. The Citizenship Act (Staatsangehörigkeitsgesetz (StAG)) reduced the residency requirement to eight years for all immigrants; children had to wait until they turned 16. The other requirements of the 1991 reform stayed the same: applicants could not have a criminal record, had to demonstrate economic self-sufficiency and their loyalty to democratic principles. In addition, the new law also required applicants to demonstrate adequate German language skills prior to naturalization. As before, the law of 2000 did not recognize dual citizenship in general though exemptions became more common. It became easier for older applicants and refugees to keep their previous citizenship. Applicants could also keep their nationality if it was legally impossible to renounce it or if it imposed a special hardship like excessive costs or serious economic disadvantages (e.g. problems with inheritances or property in the country of origin).

The 2000 reform further introduced birthright citizenship into German law. A child born to foreign parents after January 1, 2000 was eligible for citizenship if one parent had been a legal resident for eight years and had a permanent residence permit for at least three years.

3.3.2 Swiss Direct Democracy and Citizenship

In Switzerland, regular applications for naturalizations are handled at the local or cantonal level. The general rule is that anyone who has been resident in Switzerland for ten years and holds a permanent residence permit may apply to their municipality or canton of residence for citizenship. Years spent in Switzerland between the ages of eight and eighteen count double, but a person has to have resided in the country for at least six years. People married or in a registered partnership with a Swiss citizen are subject to a shorter length of residence: they may apply for citizenship if they have resided in Switzerland for at least five years. Each canton stipulates a minimum length of

income of the individual), or corrective methods imposed by juvenile courts, were still eligible. Convictions exceeding these limits were considered on a case-by-case basis by the authorities.

residence of two to five years in the given municipality and canton. Moreover, an immigrant needs to prove sufficient integration in Swiss society, which includes command of the local language, the absence of a criminal record and no welfare dependence in the past three years.

Until 2003, some municipalities held local referendums on the citizenship application of resident immigrants who fulfilled the eligibility requirements. If enough local voters voted yes, the applicant would obtain citizenship. An immigrant who was denied citizenship could apply again later and have another ballot referendum or simply satisfy the eligibility criteria after local referendums were abolished (Hainmueller et al., 2017). Being denied citizenship in the local referendum delays the naturalization process by about three years on average.

3.3.3 Eligibility for Citizenship in France

In France, first-generation immigrants can obtain citizenship through two main channels: through naturalization or through marriage to a French citizen. In addition, France grants birthright citizenship if the parent of the child was also born in France but does not have citizenship. About 60% of applications for citizenship fall under the regular naturalization, about 20% under the marriage rules, and the remaining 20% on citizenship by birthright.

The naturalization channel requires the immigrant to satisfy a 5-year residency requirement. Moreover, an immigrant also has to demonstrate sufficient language skills in French, take a civic knowledge class, have no criminal record, and be financially independent.¹³ Children born in France to foreign-born parents can obtain citizenship some time between age 13 and 18 if the child spent a certain number of years in France. They do not have to satisfy the additional requirements listed above.¹⁴

The channel through marriage allows an immigrant to naturalize if the couple has been married for a certain number of years and the immigrant has lived in France for at least three years. The same additional requirements with respect to language, criminal record, and financial independence as for regular immigrants apply. A national reform that was announced in March 2006 and enacted in July 2006 increased the number of years a marriage had to last between an immigrant and a native before the immigrant could obtain a French passport from two to four years.

¹³The residency requirement is only two years if an immigrant has studied at a French university during those two years.

¹⁴Special provisions apply to children born to parents in the former or current French overseas territories.

4 Evidence on Labor Market Integration

Based on Germany's citizenship reform in 1991 and 2000, [Gathmann and Keller \(2018\)](#) analyze how a reduction in the residency requirements for naturalization affects labor market integration of first-generation immigrants. The estimation approach compares the labor market performance of immigrants arriving in Germany in a certain year at a certain age who get eligible for citizenship earlier (after 8 years residency) or later (after 15 years residency) because of small differences in arrival age or arrival year. To adjust for other integration forces, the estimation controls flexibly for the year of birth, general assimilation, age, region of origin and time effects. As long as eligibility and citizenship have permanent effects on labor market performance, outcomes for immigrants with faster access to citizenship should differ relative to immigrants who gain eligibility later. The other criteria are very similar for immigrants with shorter and longer waiting periods.

There are four main results. First, shorter waiting periods for citizenship increase employment rates among immigrant women. Women who face an 8-year rather than a 15-year residency requirement are 3.5 percentage points more likely to be employed in the labor market. The effect is mostly accounted for by women who have not participated in the labor market before. There are few employment effects for immigrant men – in part because most of them were employed even before getting eligible for citizenship. The returns to citizenship are concentrated among immigrants from outside the European Union, which is reasonable as EU migrants enjoy the same rights and responsibilities as natives. Among non-EU immigrants, women from poorer countries are the ones that increase their labor supply the most.

Moreover, there are sizable effects on women's earnings, which increase by 9.8 log points if the waiting period is eight years rather than 15 years. Citizenship thus speeds up the process of closing the immigrant-native earnings gap among women ([Gathmann and Monscheuer, 2022](#) provide a thorough overview of earnings assimilation in Germany). All of the improvements in women's labor earnings come from an increase in labor force attachment. Women are more likely to be employed, work more hours per week, are more likely to be employed full-time, and have longer job tenure. Given the sizeable wage penalties of part-time work and jobs with high turnover in most countries including Germany, changes in labor supply are one important channel for the large earnings changes among women.¹⁵

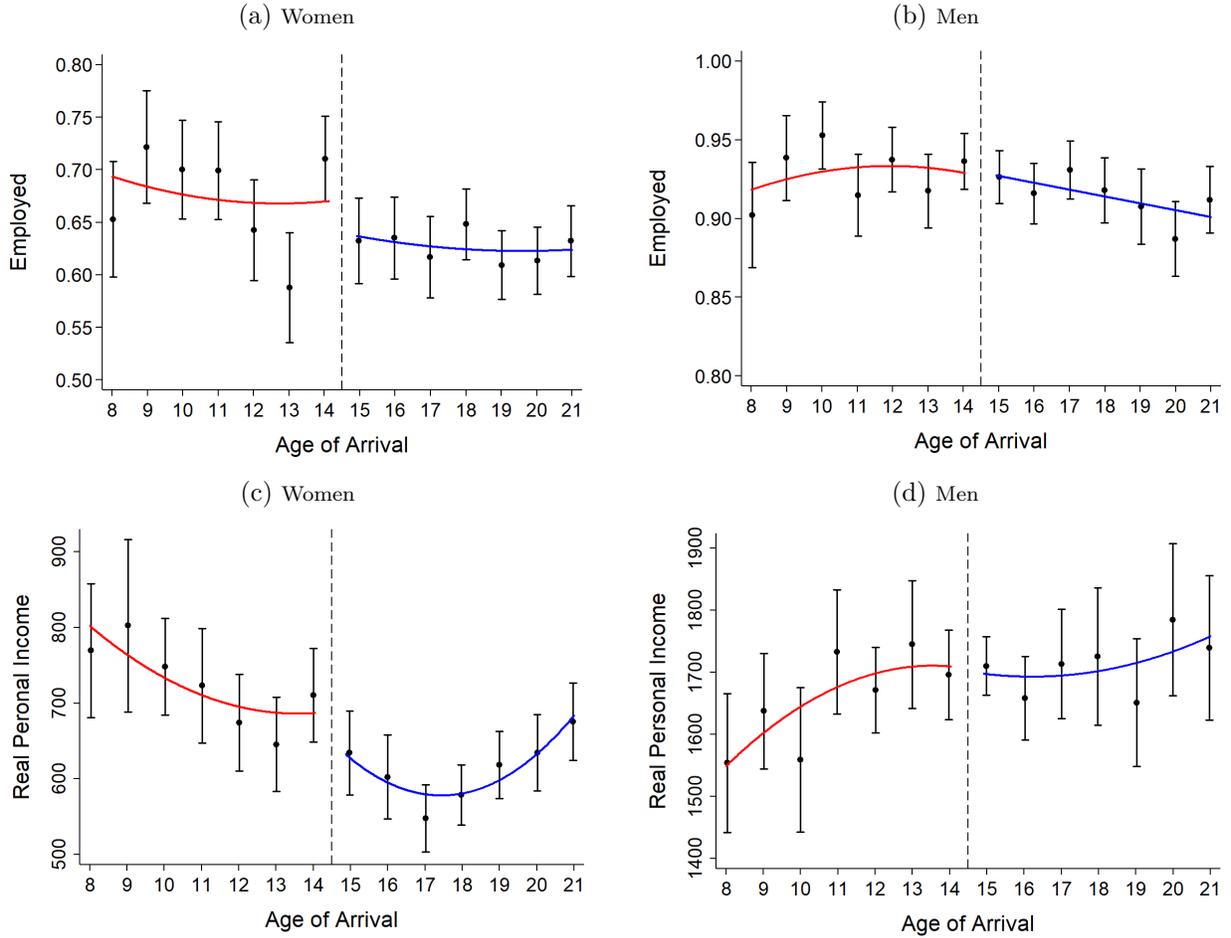
¹⁵Using the introduction of birthright citizenship, [Sajons \(2019\)](#) shows that some women increase working hours while others decrease them or even leave employment if their newborn child obtained German citizenship automatically at birth.

There is also evidence that women invest more in human capital. While there are few effects on formal education, language skills in writing and speaking German improve with shorter residency requirements. Moreover, both men and women improve the type of jobs they hold: women with shorter waiting periods are more likely to work in a white-collar job and have a permanent work contract; and men are less likely to be self-employed.

The evidence from Germany demonstrates that faster access to citizenship speeds up immigrant assimilation in the labor market – even in countries with traditionally restrictive immigration policies. Interestingly, most of the returns to citizenship accrue because immigrants change their behavior – here, by increasing their labor supply and investing more in language skills. Beyond the overall effect, citizenship improves especially the relative economic position of immigrant women, which is important given the often precarious economic and legal status of immigrant women. In ongoing work, [Gathmann and Garbers \(2022\)](#) zoom into the age-dependent residency requirements of the 1991 reform. In particular, they exploit the fact that an immigrant who arrived in Germany at age 14 had to wait 8 years before becoming eligible, while an immigrant arriving at age 15, just one year older, would have to wait 15 years before citizenship became an option. Both cohorts of immigrants face similar eligibility criteria otherwise; the only exception is that immigrants arriving by age 14 need to have six years of education in Germany, while immigrants arriving at age 15 need to demonstrate economic self-sufficiency. They use the sharp discontinuity in eligibility to implement a regression discontinuity design (RDD) as well as a local randomization approach, which is more suitable when the running variable is discrete ([Cattaneo et al., 2015](#); [Cattaneo et al., 2017](#)). The sample analyzed includes first-generation immigrants who arrived in Germany between 1980 and 1988. Based on the fuzzy RDD, Panel (a) of [Figure 4](#) demonstrates that immigrant women with faster access to citizenship (arrival ages 14 and under) have higher employment rates than women who arrived at age 15 or later.¹⁶ Panel (c) further shows that immigrant women who arrived under the age 15 earn more than women who arrived at age 15 or older. The employment rate is a sizable 8 percentage points and earnings about €94 per month higher. Panel (b) and (d) of [Figure 4](#) suggest that faster access to citizenship has little effect on the employment or earnings of immigrant men.

¹⁶The much lower employment rate for women arriving at age 13 is likely due to sample variation as there are few observations in that particular bin in the current sample.

Figure 4: Employment Rates and Real Monthly Personal Income



Notes: The figures show the average employment rate for each age of arrival in Germany. Panel (a) and (c) for women and Panel (b) and (d) for men. Confidence intervals of 95% for each bin.

Source: Gathmann and Garbers (2022).

The results are surprisingly similar when considering a very different population of immigrants: immigrants married to a French citizen, which make up 13% of all marriages in France. Govind (2021) studies a French reform in 2006, which increased the necessary duration of marriage before the foreign spouse could apply for French citizenship. A foreign spouse that applied for naturalization before July 2006 had to be married only two years. The treatment group is thus defined as mixed couples that married before July 2004. A foreign spouse that applied for naturalization after July 2006 had to be married at least four years. This rule applies to all mixed couples who married after July 2004, which we label as the control group.¹⁷

¹⁷Note that the longer waiting period of four years also applied to couples who married before July 2004 but did not apply for naturalization by July 2006. The study cannot identify those couples as the date of application is not observed by the researcher.

She uses a difference-in-differences strategy to compare the labor market outcomes of foreign spouses in couples that married between July 2004 and February 2006 (the control group) to couples who got married between January 2002 and February 2004 (the treatment group). The main result is that a shorter waiting period increases annual earnings among those employed continuously by 29%. The return is explained both by an increase in the number of hours worked and hence, a supply side effect; and by an increase in hourly wages, a productivity effect. The labor supply effect turns out to be temporary. When the control group gains access to citizenship after four years, they also work more hours on average. In contrast, the difference in hourly wages and productivity persists. This persistent effect provides further support for the argument that earlier access to citizenship speeds up labor market integration. It is again especially immigrant women in intermarriages who benefit from faster access to citizenship, presumably because their economic and legal position was more precarious without citizenship than for immigrant men.

These results for France mirror the findings for Germany closely even though the French case applies to a subset of the immigrant population. Foreign spouses of French citizen tend to be better integrated: they are more educated, more likely to be employed and more likely to come from a French-speaking country even before becoming eligible for citizenship. With faster access to citizenship, immigrants in intermarriages get more attached to the labor market – hence, behavioral changes on the supply side are again an important part of the estimated returns to citizenship. Moreover, earlier access generates permanent differences in labor market outcomes through better and jobs with higher productivity, which puts immigrants on a steeper earnings profile. And finally, the more liberal access has a more profound benefit for immigrant women by increasing their labor market attachment and hence, helps them become economically self-sufficient.

A yet different variation is used by [Hainmueller et al. \(2019\)](#) to study the labor market returns of obtaining citizenship in Switzerland. They exploit the fact that until 2003, several municipalities used referendums to have voters decide on the applications for naturalization by immigrants in local referendums. As a result, some immigrants who applied got accepted by the majority of local voters while others were not approved. Focusing on ‘close’ referendum outcomes allows implementing a regression discontinuity approach. It is important to stress that the estimates are valid for the group of immigrants who decide to apply for citizenship. They are not informative for immigrants who might take-up citizenship if citizenship rules change, for instance. The key result is that winning Swiss citizenship in the referendum increased annual earnings by 13.4% over a 15-year time period or approximately 5,000 U.S. dollars per year. They further show that the returns to citizenship

are largest for immigrants with very low prior earnings and those from Turkey and Yugoslavia, which are more marginalized in society. These latter results suggest that discrimination in the labor market might have played a role for the observed economic improvements.

Studies for both Switzerland and Germany find no indication that access to citizenship increases the dependency on the pension or welfare system.

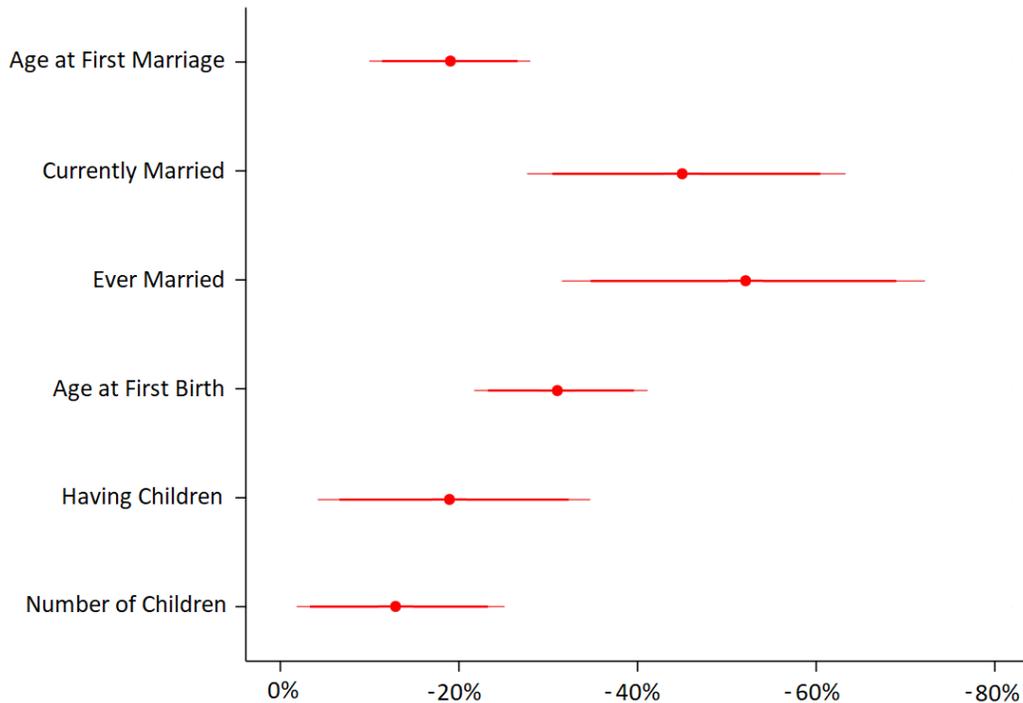
5 Evidence on Social Integration

Does citizenship also influence long-run decisions about family formation and fertility? [Gathmann et al. \(2019\)](#) study a sample of first-generation immigrants who arrived in Germany between the ages of 12 and 30 and thus have not finished their family choices yet. Using the German citizenship reforms in 1991 and 2000, they compare immigrants facing different residency requirements because some arrived in Germany slightly earlier or at a slightly younger age than others while controlling for general assimilation, age, year, origin country and arrival cohort effects in a flexible way.

[Figure 5](#) shows how facing a 8-year rather than a 15-year residency requirement reduces the immigrant-native gap for the outcome specified on the left. Shorter waiting periods reduce the probability of being currently or ever married. One explanation for the lower marriage rates is that marriages have become less stable or that immigrants are more likely to cohabitate rather than getting married. Yet, there is no evidence that divorce or cohabitation rates go up for immigrants who can obtain citizenship earlier. Instead, immigrants are more likely to live alone without a partner, which indicates that immigrants search longer for a partner as the gains from searching have increased. Moreover, immigrant women postpone marriages by almost a year, while immigrant men actually reduce their age at marriage. As immigrant women marry almost three years earlier than immigrant men, a liberal citizenship policy reduces the gender age gap at first marriage by almost two-thirds. Furthermore, it also reduces the immigrant-native gap in age at first marriage. The average immigrant woman marries early at age 20 resulting in an immigrant-native gap of 4.9 years. A liberal citizenship policy reduces this gap by 0.9 years or 19%. In line with the opposing mechanisms for intermarriage discussed above, there is no effect on the propensity to have a native partner or spouse. Yet, the likelihood of marrying or partnering within one's region of origin declines, while the probability of a partnership or marriage with an immigrant from another region increases.

Does citizenship also impact the fertility choices of immigrants? Immigrant women with faster access to citizenship postpone their fertility as well: women with an 8-year residency requirement

Figure 5: Citizenship and Marriage and Fertility Choices of Immigrant Women



Notes: The graph shows for each category by how many percent a 15-year rather than 8-year residency requirement reduces the immigrant-native gap in the outcome specified. The thin line represents the 95% confidence interval and the bold line the 90% confidence interval.

Source: Gathmann et al. (2019); Microcensus (2005-2010).

have their first child a stunning 1.3 years later than women facing a 15-year residency requirement. Immigrant women have their first child at age 23.3 on average, while native women have it at age 27.5 – more than 4 years later. Hence, a shorter waiting period reduces the immigrant-native gap in age at first birth by 31%. The postponement effect is much stronger for more educated immigrants, which is in line with the idea that the costs of career disruptions, which are typically higher for educated women, plays an important role for explaining the delay of childbirth. What do these patterns imply for the process of social integration? A liberal citizenship policy contributes substantially to a convergence between the fertility and marriage choices of immigrants and natives.

A different variation to study long-term decisions like fertility is used by Avitabile et al. (2014). They exploit the introduction of birthright citizenship in Germany to study the fertility choices and parental investments of foreign-born immigrants. As discussed in Section 2, birthright citizenship, by providing better opportunities for the child in the host country, encourages parents to invest more in the child, but potentially have fewer children. The main result of their analysis is that the adoption of birthright citizenship reduces the probability of a new birth within the past 12 months

by 1.5 percentage points, which reduces the immigrant-native fertility gap by roughly 25%. There is also some evidence that parents invest more in their newborn child.

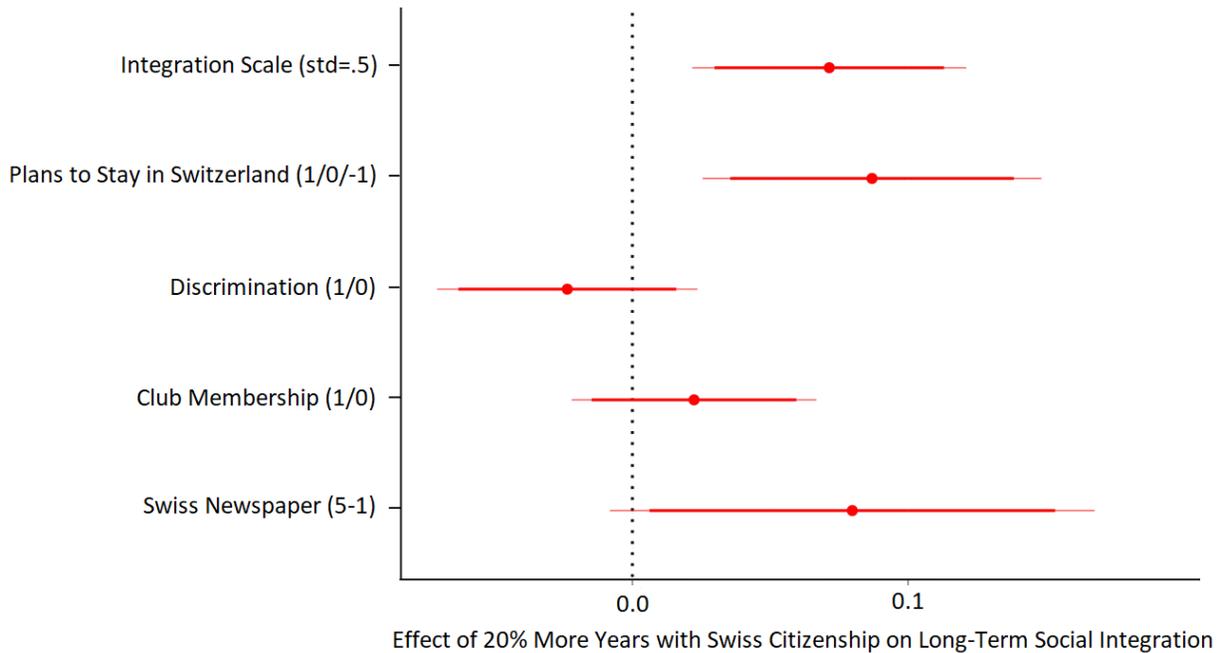
Rather than long-term marriage and fertility choices, a few studies look at other margins of day-to-day integration like having contact with natives, media consumption, and engagement in local clubs or associations. Based on the 2000 citizenship reform in Germany, [Avitabile et al. \(2013\)](#) exploit a transitional rule in the reform. Immigrant children born between 1990 and 1999 could obtain a German passport if their parents applied for it within a year of the reform.¹⁸ Parents, whose child could obtain a German passport, step up their own integration efforts. They are more likely to report being in contact with the native population and parents are more likely to read German newspapers. Immigrant parents are also more likely to speak German at home, though that effect is concentrated among more educated parents. These results reveal that parents indeed perceive citizenship as providing better opportunities for their child and respond accordingly.

Using the variation from the local referendum results in Switzerland, [Hainmueller et al. \(2017\)](#) explore whether immigrants who obtained citizenship are more actively engaged and feel accepted in Swiss society than immigrants who did not obtain it or obtained it only later. Comparing immigrants who narrowly won the referendum on their citizenship application in their municipality to those that narrowly lost it, they find that receiving Swiss citizenship strongly improved long-term social integration. The integration outcomes covered were: whether an immigrant plans to stay in the country; whether an immigrant feels discriminated against; whether an immigrant reads Swiss newspapers and whether they are member of a local club or association.¹⁹ The results persist at least fifteen years after the referendum result and indicate that obtaining citizenship earlier by winning the referendum shifts immigrants' willingness to participate actively in the public life and social activities of the host country. [Figure 6](#) shows that the impact is starkest for feelings of discrimination (a 140% decrease) and for plans to stay in the country (a 80% increase). Moreover, the long-term improvements in social integration are strongest for more marginalized immigrants who are less educated and often of Turkish or ex-Yugoslavian descent. Moreover, first-generation immigrants benefit more than second-generation immigrants who were born in the host country.

¹⁸The purpose of the transitional rule was to give children who were born before the cutoff date for birthright citizenship (January 1, 2000) the chance to obtain a German passport. Take-up of citizenship under this transitional rule was low, however, as many parents did not know about the provision or did not satisfy the 8-year residency requirement.

¹⁹The first three items are binary variables; the last one is coded on a five-point scale from reading exclusively Swiss newspapers to reading exclusively newspapers from their home country. To generate an overall social integration score, the authors extract the first principal component from a principal component analysis.

Figure 6: Effects of Early versus Late Naturalization on Long Term Social Integration



Notes: Effect estimates with robust 95% (thin) and 90% (bold) confidence intervals based on a two-stage least squares regression.

Source: [Hainmueller et al. \(2017\)](#).

A related study of the Swiss case analyzes whether immigrants who obtained citizenship through the local referendum are better integrated politically than immigrants who applied but did not get approval in the local referendum ([Hainmueller and Hangartner, 2013](#)). The results are again clear-cut: immigrants who obtained citizenship earlier are more likely to vote, are more likely to be active politically and are better informed about political affairs. Overall, the findings show that citizenship for first- and second-generation immigrants acts as a catalyst for social, political and economic integration by encouraging adult immigrants to become full members of the host society and to participate actively in it. By improving the position of marginalized immigrants, a liberal citizenship policy also contributes to the social cohesion of the host country by reducing immigrant-native gaps.

6 Evidence on Educational Performance of Immigrant Children

Does citizenship also help immigrant children in succeeding in the host country? Immigrant children might get access to citizenship through three channels: through birthright if they are born in the host country to foreign-born parents if the country allows it and the parent satisfy the criteria; or,

they might obtain citizenship through naturalization by applying for naturalization themselves at a certain age if they satisfy the criteria; or they might be included in the citizenship application of their parents as a dependent child.

Using the adoption of birthright citizenship in Germany, [Felfe et al. \(2020\)](#) analyze whether children who obtain German citizenship by birth have better educational outcomes. They use the discontinuity that children born in Germany after January 1, 2000 to foreign-born parents with eight years of residency obtain a German passport automatically; while children born before that threshold are not eligible for birthright citizenship. The design is not sharp because children born before the threshold date may get naturalized through their parents or if their parents applied for them within one year of the 2000 reform under the transitional rule. Because of sample size issues, the analysis uses a difference-in-differences approach rather than a fuzzy RDD design for estimation. The analysis tracks the performance of immigrant children in the education system at three key stages: early childhood education, primary school and at the beginning of secondary school.

There are three key results. The first result is that children with birthright citizenship are more likely to attend early childhood education (Kindergarten), which is not compulsory in Germany. Hence, parents are more willing to send a child with birthright citizenship to a German educational institution and have it interact with its peers. Almost all native children between the ages of 3 and 6 attend the 3-year daycare (Kindergarten) in Germany, while the attendance rate of immigrant children in the same age range is substantially lower ([Cornelissen et al., 2018](#)). As a result of the parental investment in early childhood education, the child has a more favorable assessment in the school entry examination, mostly because the child has better German language skills, but also shows higher social-economic maturity.²⁰ The third key result is that children with birthright citizenship have a much lower probability of grade retention and a much higher probability of attending the academic track (high school) than immigrant children without birthright citizenship. Both decisions are influenced by the child's performance but also by the teachers' assessment of the child. In particular, primary school teachers make recommendations in the final year of primary school, which school track a child should attend. These recommendations are non-binding in the states analyzed. The analysis shows that citizenship has little influence on the teachers' recommendation; rather, parents are more likely to send their child to high school even independently of the teacher's

²⁰School entry examinations are compulsory for each child before entering primary school (typically at age 6). The examination is done by a pediatrician who assesses motor and language skills but also the socio-economic maturity of the child. Most children pass the examination as the primary goal is to evaluate whether the child is ready to enter primary school or not.

recommendation. That channel indicates once again that citizenship shifts both the perspective of immigrants and the subsequent choices they make for themselves or their children. Additional support for the notion that behavioral changes on the side of immigrants is an important channel comes from [Felfe et al. \(2021\)](#). Based on a lab-in-the-field-experiment, they document that access to birthright citizenship improves the willingness of children with foreign-born parent to cooperate with native children.²¹ As in the discussion on economic and social integration, a big part of the citizenship effect comes from changing attitudes and behavior of eligible immigrants in order to make it in the host country.

[Gathmann et al. \(2021\)](#) take the analysis a step further by asking the following questions: who actually benefits from citizenship? And which citizenship policies work? Do children benefit more from birthright citizenship possibly because they obtain it automatically at birth? Or, do children benefit more if they naturalize through application because that process selects the immigrants who are most willing to integrate and invest in the host country?

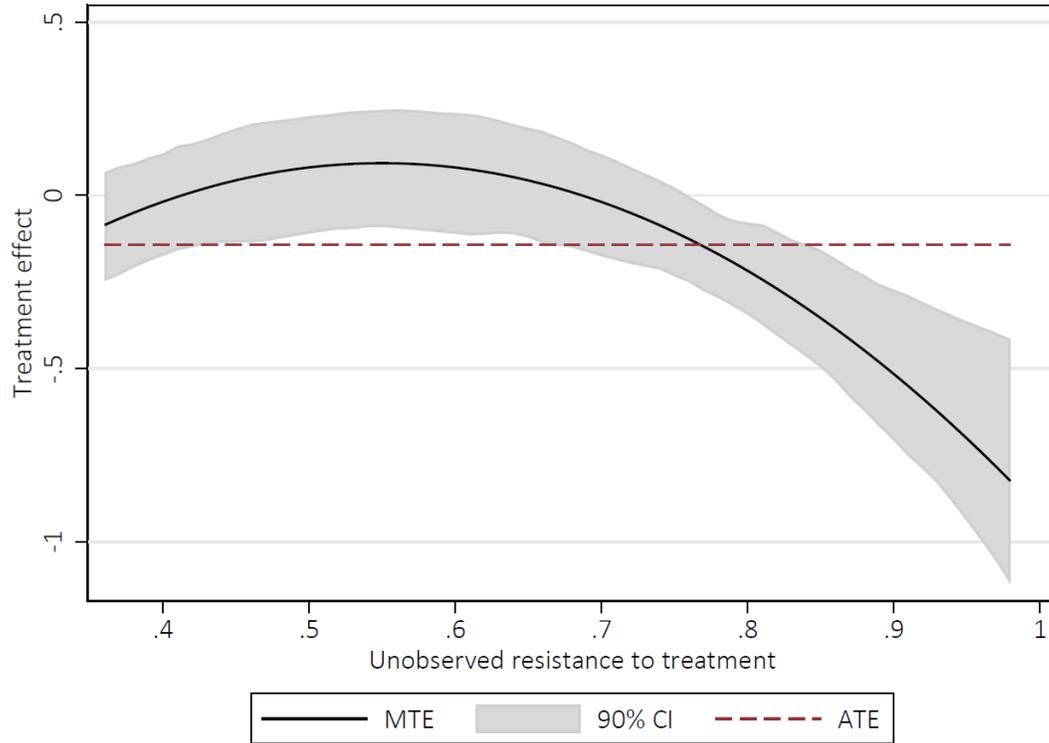
To answer these questions, the empirical analysis is based on the marginal treatment effects framework to trace how returns to citizenship vary across immigrant children ([Heckman and Vytlačil, 1999](#); [Heckman and Vytlačil, 2005](#)). The data come from the National Educational Panel Study (NEPS), which covers schoolchildren all the way from pre-school (Kindergarten) to the end of secondary schooling. The data contain information on immigrant background, school performance as measured by grade retention, track choice and grades in key subjects; and test scores for German language and Math skills. For identification, the authors make use of the 1991 and 2000 reforms of German citizenship law, which defined the rules for birthright citizenship and naturalization. Specifically, they define three eligibility indicators for citizenship. First, immigrants can naturalize when they reach age 16 and have lived in the country legally for eight years and fulfill the other criteria ('individual eligibility'); second, they are eligible as part of a family application for naturalization ('family eligibility') if their parents meet the criteria. Third, immigrant children born in the country after January 1, 2000 to a foreign-born parent who has been living in the country legally for at least eight years obtain citizenship at birth ('birthright eligibility'). The three eligibility indicators are then used as instruments for the decision to naturalize. The second stage uses a local instrumental variable estimator to trace how the returns to citizenship vary across immigrants along observable and unobservable characteristics. Observable gains to citizenship arise because some groups (e.g. girls versus boys or EU versus non-EU immigrants) might

²¹In contrast, [Dahl et al. \(2021\)](#) argue that there might be a backlash of birthright citizenship if restrictive rules at home for girls with foreign-born parent reduce the perceived opportunities that open up through citizenship.

benefit more from citizenship than others. The unobservable gains from citizenship arise from the correlation between the returns to citizenship and the willingness to naturalize conditional on observable characteristics.

[Figure 7](#) plots the marginal treatment effect for grade retention of obtaining citizenship against the unobserved costs of citizenship (shown on the x-axis). The graph reveals sizable heterogeneity in unobservable gains. In particular, returns to citizenship in terms of lower grade retention are higher for those least likely to take-up citizenship, i.e. there is a reverse selection on gains. In addition, host country citizenship increases the likelihood of attending high school. Immigrant children also improve their school grades on key subjects like Math. Interestingly, there are few effects of citizenship on test scores administered by the survey team. That school performance improves but test scores do not could indicate that citizenship boosts non-cognitive skills like student motivation, which could manifest as less disruptive behavior or more participation in class. Another potential explanation is that teachers evaluate naturalized immigrant children more favorably than their non-naturalized peers.

Figure 7: Marginal Treatment Effects for Grade Retention



Notes: The figure shows the marginal treatment effects using the local instrumental variable approach for grade retention against the unobserved resistance (U_N) and the confidence intervals (shown in gray). The average treatment effect (ATE), shown as the red dashed line, is obtained by aggregating the MTE over the distribution of observable characteristics and unobservable resistance in the sample.

Source: [Gathmann et al. \(2021\)](#).

Investigating the source of unobservable costs shows that families with high unobserved resistance to citizenship come from lower socio-economic family backgrounds than immigrants with low resistance. Citizenship thus helps to create a level playing field for children from less advantaged family backgrounds by reducing the socio-economic gradient and immigrant-native gap in school performance.

Treatment effects also vary along observable characteristics, esp. the country of origin. Immigrant children from Central and Eastern Europe and the Former Soviet Union benefit the most from treatment: they improve their language as well as math skills and are more likely to attend high school. For immigrant children from Turkey, traditionally the largest immigrant group, the benefits are more muted. Yet, they are more likely to attend high school if they hold host country citizenship. In contrast to immigrant origin, there are no gender differences in the returns to citizenship.

The fact that gains are high among immigrants with high costs of obtaining citizenship suggests that expanding citizenship eligibility or take-up could substantially improve the school performance of immigrant children. Policy simulations indicate that raising the overall take-up rates of citizenship, independently of the channel of eligibility, would generate sizable educational returns for immigrant children. In the next step, the econometric approach is extended to estimate marginal treatment response functions in order to separate the returns of naturalization and birthright citizenship (Mogstad and Torgovitsky, 2018). The estimates from the extended model are then used to simulate a reform of German citizenship law in the direction of a US-style model. For birthright citizenship, the hypothetical reform eliminates the 8-year residency requirements for parents; for naturalization, the residency requirement is reduced to five years. The results indicate that immigrant children benefit more from liberalizing birthright citizenship than from liberalizing naturalization criteria.

Overall, these results provide strong evidence that immigrant children benefit a lot from citizenship. Citizenship acts to help establish a level-playing field as the native-immigrant achievement gap in school performance is reduced. As such, citizenship is a powerful tool to foster the integration of the next generation and get them off to a good start in school.

7 Take-up of Citizenship

The evidence thus far has shown that a faster access to citizenship substantially speeds up the integration of first- and second-generation immigrants in the host country. Yet, unless one grants citizenship automatically at birth, the overall impact of citizenship on integration outcomes for the immigrant population depends on how many and which immigrants actually decide to naturalize. This section discusses the recent evidence on the determinants of take-up decisions..

Empirically, the number of immigrants who acquired a new citizenship in another country has been rising. In 2019, a record number of 2.2 million individuals, a majority of them women, became citizens of an OECD country, an increase of 12% from the previous year. 42% of the new citizens were immigrants in Europe and 38% of them resided in the United States. Relative to the total foreign-born population, the share of naturalizations in 2019 is highest in Canada (10%), Sweden (7.2%), Poland (5.4%), Portugal (5%), and Luxembourg (4%) (OECD, 2021). Relative to the foreign-born population with more than ten years of residency, take-up rates are highest in Canada (90%), Sweden and the Netherlands (80%) followed by the United Kingdom (60%). In contrast,

naturalization rates are much lower in the United States and France (45%), Germany (40%) or Switzerland (35%) (OECD, 2011).

Studies have mostly focused on how citizenship take-up varies by characteristics of the individual or the country of origin (see Chiswick and Miller (2008), Mazzolari (2009) and Yang (1994) for the United States; DeVoretz and Pivnenko (2005) for Canada; Bevelander and Veenman (2008) for the Netherlands; or Zimmermann et al. (2009) for Germany). Women are typically more likely to naturalize than men. One reason is that more women get married to citizens of the host country, which facilitates naturalization. As shown above, citizenship tends to have higher returns for women both in the labor and marriage market, most likely because women have a more precarious legal and economic status without citizenship. Moreover, immigrants from developing countries are more likely to naturalize as the value of citizenship is higher than for immigrants from high-income countries who enjoy similar freedoms and rights with their original passport. Finally, there is a positive association between being naturalized and formal education. Note that this relationship need not identify a causal effect of education as access to citizenship might encourage additional educational investments.

It is only recently that more attention has been directed to the question how eligibility rules and other privileges for citizens in the host country affect the take-up decisions of immigrants. The attractiveness of naturalization depends on the additional rights and freedom a naturalized immigrant obtains compared to keeping the original citizenship and the rights as a non-citizen, which might involve a permanent resident and work permit. An immigrant naturalizes if these additional benefits exceed the costs of obtaining citizenship. Such costs comprise application fees; the time and effort costs of passing language and civic knowledge tests; or the costs of losing the citizenship from the origin country if dual citizenship is not an option.

Based on the citizenship reforms in Germany, Gathmann and Keller (2018) show that shorter waiting periods have a strong impact whether an immigrant naturalizes at all in the host country. Conditional on years since migration and arrival cohort, an immigrant with a 8-year rather than 15-year residency requirement is 9 percentage points more likely to naturalize controlling for years since migration – an increase of 25%. This result is surprising because even an immigrant with a longer residency requirement gets eligible for naturalization eventually. Hence, immigrants with shorter waiting periods cannot just naturalize earlier, but they actually naturalize at higher rates than immigrants with longer waiting period. This results reinforces our earlier point that eligibility criteria send strong signals to immigrants whether immigrants are encouraged to become full mem-

bers of the society in the host country or not. [Hainmueller et al. \(2017\)](#) and [Govind \(2021\)](#) report similar results for Switzerland and France; obtaining access to citizenship earlier, by winning the local referendum or through shorter waiting period, raises naturalization propensities relative to immigrants who have to wait longer before they can apply.

Much less is known about the impact of other provisions like language and civic knowledge requirements, dual citizenship or application fees. In the following, we discuss some recent studies that attempt to identify causal effects. One of the few studies on language and civic knowledge requirements for naturalization exploits the fact that Denmark introduced such requirements in 2002 and the Netherlands in 2003 ([Vink et al., 2021](#)). While the civic integration test is comparable in both countries covering questions on the government, history and culture of the country, the two differ in their language requirements. Denmark required language skills at the B1 level (according to the Common European Framework of References for Languages (CEFR)) since mid-2002, and then increased the language requirement to B2 level in 2006.²² In comparison, the language requirement of A2 in the Netherlands is a fairly modest level of proficiency. The countries also vary in their residency requirements for naturalization. Whereas the Netherlands require five years, Denmark increased its requirements from 7 to 9 years in 2002. The study estimate a duration model exploiting the time variation in the requirements. The model captures time shifts in overall naturalization propensities by the baseline hazard, which varies across origin countries and partner status. In Denmark, the combined effect of lengthening the residency requirement and adopting language and civic knowledge requirements sharply reduced naturalization rates, especially among less educated immigrants. A further reduction is observed after the level of required language skill was raised in 2006. Naturalization rates take about an extra five years (above and beyond the residency requirement) to catch up with the naturalization rate of immigrants who did not face the longer waiting period and additional requirements of language and civic knowledge tests. Unsurprisingly, the negative effect in the Netherlands, which introduced low-level language requirements and a civic knowledge test, is smaller but also more pronounced among less educated immigrants.

Another important channel to influence take-up decisions is whether the host country requires immigrants to renounce their original citizenship. An early study used dual citizenship reforms in several Latin American origin countries, e.g., Brazil, Colombia and Costa Rica ([Mazzolari, 2009](#)). Naturalization rates in the U.S. go up for immigrants originating from the adopting countries relative to immigrants from other Latin American countries that did not change their laws on dual

²²Subsequently, the language requirement was lowered to B1 level in 2013 when it became clear that the higher requirements proved to be a high barrier for immigrants and dramatically lowered naturalization rates.

citizenship. In addition, employment rates increase and welfare use falls indicating that holding a passport of the host country, even if dual citizenship is allowed, still improves economic assimilation. There is little effect on earnings, however. Effects do not vary by gender but are larger for more educated immigrants. More recently, Peters and Vink (2022) exploit two reforms of dual citizenship in host countries. Sweden allowed dual citizenship in 2001, while the Netherlands renounced dual citizenship in 1997 – except for immigrants married to a Dutch citizen. Hence, the reforms provide variation, which immigrants can keep their original passport when applying for naturalization. The control group is made up of immigrants from origin countries that do not allow dual citizenship both before or after the reforms. The staggered difference-in-differences estimates show that abolishing dual citizenship reduces naturalization rates by 5.3 percentage points in the Netherlands, while the introduction of dual citizenship increases naturalization rates in Sweden by 5.9 percentage points. The effects are larger for women and for immigrants from EU and other highly developed countries.

A few studies have analyzed application fees for citizenship, which have increased in several countries. Would that reduce naturalization rates even in the light of the evidence that citizenship boosts immigrants' labor market careers? In the Netherlands, application fees tripled over the past decades – from 306 Euros in 2003 to 901 Euros in 2020 (Peters et al., 2022). The identification is not trivial as the Netherlands also changed other requirements, like for language and civic knowledge, over the same period. While there is no natural control group, the authors use high-income immigrants who should be less affected by the fees (but possibly also feel less deterred by additional tests), as control group. They find that naturalization rates go down by about 1.5 percentage points for low-income immigrants. That application fees matter for low-income households is confirmed by evidence from the United States. Yasenov et al. (2019) evaluate a federal fee-waiver program in the U.S.. Before 2010, low-income immigrants applying for citizenship had to declare in their application that they cannot pay the application fees; and the authorities had a lot of discretion to accept the declaration or not. Since November 2010, there is a standardized form with clear rules when an applicant is eligible for the waiver.²³ After the reform, immigrants just had to file one additional form with their application requesting the federal fee waiver; non-eligible immigrants had to pay the application fee (\$680 in 2010). The fee waiver increased the overall naturalization rate by 1.5 percentage points or around 75,000 additional applications – most of them coming from low-income and less educated households. Beyond direct eligibility requirements, take-up decision are also affected by the cost-benefit analysis of applying versus remaining a permanent resident

²³An immigrant was eligible if household income was below 150% of the federal poverty guidelines or received means-tested benefits such as Medicaid.

without citizenship. A central difference is that citizens have voting rights, while permanent residents do not. Several countries have introduced or been discussing to introduce voting rights for non-citizens in local elections – examples include Sweden, Finland, the Netherlands, Luxembourg or Ireland, for instance²⁴ Voting rights for non-citizens might reduce naturalization propensities as it lowers the difference between becoming a citizen and remaining a permanent resident. Yet, voting rights for non-citizen could also increase the attachment and identification immigrants develop to the host country, which could raise naturalization rates.

Sweden was among the first to adopted voting rights for non-citizens in 1975. The only condition was that immigrants resided in the country for at least three years at the day of the election.²⁵ The policy allows for the implementation of a regression discontinuity design (RDD) where the running variable is the immigration date (Stutzer and Slotwinski, 2021). Individuals who immigrated just before the threshold date three years earlier are eligible to vote (the treatment group) while individuals who migrated a few days later three years earlier are not (the control group). Naturalization in Sweden requires 3-5 years of residency, which ensures that the control group has not naturalized at the date of the election. The main result is that naturalization rates increase for immigrants from less developed countries, including many refugees. For them, the participation and identification with the host country appears dominant. Naturalization rates decrease for immigrants from rich and highly developed countries who mostly move to Sweden for employment reasons. For them, the benefits of citizenship, which includes voting rights, seems to have decreased as non-citizens became eligible to vote.

8 Discussion

The empirical evidence discussed shows that a more liberal citizenship policy can be a powerful tool to foster immigrant integration. Yet, such a policy might not be without costs. First, a liberal citizenship policy might attract more immigrants to the country. Depending on the selection of immigrants, this might or might not increase the fiscal burden for the host country. Yet, we think that both the scale and selection of immigration primarily depends on the entry policies of the host country, which define who can enter the country and what is required to obtain a permanent residence and work permit. Countries like Canada, for instance, combine a restrictive entry policy

²⁴EU legislation requires that EU citizens who reside in one of the other member states have the right to vote in local elections in that member state. In about 50% of EU member states, these rights extend to non-EU resident non-nationals.

²⁵Citizens from EU member states and the Nordic Passport Union are immediately eligible to vote since 1997.

coupled with a liberal citizenship policy to reap the gains of citizenship for both immigrants and host country.

A second potential cost is that under a liberal citizenship policy immigrants obtain voting rights fast, which enables them to influence the policy agenda or even stand for election themselves. If the new citizens have different preferences than natives, this could influence the allocation of public goods, redistribution or the salience of certain issues, for instance. The existing evidence shows that naturalized immigrants have lower turnout rates than natives though the difference declines with time in the country and for second-generation immigrants (see, e.g., [Bevelander and Hutcheson, 2022](#)). A few studies also report that naturalized immigrants are more likely to vote for left-wing parties though this pattern is neither uniform across migrant groups nor host countries (see [Strijbis, 2021](#) for a recent survey). Finally, it is not clear how take-up rates evolve if citizenship becomes more accessible and who chooses to obtain citizenship under the new policy. As a result, it is a-priori not clear how the immigrants would influence the political landscape – esp. since non-citizens can vote in some elections in several European countries even today.

Finally, there could be a political backlash among natives if they feel outnumbered or overpowered by the presence of immigrants. The recent literature on populism has shown mixed evidence for the existence of a native backlash. Most importantly, the existing evidence covers immigrants and refugees, in particular, not naturalized immigrants. It seems at least doubtful that such a political backlash exists against immigrants who obtain the citizenship in the host country.

Rather than a liberal citizenship policy, governments might support immigrant integration through other means like language training, for instance.²⁶ Whether language training that is offered to immigrants by the government actually improves integration is debated, however. France provides an interesting case here because it offers language courses but also broader civic education.²⁷ The program is primarily targeted toward refugees. Whether a refugee qualifies for the free language training depends on the score on a prior language test. [Lochmann et al. \(2019\)](#) use that setting to implement a RDD; they find that immigrants who were assigned additional language training have higher labor force participation rates than immigrants that did not – and this effect is seen for both men and women, older and younger immigrants as well as refugees and other immi-

²⁶We know that proficiency in the host country language(s) is positively related to labor market performance (see, e.g., [Chiswick and Miller, 2015](#) for an overview) or the feeling of belonging to the host country ([Zorlu and Hartog, 2018](#)).

²⁷The *Contrat d'accueil et d'intégration* (CAI) involves signing a contract, civic knowledge training, language training, and a 'Living in France' seminar.

grants. Interestingly, the impact of language training seems to be larger for immigrants with more education.

Another study of the same language program also finds positive effects (Pont-Grau et al., 2020). Rather than the marginal immigrant or refugee as in the regression discontinuity (RD) setting, they consider all immigrants including those with very poor scores in the initial test within a difference-in-differences setting. In this broader sample, they find positive effects of language training on the quality of job held, i.e. whether one works in the formal sector and has a permanent work contract. Yet, they find no effect on labor force participation. These results indicate that treatment effects are likely to be heterogeneous. It could well be that the marginal immigrant with some French language skills benefits mostly by raising the chances of obtaining a job, while immigrants with poor and very poor language skills gain by finding a better job but only if they find one.²⁸

Looking more broadly at the whole integration program CAI, (Emeriau et al., 2022) take advantage of the staggered introduction of the policy across metropolitan areas in France to implement a RDD. They find that the integration policy did little in the medium-run to foster the economic and social integration of immigrants and refugees.

Finally, one could also target the needs of unemployed immigrants and refugees within broader policy measures like active labor market programs, for instance. Evaluation studies have analysed specific measures like language training (Sarvimäki and Hämäläinen, 2016; Lang, 2022), facilitating contacts with potential employers (Battisti et al., 2019) or wage subsidies (Clausen et al., 2009) but also full integration programs (Dahlberg et al., 2022). They generally find positive effects of active labor market programs on the labor market outcomes of immigrants.

In sum, citizenship is not the only channel to foster the integration of immigrants, but it is a very powerful instrument. Moreover, while we think citizenship and other integration measures are not be mutually exclusive, we think citizenship policies have certain advantages over the alternatives discussed. First, government sponsored programs are expensive and need to be targeted well in order to be effective. Second, the existing evidence shows that the benefits largely stem from immigrants increasing their efforts to fit in and make use of the opportunities in the host country. These additional investments and engagement might not be the same if immigrants feel they get forced to follow an integration program. Finally, a liberal citizenship policy signals to immigrants that they are welcome to become full members of the host society. The examples of traditional

²⁸Other studies also report positive effects of language training on integration measures for refugees (see, e.g., Arendt et al., 2020; Foged et al., 2022).

immigration countries shows that this is a powerful tool to form a common identity and foster the willingness to invest and engage in the host society.

9 Conclusion

In recent years, several European countries have reformed their citizenship policies – often in response to rising immigration flows. There is much to be learned from these reforms on whether and how citizenship affects the integration of immigrants in the host countries. This paper reviews recent evidence from the social sciences on how citizenship works, who benefits from citizenship and which policies matter.

Most of the literature has focused on the length of the waiting period before an immigrant can naturalize. Several conclusions emerge from here. The evidence supports the view that citizenship acts as a catalyst for immigrant integration. It speeds up the convergence between natives and immigrants and helps immigrants improve their position in the host country. Second, citizenship carries with it sizable returns in the labor market. It also has a large influence on the social integration of immigrants in terms of civic participation, media consumption, or feelings of discrimination; but also in terms of long-run choices regarding when and whom to marry and fertility. Third, it matters a lot whether an immigrant becomes eligible for citizenship earlier or later. Take-up is higher among immigrants facing shorter residency requirements; and economic and social integration outcomes improve as a result. Fourth, there is a lot of heterogeneity in the returns to citizenship across immigrants. Immigrant women typically gain more than men from citizenship, likely because their economic and social positions are often precarious in the absence of citizenship. They are more likely to be a dependent spouse whose legal as well as economic and social status depend on their partner.

Much less is known about the impact of other eligibility criteria for naturalization like civic knowledge requirements or application fees. Not surprisingly, stringent eligibility requirements impose sizable barriers to take-up and hence, integration. Requirements that require effort and money like formal tests and application fees reduce the take-up of less educated and less wealthy immigrants. Forcing immigrants to decide between one citizenship and another, i.e. not allowing dual citizenship, deters immigrants from high-income countries. Interestingly, expanding rights for non-citizen encourages take-up of citizenship by immigrants from poorer countries but reduces naturalization rates of immigrants from high-income countries.

Taken together, these results define a trade-off for policy-makers: stricter eligibility criteria attract fewer immigrants, while others refrain from applying. Yet, it is not necessarily the more educated or richer immigrants that still apply – that depends on the eligibility rule imposed. At the same time, stricter eligibility rules reduce the number of immigrants who benefit from better economic and social integration. More studies are needed to better understand who is deterred or encouraged to take-up citizenship and how this affects the overall integration success of the immigrant population in the host country. Finally, some studies have also exploited the adoption of birthright citizenship to shed light on the integration of second-generation immigrants. Many countries in Europe and elsewhere do not yet grant birthright citizenship or only under specific circumstances. The evidence clearly shows that there are sizable returns to granting birthright citizenship for immigrant children and youth. Granting birthright citizenship is thus a powerful tool to foster integration among second generation immigrants.

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