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The Economic Case for a Clear, Quick Pathway to Citizenship

Evidence from Europe and North America

By Pieter Bevelander and Don J. DeVoretz

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Center for American Progress



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Introduction and summary

A number of recent studies have illustrated that opening a door for undocumented immigrants to earn legal status and, ultimately, citizenship would significantly enhance the U.S. economy.¹ This report goes further, examining not just the U.S. case but also the economic impact of allowing immigrants to gain full citizenship in other countries in North America and Europe. The evidence is clear: A pathway to citizenship free of obstacles and undue delays helps immigrants integrate into the labor market and increase their earnings. These increased earnings and the corresponding added tax revenue would help grow the economy, which yields benefits for native-born citizens too.

But generally understanding that pro-citizenship policies have positively affected a range of economies is only the first part of the inquiry. The next step is evaluating how the United States can maximize the potential economic gains from such policies. After demonstrating that granting citizenship carries positive economic impacts for an array of countries, this report delves deeper to explore how to maximize the gains from citizenship.

The literature on new and old immigrant-destination countries shows that the clearer the pathway to citizenship, the greater the gains, and that the optimal waiting period for citizenship is roughly five years. Placing significant restrictions and lengthy delays on immigrants' ability to become citizens diminishes the size of their ultimate economic premium for two reasons. The number of years that an immigrant can work for higher wages as a naturalized citizen declines, and immigrants have fewer incentives to invest in training and new skills as they age. Also, the best and the brightest immigrants may leave for their home countries or other, more welcoming countries.

But the goal is not simply to maximize individual naturalized citizens' contributions. It is also to encourage the greatest number of people to naturalize so that the country can reap the biggest economic benefit possible. After all, the economic gains will have little overall impact on a country's economy if few people are able to actually achieve citizenship.

After demonstrating that granting citizenship carries positive economic impacts for an array of countries, this report delves deeper to explore how to maximize the gains from citizenship.

If maximizing the economic benefits of immigration reform is a priority for U.S. policymakers, it follows that they should adopt a clear, achievable, and relatively short pathway to citizenship that encourages the most eligible individuals to naturalize.² However, legislation presently before Congress, such as the Senate-passed immigration reform bill, proposes a far-longer pathway to citizenship—a minimum of 13 years—than is optimal. This pathway also comes with \$2,000 in fines and numerous application fees, all of which could serve to reduce the economic premium from citizenship and the number of people who will naturalize.³

While the countries surveyed in this report do not have large unauthorized populations, it is clear that the immigrants who enter these countries with the least amount of human capital—those at the lowest rungs of the workforce, for example—make the greatest gains and see the largest citizenship premiums. Given the roughly similar human-capital profile of the United States’ undocumented population, we can expect U.S. immigrants to make similarly large gains from legalization and citizenship.

It is in all Americans’ interest for policymakers to reconsider the length and cost of the pathway to citizenship in current legislative proposals and to pursue options for making it more—rather than less—attainable.

Guided by a survey of experts from around the world (see Appendix B and Appendix C), we divide the countries in this report into three categories: a high citizenship premium, represented by countries such as Canada; a medium citizenship premium, represented by countries such as Germany; and a low citizenship premium, represented by countries such as the Netherlands and Norway.

Glossary of terms

Labor-market integration: The degree to which immigrants are fully incorporated across industries, not concentrated in certain economic sectors, in a given country.

Economic premium of citizenship: The bump to a country’s economy that arises after immigrants become citizens. This bump comes in the form of higher wages and more tax revenue collected from naturalized citizens, all of which spurs more overall economic activity.

Acquisition or ascendency rate of citizenship: The percentage of all eligible immigrants in a given country who naturalize.

OECD migrants: The Organisation for Economic Co-Operation and Development, or OECD, is an organization of 34 countries from the developed world, such as Australia, Denmark, Iceland, Italy, Norway, Spain, and the United States. OECD migrants generally have greater education, skill levels, and earnings profiles than non-OECD migrants.

Optimal waiting period: The amount of time that maximizes the citizenship premium and the number of immigrants that become citizens. Note that the window for this waiting period only begins when an immigrant has access to the social and educational tools that would facilitate his or her integration into the host economy, including—but not limited to—language training, drivers’ licenses, checking accounts, and the ability to work legally. For undocumented immigrants living in the United States, this window would open after immigrants’ adjustment to legal status.

- **High premium:** Canada, which has a three-year waiting period for citizenship, recognition of dual citizenship, and low language requirements, has a high citizenship premium of 14 percent higher wages for immigrants who naturalize, compared to those who do not. The premium increases even more for immigrants coming to Canada from developing countries: For these migrants, it is as high as 29 percent. Nevertheless, the very short waiting period does cause a substantial outflow of newly naturalized migrants.
- **Middle premium:** Germany, by contrast, presents a long and bureaucratic waiting period of at least eight years, coupled with strict language requirements and a lack of dual-citizenship recognition after age 21. So, while the strong German economy brings a 15 percent wage premium to naturalized citizens, only 30 percent of the foreign-born population has naturalized, meaning that Germany loses out in economic value, with very few candidates naturalizing.
- **Low premium:** Finally, the Netherlands and Norway represent countries with both low rates of naturalization and little or no citizenship premium from naturalization. A combination of opaque citizenship-acquisition policies, lack of dual citizenship, high language standards, and long waiting periods all work to deter citizenship acquisition in these countries.

Why citizenship brings an economic boost

How does citizenship bring immigrants and their host nations such an economic premium? The most widely accepted view is that prospective citizens invest in themselves prior to naturalizing, while other immigrants who do not naturalize or do not plan on staying in a given country do not, a phenomenon that economists call human-capital investment. This added human capital has four main parts, split between additional education and additional training: language acquisition, additional education in the host country, increased knowledge of the local labor market, and greater experience working in that labor market.

Citizenship also brings two particularly useful benefits to immigrants. First, it opens up some jobs that were formally restricted to noncitizens, such as government positions, positions that require security clearances, or—in some countries—even professional positions.⁴ Second, economists find that obtaining citizenship sends a signal to employers to hire and invest in these people, since naturalization demonstrates a commitment that immigrants intend to remain in the host country.⁵ Taken together, these changes and investments lead to higher wages after naturalization, which, in turn, spurs more economic activity through greater tax revenue and consumption.

Maximizing the gains from citizenship: A theoretical approach

Economists find that the rules governing how countries admit immigrants, as well as the rules governing naturalization, affect the ultimate size of the economic premium gained from immigrants becoming citizens. Too short a waiting period after immigration, for example, may inhibit the ability of a prospective citizen to gain enough human capital and labor-force attachment to produce a substantial economic premium after naturalization. On the other hand, too long a waiting period may mean that candidates who have integrated into the labor market and gained valuable skills leave the country before they can become citizens.⁶

The length of time before an immigrant can become a citizen is only one factor that shapes the economic premium from citizenship. Language requirements, for example, may help immigrants integrate into the country, but too strict a language provision might unduly restrict who attains citizenship—hindering, for example, older candidates—thereby diminishing any economic gains. Likewise, the fact that many host countries do not allow naturalized citizens to keep dual nationalities reduces citizenship-acquisition rates and the aggregate economic premium.

For illustrative purposes, consider a theoretical country attempting to maximize both rates of naturalization and the economic benefit derived from them. Figure 1 depicts a hypothetical demand curve showing acquisition rates—the percentage of immigrants becoming citizens—and the citizenship premium—the economic bump that comes with naturalization.

With only a minimal waiting period—three years, for example—the amount of immigrant-accumulated country-specific human capital, such as education, knowledge of the local labor market, and language acquisition, and the subsequent signal sent to employers about their long-term settlement in the country is small.

In this case, the short waiting period results in a small present-value citizenship premium—in this hypothetical case, only \$50. As the acquisition waiting period grows to five years, the present value of the derived citizenship premium increases to a maximum of \$100 as prospective citizens acquire more human capital. This sends a stronger signal to employers about the value of these workers; employers, in turn, pay more to these newly naturalized citizens.

Waiting periods of more than five years produce a gradual decline in the citizenship premium for two reasons. First, the payoff period—the number of years after naturalization that the individual will be able to work at the higher wages—shortens, and there is thus less incentive to accumulate human capital while waiting to ascend to citizenship. Next, a longer acquisition waiting period produces some outmigration, as the more economically capable candidates for citizenship leave the host country to seek a citizenship premium in their home or a third country.

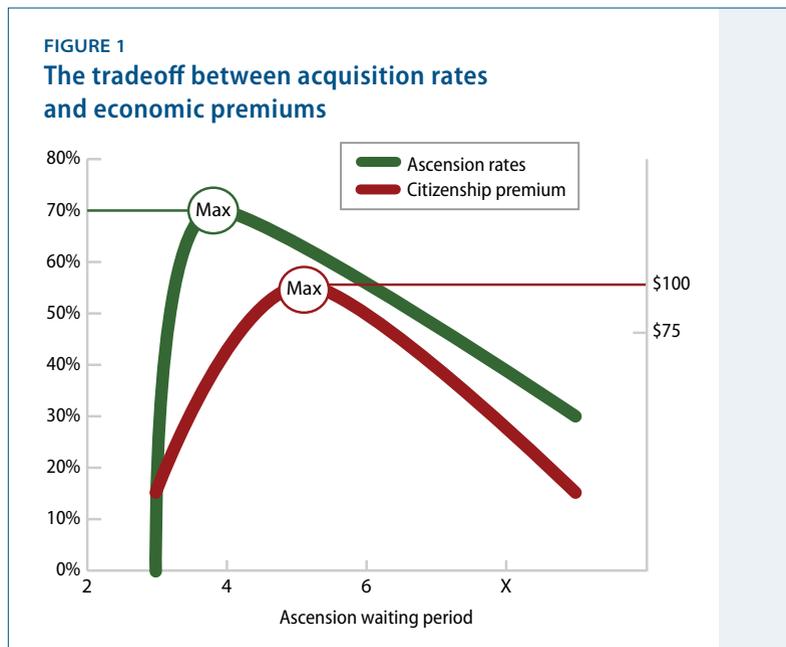


Figure 1 also depicts, in hypothetical terms, the fact that the percentage of people naturalizing rises significantly with shorter waits and then drops with longer waiting periods, which simultaneously reduces the earned economic premium and the incentive to become a citizen. In this example, obtaining the greatest number of naturalized people produces only \$75 in citizenship premium. By contrast, a five-year waiting period produces the maximum \$100 citizenship premium but a 20 percent drop in the total number of people that would become citizens.

The point of Figure 1 is to show, in a theoretical fashion, that a clear pathway to citizenship must recognize this tradeoff between ascendancy and accrued economic citizenship premium. Once this economic tradeoff is recognized, the citizenship policy choice that policymakers face is not a binary between no citizenship and citizenship. Rather, the policy choice is between slightly longer or shorter waiting periods to produce the appropriate mix of citizenship acquisition and economic benefits. In the U.S. case, for example, scholars such as economist Manuel Pastor have found that barriers to naturalization, such as high fees and strict language requirements, keep many immigrants from becoming citizens.⁷ The clearer Congress can make the ultimate pathway to citizenship for unauthorized immigrants, the better. See Appendix A for a discussion of the factors that produce higher naturalization rates.

The clearer Congress can make the ultimate pathway to citizenship for unauthorized immigrants, the better.

Literature review

For many years, economists studying the integration of immigrants were reluctant to study the economic impact of citizenship, largely following Barry R. Chiswick's 1978 study, which found no "citizenship effect" on earnings once one controlled for length of immigrant residence.⁸ More-recent studies have begun to examine this question. Bernt Bratsberg, James F. Ragan Jr., and Zafar Nasir focused on youth immigrants and found that becoming a citizen meant that immigrants fell more evenly across the labor-market spectrum and raised their earnings. They also found that immigrants from less-developed countries had a higher immigration premium.⁹ Sergiy Pivnenko and Don J. DeVoretz likewise found a strong citizenship effect on Ukrainian immigrant earnings in Canada.¹⁰ With these initial studies pushing back on Chiswick's earlier research, a new growth in the economic literature on citizenship acquisition has emerged.

DeVoretz and Pivnenko developed the first general model for studying citizenship acquisition and labor-market outcomes. Their analysis revealed that candidates for citizenship acquisition invested in

themselves prior to becoming citizens, which was later rewarded by a citizenship premium on their earnings. This finding, in turn, led them to study the citizenship effect in terms of additional training and job experience, as well as in terms of positive discrimination by employers who preferred citizens. By 2005, the economic framework to analyze immigrant naturalization was complete, and a surge in economists' research interest appeared in all major immigrant host countries. This interest resulted in two major volumes and myriad case studies in Europe and North America that followed the now-standard methodology of DeVoretz and Pivnenko.¹¹

A number of case studies have used cross-sectional data,¹² as well as longitudinal data,¹³ in which individuals are followed over time and for which the time of citizenship acquisition can be controlled. Taken together, the overall evidence from these studies suggests that becoming a citizen has a positive effect on the employment and earnings trajectories of immigrants.

Best practices from North America and Europe

Scholars have looked at the economics of citizenship in a number of other immigrant-receiving countries. Given that the average waiting times to become a citizen vary widely, as shown in Appendix D, and these countries have very different citizenship premiums, it is possible to hone in on the best practices among countries that produce the highest citizenship premium. Differences across states—such as the shape and strength of the labor market or the type of welfare state, for example—make it impossible to directly compare different nations. Nonetheless, the experiences of a range of host countries hold important lessons for the United States.

Canada: Low barriers to naturalization, high premiums

The Canadian case shows the positives and negatives of a short waiting period to become a citizen. On the one hand, Canada consistently has a high average rate of immigrants becoming citizens—around 70 percent. Once one has become a permanent resident, or “landed immigrant,” in Canada, there is only a three-year waiting period, followed by a modest written examination on cultural and political institutions. The exam requires minimal linguistic ability in either French or English, and it is waived for applicants more than 50 years old. On the other hand, there is substantial outmigration after naturalization, especially by the numerous and recent Chinese naturalized immigrants in Canada—as high as 20 percent of those who naturalize.¹⁴ But even after taking this emigration into account, Canada still receives a net value of almost \$68,000, on average, over a lifetime from immigrants who become citizens, as well as a total of 14 percent higher wages for naturalized citizens, as seen in Table 1 and Table 2.

TABLE 1
Lifetime net contributions of immigrants^a

	Canadian-born	All immigrants	OECD immigrants	Non-OECD immigrants
Citizens	\$72,208	\$67,986	\$86,417	\$59,992
Noncitizens	N/A	\$35,164	\$71,491	\$18,548
Percentage increase for citizens	N/A	93%	21%	223%

a. In 2005 dollars, with a 5 percent discount rate. Public finance transfer is defined as the difference in income tax payments minus monetized benefits at federal and provincial levels.

Source: Don J. DeVoretz and Sergiy Pivnenko, "The Economic Causes and Consequences of Canadian Citizenship," *Journal of International Migration and Integration* 6 (3) (2005): 435–468.

The Canadian citizenship premium is substantial and varies across immigrant entry groups. Table 1 reports citizenship premiums in the form of increased Canadian public finance treasury transfers from naturalized Canadians of more than \$32,000, or a 93 percent rise over immigrant-noncitizen-category transfers. This citizenship premium in the form of a tax premium is even greater for non-OECD immigrants, who, after ascending to citizenship, increase their net treasury transfers by more than 200 percent.

In addition to added tax revenue, the citizenship premium that naturalized immigrants capture is substantial. Citizenship acquisition produces a small premium for skilled and integrated Americans who move to Canada, such that their earnings now slightly surpass the Canadian born after naturalization. More dramatically, less economically integrated South Asian immigrants, for example, receive a larger citizenship premium, such that their earnings performance approaches and then exceeds the Canadian-born standard. These data confirm that immigrants from developing countries tend to have a higher citizenship premium.

Table 2 reports the wage differences between naturalized Canadian immigrants and noncitizens by gender and place of origin. Regardless of gender or place of origin, all groups receive, on average, a 14 percent citizenship premium, but it is the naturalized citizens from developing, non-OECD countries who receive a premium 28 percent higher than the 7.6 percent premium naturalized immigrants from developed countries receive. This larger premium is a byproduct of the naturalized immigrants' human-capital accumulation and positive discrimination of employers.

TABLE 2
Citizenship wage premiums of Canadian immigrants
by citizenship status of people ages 25 to 65

Source-country status	Wage gain
All countries	14.5%
Males	14.2%
Females	15.2%
All OECD countries	7.6%
Males	7.6%
Females	7.7%
All non-OECD countries	28.9%
Males	29.3%
Females	29.5%

Source: Don J. DeVoretz and Sergiy Pivnenko, "The Economic Causes and Consequences of Canadian Citizenship Ascension." In Pieter Bevelander and Don J. DeVoretz, eds., *The Economics of Citizenship* (Malmö, Sweden: Malmö University, 2008), p. 42, Table 5.

The Canadian case makes clear that short waiting periods—in this case only three years—coupled with dual-citizenship recognition and limited language barriers, produce high acquisition rates. But it also highlights the possibility that these minimal barriers mean that more immigrants will leave the country upon receiving citizenship. Nevertheless, the premium derived from acquisition of Canadian citizenship is, on average, a significant 14 percent—and a particularly large 29 percent for naturalized immigrants from less-developed countries.

Germany: Having too many roadblocks leads to too few naturalizations, even with a relatively high premium

In contrast to Canada, the German experience with citizenship has shown the pitfalls of putting up too many roadblocks to citizenship. Until recently, Germany primarily granted citizenship on a *jus sanguinis*, or bloodline, basis, making it difficult for those without German ancestors to become citizens. Naturalization for the foreign born was difficult and still remains a challenge even after the 2005 reforms, which led to an eight-year waiting period—de facto nine-and-a-half years after administrative delays—and a population of legal, noncitizen residents of approximately 8 million.¹⁵ Strict language requirements and a provision that allows dual

citizenship only until age 21 have led to a citizenship rate of only 30 percent among the population. The German case provides a lesson in how to minimize the citizenship premium of a population. Nevertheless, economist Max Friedrich Steinhardt finds that wages of naturalized workers grow by around 0.49 percentage points per year of prior work experience, with an average 15 percent citizenship premium of naturalized immigrants over other foreign-born employees.¹⁶

Germany provides a number of roadblocks on the pathway to citizenship: The eight-year waiting period is one,¹⁷ as is a strict German language requirement. The more difficult hurdle is the dual-citizenship barrier. Germany allows dual citizenship only for naturalized citizens under age 21. Given that Turkey—the sending country of the major immigrant group to Germany—does not allow dual citizenship and losing Turkish citizenship could mean a loss of Turkish lands, as only citizens can own land, the decision to take exclusive German citizenship is not an easy one. One final deterrent for German citizenship acquisition is that many immigrants in Germany do not want to become German citizens because of perceived negative native-born German attitudes toward foreigners.¹⁸ Combined, these factors have led to a citizenship-acquisition rate of only 30 percent.

Notwithstanding this low citizenship-acquisition rate, Germany has a robust economy that could potentially yield large economic premiums for those who ascend to citizenship. Steinhardt reports that a 15 percent citizenship premium arises from a comparison of naturalized and foreign employees' daily wages. In fact, this citizenship premium almost completely erases the initial wage gap between native-born employees, at €77.20, and noncitizen foreigners, at €67.38. Studies show that this gap is closed through a combination of naturalized Germans' higher educational attainment and an increased return on this new human capital. Thus, Germany does have the potential to reap big returns from naturalized citizens.¹⁹

Nevertheless, with less than one-third of migrants actually becoming citizens—even with a relatively high wage premium for naturalized workers—Germany fails to capitalize on much of this economic opportunity.

Sweden: A mostly Nordic immigrant population leads to low premiums overall, but non-OECD migrants see high returns after naturalization

Sweden has one of the most liberal citizenship-acquisition policies. Since 1975, immigrants from non-Nordic countries have been able to become citizens after five years of residence, while Nordic immigrants can apply after only two years.²⁰ Sweden permits dual citizenship and has minimal other requirements for gaining citizenship, such as proving no criminal record. Immigrants in Sweden, therefore, generally show high rates of citizenship acquisition, with the highest rates coming from developing nations.²¹

Studies of Sweden's citizenship premium have found that its economic effects are minimal, with only a small economic premium after citizenship. But this small premium obscures the fact that the bulk of those immigrants becoming citizens in Sweden come from Nordic countries, where they have never needed a work permit or other special qualifications to work; generally, these immigrants are on par with Swedes in terms of education and skill level. Once the amount of time since naturalization is taken into account, the evidence of a wage premium becomes clearer. This is especially the case for immigrants from Asia, for whom every year since naturalization is associated with an increase in income relative to noncitizens of 1.2 percent and 1.7 percent for men and women, respectively.²²

Over a 30-year working lifetime, a naturalized Swedish immigrant from Asia would increase his or her income by 68 percent. Asian immigrants to Sweden are drawn from a lower skill group, which implies that the earned citizenship premium is largest for Sweden's lower-income immigrant population. Thus, Sweden, like Canada, has generally liberal citizenship policies and reaps great rewards from naturalization, particularly the naturalization of non-Nordic immigrants.²³

The Netherlands: Restrictive naturalization policies lead to a drop in naturalization rates

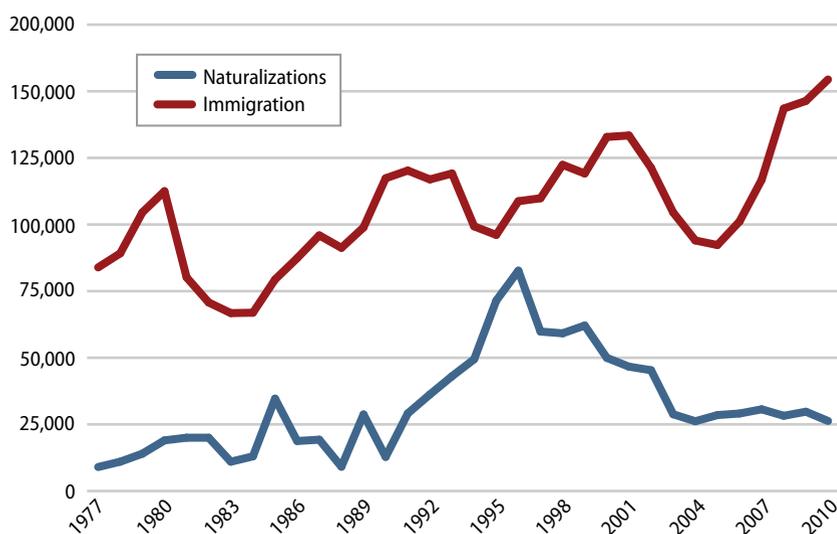
The Dutch case is an example of both restrictive and lenient citizenship-acquisition policies. From 1992 to 1997, Dutch law allowed dual citizenship, and the number of people becoming citizens rose significantly. After 1997, naturalization became harder, with the introduction of language and naturalization tests. These restrictions meant that the naturalization rate spiked in 1997—right before the restrictions came into place—and then gradually decreased by about 30,000 naturalizations from 2003 onward.

Two studies of the impact of naturalization on the earnings and employment prospects of naturalized Dutch citizens in 2002 and 2003 show a positive and significant effect on these immigrants' employment prospects but no significant effect on the income prospects of most immigrants, primarily because many of these naturalized citizens end up stuck in low-wage professions even after gaining citizenship. However, while naturalization had no significant effect on the income prospects of most immigrants to the

Netherlands, naturalization increased refugees' earnings. This is an unexpected outcome, since Dutch refugees arrived with little human capital, though it could be the result of immigrants being stuck at the lower segments of the labor market without the benefits of substantial wage premiums.²⁴

In sum, the Dutch case reveals an economic gain from naturalization in the form of employment opportunities but less so of income gains. Here only the least well equipped—refugees—see a citizenship premium after naturalization.²⁵ It also shows that restricting naturalization policies has a direct and unsurprising effect on the overall naturalization rate.

FIGURE 2
Immigration and naturalization in the Netherlands, 1977–2010



Source: Statistics Netherlands, "Statline," available at <http://statline.cbs.nl/statweb/?LA=en> (last accessed January 2014).

Norway: A lack of dual citizenship leads to low citizenship rates, even though the least-skilled immigrants still see an economic premium

Norway's denial of dual citizenship leads to a low overall citizenship-acquisition rate, at 38 percent, with the exception of one group: Norway's refugees. Economist John E. Hayfron reports that naturalization has an instantaneous effect on refugees' wages. For instance, Norwegian naturalized citizens earn 31.6 percent more than noncitizens. And looking one year beyond the time of naturalization, Hayfron finds that immigrants' wages increase by 9.7 percent. The results show that refugees who naturalize have a higher wage premium than their counterparts who are noncitizens.²⁶

Other scholars, such as Bernt Bratsberg and Oddbjørn Raaum, have found little or no citizenship premium overall from naturalization, which they hypothesize may arise from the fact that Norwegian labor law does not allow any discrimination by citizenship status. Thus, the gains from naturalization seen in other countries are available to immigrants in Norway even before they become citizens.²⁷ The one clear lesson from the Norwegian experience is that, even without a big differentiation in how Norway treats citizen and noncitizen workers, here again, the least-skilled immigrants—in this case, Norwegian refugees—still earn a citizenship premium.

Experts weigh in on the citizenship premium

In order to understand the tradeoffs involved in crafting a citizenship policy to maximize economic gains, the authors convened a conversation with a panel of 18 experts in the field of the economics of citizenship from around the world, as seen in Appendix C. These experts were asked about the size of the citizenship premium in their countries of study and the causal factors related to the citizenship premium, including waiting periods before naturalization and any legal barriers impeding naturalization. The goal of this survey was to better understand the relationship between citizenship-acquisition barriers and the size of the economic premium from citizenship across multiple cases. The survey results can be split into high, low, or near nil citizenship premiums.

High-citizenship-premium case

Canada represents the high-premium case when it comes to citizenship acquisition: Immigrants naturalize at a high rate—70 percent—with only a short waiting period before naturalization, unique among most receiving countries.²⁸ The two Canadian experts surveyed felt that given the Canadian mix of largely economic immigrants—immigrants who come for reasons such as work—Canada’s short waiting period of only four years before naturalization was sufficiently long enough for these immigrants to equip themselves with human capital. However, Canada’s clear and timely pathway to citizenship acquisition has led to emigration of some newly naturalized Canadians, which the experts felt to be a byproduct of the relatively short waiting period.

The Canadian experts also noted that since more than half of the observed citizenship premium was a result of immigrant human-capital investment prior to acquisition, Canada’s accessible educational and language programs for immigrants complemented the existing citizenship pathway in terms of length of the waiting period, language requirements, and labor-market integration of the newly naturalized.²⁹

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In short, the Canadian experts felt an optimal citizenship regime was in place given Canada's highly skilled immigrant mix.

Moderate-citizenship-premium case

The estimated citizenship premium reported for German naturalized citizens is moderate but sufficient to close the wage gap between immigrants and the native born, as reported above. Nonetheless, given the low rates of naturalization in Germany, the German experts felt strongly that the eight-year waiting period was too long and should be replaced with a more reasonable period, such as one of five years. One expert suggested the length of the waiting period should be contingent on labor-force participation and language acquisition. They also noted that full dual citizenship should be permitted in Germany to enhance Germany's acquisition rates.³⁰

In addition, the experts noted that the composition of German candidates for citizenship acquisition—namely, the undocumented non-EU residents and documented resident EU citizens—inherently limit citizenship acquisition. The former fear deportation, while the latter do not need German citizenship to succeed in Germany. Moreover, this compositional problem is largely beyond German control unless incentives, such as access to citizenship, are put into place to prompt the undocumented to leave the German shadow economy. A combination of a long waiting period to naturalize, coupled with an immigrant population that sees penalties from citizenship acquisition—such as losing Turkish citizenship—and few benefits for EU residents that already have full work privileges, leads to a low German naturalization rate.

In sum, the German experts felt that Germany's documented and undocumented immigrant populations have an economic incentive to ascend to citizenship but are thwarted by a complex and less-than-transparent citizenship policy coupled with an exceptionally long waiting period.

Low-citizenship-premium cases

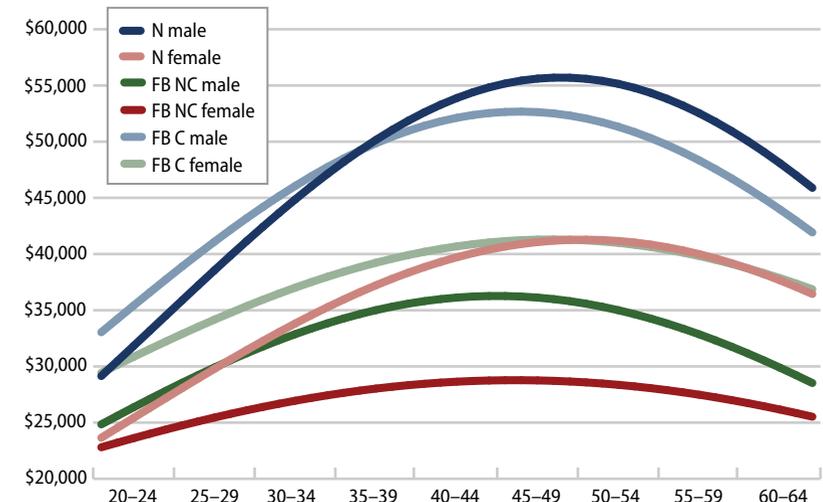
The Netherlands and Norway are examples of cases where low citizenship-acquisition rates are coupled with small or no citizenship premiums arising from citizenship acquisition. The respective country experts opine that less-than-transparent citizenship-acquisition policies, lack of dual-citizenship rights, and high language standards, coupled with long waiting periods, all deter citizenship acquisition.³¹ These explicit policies deter people from becoming citizens, which reduces the economic premium earned in both the Netherlands and Norway. Nonetheless, even with these citizenship barriers, both countries' unskilled refugee class earned a citizenship premium upon acquisition of citizenship.

Lessons for the United States

Given the range of cases from North America and Europe and the range of citizenship premiums and naturalization rates, what lessons can be learned by U.S. policymakers debating immigration reform? These examples are particularly relevant, considering that the United States already has close to 8.5 million legal permanent residents who are eligible to become citizens but have not yet naturalized. Ensuring that immigration reform contains a pathway to citizenship—first and foremost, for these unauthorized immigrants—that is reasonable and not too onerous, will ensure that the greatest number of potential applicants become citizens.³² First and foremost, we turn to evidence about the citizenship premium in the United States.

Figure 3 illustrates the economic premium derived from naturalization in the United States from 2006 to 2010, across gender and birth status—whether a naturalized or a native-born citizen—using native-born citizens as a reference group.³³ Naturalized males—FB C male—catch up and often exceed the earnings of their native-born male cohorts—N male—with an increase in yearly income of more than 50 percent. Even more dramatically, female foreign-born naturalized U.S. citizens—FB C females—receive a dramatic citizenship premium, such that their earnings now exceed those of native-born females, represented as N female.

FIGURE 3
The economic premium for documented immigrants becoming citizens
Empirical age-earnings profiles for native, or N, and foreign-born, or FB, employees by citizenship status



Note: These calculations look at the entire foreign-born population and do not differentiate between those with and those without legal status. They also do not control for country or region of origin or race, all of which affect the overall income gap. Thus, the high wage differentials seen here should not be taken as indicative of the gains that would be made by an individual legal immigrant obtaining citizenship. Nor are they indicative of the gains made by unauthorized immigrants gaining both legal status and citizenship. Source: Authors' calculations are based on U.S. Census Bureau, American Community Survey, 2006 to 2010.

Table 3 breaks down the various components that go into the wage premium from citizenship of documented immigrants after naturalization over the 2006–2010 period. Citizenship status produces a substantial citizenship premium for these surveyed groups, ranging from a 46 percent to 50 percent wage increase—as seen in column 4—relative to their immigrant cohort. This citizenship premium arises in all cases, primarily from positive discrimination or the higher reward earned for their post-naturalization attributes.³⁵ In

each case, the acquisition of further human capital prior to citizenship produced one-third or more of the earned citizenship premium. It is important to note in the context of the study that Mexican and Central Americans earned citizenship premiums similar to those earned by all immigrants upon naturalization.

Reviewing the literature on the citizenship premium for immigrants in the United States

Another approach to estimating the citizenship premium is using a static model—not looking forward in time, for example—that compares earnings of citizens to legal noncitizens. Three recent studies, in particular, have sought to discern the citizenship premium in the United States, creating a robust model of the citizenship premium that takes into account many of the factors that a comparison of the entire foreign-born population before and after citizenship cannot.

In 2010, Heidi Shierholz of the Economic Policy Institute found that family incomes after naturalization were 15 percent higher than those of all noncitizen immigrants, including those with and without legal status. In 2012, Manuel Pastor and Justin Scoggins of the Center for the Study of Immigrant Integration found that naturalized citizens in 2010 saw an 11 percent wage premium over noncitizens, after controlling for factors such as educational level before citizenship attainment and national origin. Finally, in 2013, Robert Lynch and Patrick Oakford of the Center for American Progress found a 10 percent boost in income after legal permanent residents naturalize.³⁴

TABLE 3
Decomposition of wage differentials between naturalized citizens and noncitizens of the United States: Population of foreign-born employees from ages 18 to 65

Source-country status	Human-capital component	Discrimination component	Wage differential
<i>All immigrants</i>			
Males	19%	28%	47%
Females	26%	23%	49%
<i>Mexican and other Central Americans</i>			
Males	18%	27%	46%
Females	21%	29%	50%

Note: These calculations look at the entire foreign-born population and do not differentiate between those with and those without legal status. They also do not control for country or region of origin or race, all of which affect the overall income gap. Thus, the high wage differentials seen here should not be taken as indicative of the gains that would be made by an individual legal immigrant obtaining citizenship. Nor are they indicative of the gains made by unauthorized immigrants gaining both legal status and citizenship.

Source: Authors' calculations are based on U.S. Census Bureau, American Community Survey, 2006 to 2010.

These economic premiums, though, can only be realized if an immigrant chooses to naturalize, and there are direct and indirect costs associated with becoming a citizen. Foremost among the opportunity costs is the absence of dual-citizenship provisions in the host or sending country. Clearly, losing one's home-country citizenship is a significant burden for those immigrants who intend to return home to either work or retire. In addition to these costs, there are more direct costs, such as high fees and language and civics requirements.

Other immigrant characteristics—including age, educational level, gender, and years in residence—will also affect citizenship-acquisition rates. In reality, these latter conditioners for citizenship acquisition affect either the costs or benefits of citizenship acquisition. For example, younger, better-educated immigrants with more years of residence in the host country will receive larger economic premiums for a longer time period, and this will, in turn, positively influence their citizenship-acquisition rates. One point remains clear: The greatest potential economic incentive to naturalize exists for the unskilled and economically marginalized, with a smaller incentive awaiting skilled and well-integrated immigrants.

Wage gains for unauthorized immigrants

This report discusses the wage gains made by immigrants after naturalization—those immigrants moving from a legal status to citizenship status. But what happens to unauthorized immigrants who first become legal and then naturalize? Studies show that these immigrants see a double boost to their earnings—first after moving from undocumented to documented status, and then after moving from documented status to citizenship—and by extension, a double boost to the overall economy. These boosts come from many of the same factors outlined in this report, including investment in education and job training, access to better and higher-paying jobs, and—critically, for unauthorized immigrants—the ability to work legally, which carries more legal protections and a greater ability to challenge workplace discrimination and violations.³⁶

Research by Robert Lynch and Patrick Oakford has found that unauthorized immigrants who gain legal status see a 15.1 percent increase in their overall wages following legalization. Once they acquire citizenship, these immigrants see an additional 10 percent increase in their wages, for a total boost of 25.1 percent.³⁷

Were the United States to grant unauthorized immigrants legal status in 2013, followed by citizenship five years later—admittedly, a far cry from the 13-year path to citizenship in the Senate-passed immigration reform bill, S. 744, but in line with the recommendations of this report—the nation would see a cumulative increase in the country's gross domestic product of \$1.1 trillion over 10 years. The wages of all Americans—immigrant and native born alike—would rise by \$618 billion over that same time period, and taxes paid by the formerly undocumented immigrants would increase by \$144 billion as a result of their higher earnings. Finally, immigration reform under this scenario would create an average of 159,000 jobs each year.³⁸

Conclusion

The literature from a range of cases in North America and Europe proves that the policies that lawmakers put in place with regard to citizenship play a role in the ultimate citizenship premium and rate of naturalization. Certainly, the type of immigrant in question plays a role in the ultimate economic benefits—immigrants from developed nations tend to see a smaller boost to their wages in the United States, as they generally start from a higher wage scale and with more human capital. But as this report has illustrated, the barriers to naturalization—such as fees, language requirements, and the recognition of dual citizenship—and the length of time required to become a citizen play a big role in the ultimate citizenship premium.

In the context of the immigration reform debate in the United States, the countries surveyed generally see the largest citizenship premium from immigrants who enter with the lowest amounts of human capital, similar to the United States' undocumented population. But in terms of timing, the 13-year pathway to citizenship laid out in the Senate-passed immigration reform bill is far longer even than those in the countries with the most-restrictive citizenship-acquisition policies, such as Germany or the Netherlands. While too short a pathway can disincentivize integration and bring a smaller citizenship premium because workers have not had sufficient time to gain skills and training in the new country, it is clear that a long pathway hurts both the value of citizenship acquisition and naturalization rates. Clearly, the optimal period of a five-year pathway to citizenship is out of the question in light of the politics informing the current debate, with the exception of DREAMers. But given that 13 years is already far longer than the optimal period, lengthening the pathway any further will only further diminish returns.

In addition to a 13-year waiting period, the Senate-passed bill contains \$2,000 in fines, on top of at least four separate application fees, for Registered Provisional Immigrant, or RPI, status; for renewal of RPI status; for adjustment to permanent residency; and for citizenship. As Manuel Pastor and others have pointed out,

current naturalization fees alone—at \$595, plus an \$85 fee to collect biometric information—already hold down overall naturalization rates, and the high fees and fines in the Senate immigration reform bill have the potential to depress the rates of naturalization even further.³⁹ It is in the best interest of all Americans for policymakers to reconsider the length and cost of the pathway to citizenship contained in the current legislative proposals and to pursue options for making it more attainable. Ultimately, allowing the greatest number of people to complete the pathway to citizenship will bring the greatest economic benefits to the nation.

Appendix A:

Key features that produce the highest naturalization rates

Table 4 highlights the key features that produce the acquisition rates portrayed in Figure 1. Dual-citizenship status in the host country either accelerates citizenship-acquisition rates—represented by “yes”—or hinders it when dual citizenship is not recognized in the immigrant host country, represented by “no.” Time, defined either as the age of the potential applicant or the number of years required in the queue before acquisition, is the second, collective, time-related force that determines acquisition rates. Older immigrants who must wait a substantial amount of time—such as more than five years—before applying for citizenship acquisition have lower acquisition rates due to a shorter payoff period. Finally, variations in acquisition rates arise across immigrant entry class or the immigrant’s country of origin.

For most of the survey countries reported in Table 4, refugees, in particular, ascend to citizenship at fast rates, given their low probability of return migration. Other immigrant groups—Asians and South Asians in Canada, for example—recognize the economic importance of a new passport and ascend to citizenship at high rates of 80 percent or more in the first few years of eligibility. On the other hand, long-term residents who feel alienated from the host society, such as Turks in Germany, do not apply for citizenship.

In sum, the results reported in Table 4 illustrate that if a country lowers the cost of citizenship acquisition with a dual-citizenship policy and a short waiting period, youthful immigrants will apply for citizenship to enjoy a long period of payoff during which the citizenship premium arises.

If a country lowers the cost of citizenship acquisition with a dual-citizenship policy and a short waiting period, youthful immigrants will apply for citizenship to enjoy a long period of payoff during which the citizenship premium arises.

TABLE 4
Factors affecting citizenship acquisition across sampled immigrant-host countries

Countries	Dual citizenship	Time	Ascent by origin/entry class
United States	Yes	Yes	Non-OECD
Canada	Yes	Yes	Asian/South Asian
Germany	No	Yes	Turkish/European Union
Sweden	Yes	Yes	Scandinavian/refugee
Netherlands	No	Yes	Turkish/Moroccan/refugee
Norway	No	No	Pakistani/refugee
Switzerland	No	Yes	Professionals

Source: Pieter Bevelander and Don J. DeVoretz, eds., *The Economics of Citizenship* (Malmö, Sweden: Malmö University, 2008); Max Friedrich Steinhardt and Jan Wedemeier, "The Labor Market Performance of Naturalized Immigrants in Switzerland—New Findings from the Swiss Labor Force Survey," *Journal of Immigration and Integration* 13 (2) (2012): 223–242.

TABLE 5
Factors affecting citizenship acquisition across sampled immigrant-host countries

Countries	Time	Human-capital investment	Signal	Selected entry group
United States	Yes	Yes	Yes	Developing
Canada	Yes	Yes	Yes	Non-OECD
Germany	No	No	Yes	N/A
Sweden	Yes	Yes	N/A	Refugees
Netherlands	No	Yes	Yes	Refugees
Norway	No	No	Yes	Refugees
Switzerland	No	Yes	Yes	Professionals

Source: Pieter Bevelander and Don J. DeVoretz, eds., *The Economics of Citizenship* (Malmö, Sweden: Malmö University, 2008); Max Friedrich Steinhardt and Jan Wedemeier, "The Labor Market Performance of Naturalized Immigrants in Switzerland—New Findings from the Swiss Labor Force Survey," *Journal of Immigration and Integration* 13 (2) (2012): 223–242.

The curvilinear shape of the citizenship premium depicted in Figure 1 is an outgrowth of the forces reported in Table 5. Time, defined as either the age of the naturalized candidate, years in residence, or the length of waiting time before citizenship acquisition, affects the size of the premium and the timing of the peak reward in three host countries: the United States, Canada, and Sweden. In the other countries, the waiting period for acquisition is too long, and the effect on the citizenship premium is nil or negative. The decomposition of the sources of change in the wage gap for newly naturalized immigrants is either due to their human-capital investment or their employers' reactions to this investment and naturalized status.

In all the cited cases reported in Table 5, both forces are in effect to increase the citizenship premium, with the dominant force being human-capital investment. Finally, the citizenship premium was not uniform across all immigrant entry groups. In fact, the largest citizenship premium was earned by the seemingly least-integrated group—namely, refugees or immigrants from developing countries. This latter point is consistent with the observation that if immigrants invest prior to citizenship acquisition in host-country skills, the citizenship premium is the largest. Of course, it is the least-integrated immigrants who have the largest potential for human-capital investment.

Appendix B:

Policy questionnaire

The following questionnaire was sent to 18 policy experts from around the world, as listed in Appendix C.

1. In the context of your country study did you observe a positive economic effect from citizenship acquisition?
 - a. If so, how large was this effect and what dimensions did it appear?
 - i. immigrant income increase,
 - ii. better employment or
 - iii. higher taxes paid and/or less use of services
 - b. How much of any observed citizenship effect was owing
 - i. to self-selection into citizenship acquisition
 - ii. to human capital investment prior to acquisition
 - iii. What data set and econometric technique did you use (e.g. decomposition) to arrive at the above conclusion?
2. What is the required length of stay in your country before an immigrant can ascend to citizenship in your chosen country?
 - i. Has the waiting period changed in the last two decades?
 - ii. Does this waiting period vary by immigrant entry status or being married to a national?

iii. What do you consider the optimal waiting period in your country's context for citizenship acquisition based on maximizing the post naturalization economic benefits?

3. What legal barriers beyond a waiting period exist to impose a barrier for citizenship acquisition in your country?

- a. Lack of dual citizenship recognition by your country?
- b. Lack of dual citizenship recognition by your country's major immigrant sending countries?
- c. Loss of property or voting rights in the immigrants' countries of origin?
- d. High language competency in your country for citizenship test?
- e. Other?

4. What lesson or lessons from your countries citizenship policy would help inform citizenship acquisition policies for the undocumented in the USA?

5. What improvements in your country's acquisition program would increase the citizenship acquisition rate?

6. What improvements in your country's citizenship acquisition program would increase the derived economic benefits (e.g. naturalized income and tax contributions)?

Appendix C:

Expert consultants

Expert	Affiliation	Country
1 Deborah Ann Cobb-Clark	University of Melbourne	Australia
2 Paul Miller	Curtin University	Australia
3 Max Friedrich Steinhardt	HWWI	Germany
4 Amelie F. Constant	IZA	Germany
5 Michele Battisti	University of Munich	Germany
6 Klaus F. Zimmermann	IZA	Germany
7 Martin Kahanec	IZA	Germany
8 Barry R. Chiswick	George Washington University	United States
9 B. Lindsay Lowell	Georgetown University	United States
10 John Hayfron	Western Washington University	United States
11 Nahikari Irastorza	Malmö University	Sweden
12 Pieter Bevelander	Malmö University	Sweden
13 Ather Akbari	Saint Mary's University	Canada
14 Don J. DeVoretz	Simon Fraser University	Canada
15 Sergiy Pivnenko	Associated Economic Consultants Ltd.	Canada
16 Graziella Bertocchi	Università di Modena	Italy
17 Florin Vadean	University of Kent	United Kingdom
18 Gil S. Epstein	Bar-Ilan University	Israel

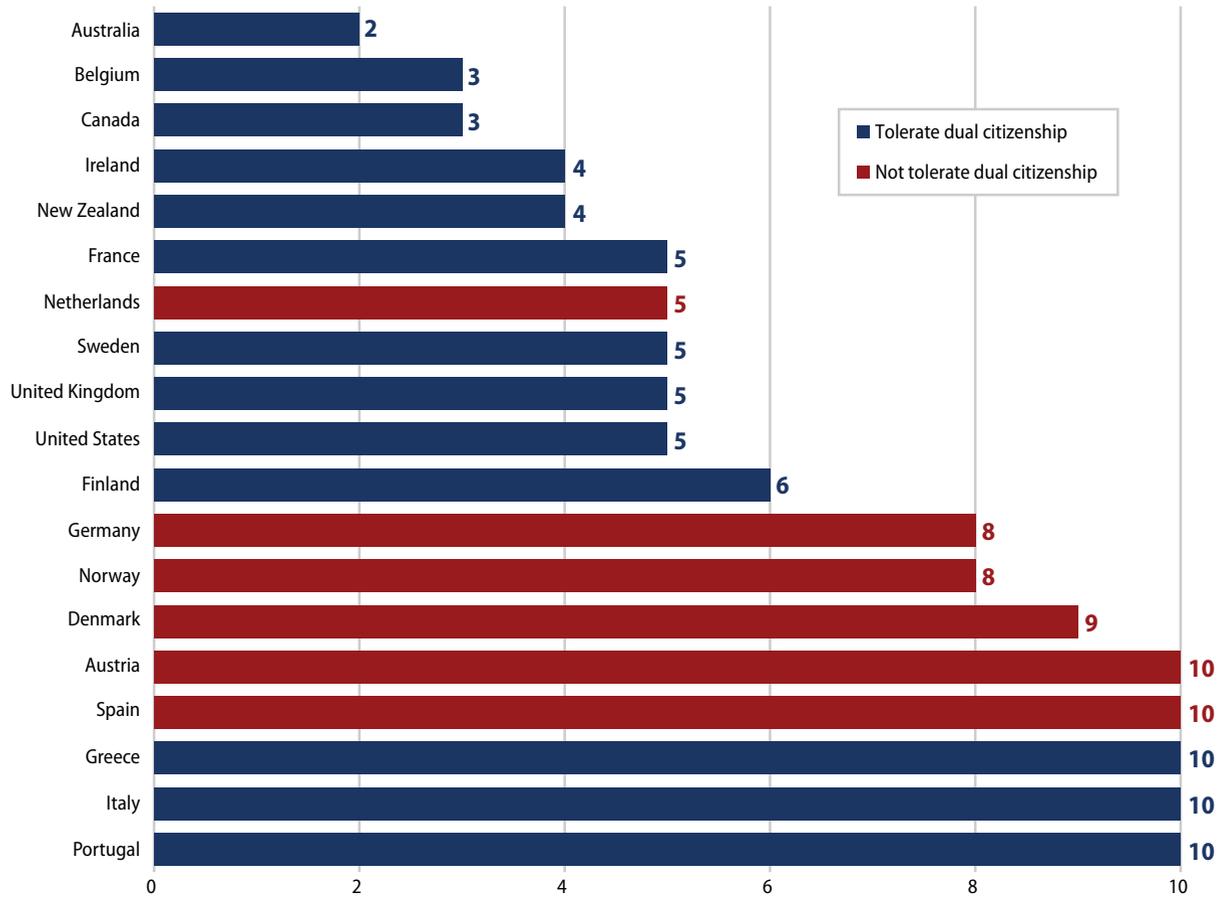
Appendix D: Time to naturalization in selected countries

Country	Average Time Until Naturalization (in years)
Lithuania	2.06
Poland	3.94
Ireland	5.07
Hungary	5.41
Greece	5.84
Portugal	7.53
Norway	7.73
Sweden	7.77
Italy	8.02
Slovakia	8.4
United Kingdom	8.68
Cyprus	8.78
Spain	8.81
Netherlands	9.02
Germany	9.58
Denmark	9.8
Austria	11.46
Belgium	13.6
France	13.9
Switzerland	14.45
Luxembourg	15.29
Slovenia	16.78
Czech Republic	17.06
Estonia	25.18
Latvia	33.54

Source: Maarten Peter Vink and Tijana Projic-Breuer, "Citizenship acquisition indicators" (San Domenico di Fiesole, Italy: EUDO Observatory on Citizenship, 2012).

FIGURE 3

Minimum number of years of residence required for citizenship and tolerance for dual citizenship



Source: Sarah Wallace Goodman, "Naturalisation Policies in Europe: Exploring Patterns of Inclusion and Exclusion" (San Domenico di Fiesole, Italy: EUUDO Citizenship Observatory, 2010).

Appendix E: U.S. age-earnings regression results: 2006–2010 American Community Surveys

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Regression results

Foreign-born population

Males

Model summary

Model	R Sex = Male (selected)	R squared	Adjusted R squared	Standard error of the estimate
1	0.725 ^a	0.525	0.525	0.63149

a. Predictors: (Constant); logarithm of weekly hours; Mexican or other Central American origin; years since immigration squared, or ysim²; high school; professional degree; doctoral degree; marital status; full year worked; master’s degree; home language; college education; citizen; age squared, or ages²; bachelor’s degree, years since immigration, or ysim; age.

ANOVA^a

Model	Sum of squares	df	Mean square	F	Sig.
1 Regression	211091.382	16	13193.211	33084.089	0.000 ^a
Residual	190638.283	478056	0.399		
Total	401729.665	478072			

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysim², high school, professional degree, doctoral degree, marital status, full year worked, master’s degree, home language, college education, citizen, ages², bachelor’s degree, ysim, age. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals “male.”

Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard. error	Beta		
1 (Constant)	4.845	0.015		331.558	0.000
Age	0.068	0.001	0.868	117.528	0.000
agesq	-0.001	0.000	-0.823	-113.418	0.000
ysim	0.012	0.000	0.160	46.487	0.000
ysimsq	-8.430E-5	0.000	-0.050	-15.357	0.000
Home language	0.104	0.003	0.040	37.016	0.000
High school	0.100	0.003	0.045	37.370	0.000
College education	0.215	0.003	0.091	72.280	0.000
Bachelor's degree	0.567	0.003	0.226	174.356	0.000
Master's degree	0.863	0.004	0.264	218.624	0.000
Professional degree	0.810	0.007	0.122	115.962	0.000
Doctoral degree	0.958	0.006	0.179	165.425	0.000
Full year worked	0.739	0.002	0.322	311.564	0.000
Marital status	0.146	0.002	0.075	67.118	0.000
Citizen	0.076	0.002	0.041	32.838	0.000
Mexican or other Central American origin	-0.107	0.002	-0.058	-45.119	0.000
Logarithm of weekly hours	0.801	0.003	0.262	252.591	0.000

a. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "male."

Females

Model summary

Model	R	R squared	Adjusted R squared	Standard error of the estimate
	Sex = Female (selected)			
1	0.750 ^a	0.563	0.562	0.64934

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age.

ANOVA^a

	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	211608.047	16	13225.503	31366.837	0.000 ^a
	Residual	164577.773	390328	0.422		
	Total	376185.820	390344			

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "female."

Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard error	Beta		
1 (Constant)	4.511	0.015		298.333	0.000
Age	0.054	0.001	0.633	81.031	0.000
agesq	-0.001	0.000	-0.604	-77.526	0.000
ysim	0.016	0.000	0.197	51.460	0.000
ysimsq	0.000	0.000	-0.084	-22.993	0.000
Home language	0.058	0.003	0.022	19.822	0.000
High school	0.132	0.003	0.055	39.687	0.000
College education	0.311	0.003	0.136	92.479	0.000
Bachelor's degree	0.642	0.004	0.266	178.485	0.000
Master's degree	0.897	0.005	0.258	198.514	0.000
Professional degree	0.979	0.007	0.150	132.214	0.000
Doctoral degree	1.054	0.008	0.145	129.573	0.000
Full year worked	0.779	0.002	0.347	312.479	0.000
Marital status	0.028	0.002	0.014	12.398	0.000
Citizen	0.102	0.003	0.052	40.104	0.000
Mexican or other Central American origin	-0.175	0.003	-0.084	-66.148	0.000
Logarithm of weekly hours	0.899	0.003	0.352	319.145	0.000

a. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "female."

Foreign-born female citizens

Model summary

Model	R	R squared	Adjusted R squared	Standard error of the estimate
	Sex = Female (selected)			
1	0.731 ^a	0.535	0.535	0.63937

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age.

ANOVA^a

Model	Sum of squares	df	Mean square	F	Sig.
1 Regression	97220.773	15	6481.385	15854.883	0.000 ^a
Residual	84584.844	206913	0.409		
Total	181805.617	206928			

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "female."

Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard error	Beta		
1 (Constant)	4.205	0.022		191.836	0.000
Age	0.062	0.001	0.754	66.368	0.000
agesq	-0.001	0.000	-0.723	-63.885	0.000
ysim	0.016	0.000	0.197	32.716	0.000
ysimsq	0.000	0.000	-0.098	-16.394	0.000
Home language	0.024	0.004	0.010	6.341	0.000
High school	0.157	0.005	0.066	30.648	0.000
College education	0.364	0.005	0.175	74.725	0.000
Bachelor's degree	0.693	0.005	0.320	136.913	0.000
Master's degree	0.920	0.006	0.290	148.450	0.000
Professional degree	1.079	0.010	0.185	112.132	0.000
Doctoral degree	1.119	0.012	0.154	96.189	0.000
Full year worked	0.735	0.004	0.321	204.351	0.000
Marital status	0.036	0.003	0.018	11.648	0.000
Mexican or other Central American origin	-0.147	0.004	-0.067	-40.635	0.000
Logarithm of weekly hours	0.947	0.004	0.381	241.382	0.000

a. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "female."

Foreign-born male citizens

Model summary

Model	R	R squared	Adjusted R squared	Standard error of the estimate
	Sex = Male (selected)			
1	0.705 ^a	0.497	0.497	0.62542

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age.

ANOVA^a

Model	Sum of squares	df	Mean square	F	Sig.
1 Regression	76010.462	15	5067.364	12955.163	0.000 ^a
Residual	77001.059	196860	0.391		
Total	153011.521	196875			

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "male."

Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard error	Beta		
1 (Constant)	4.429	0.024		185.629	0.000
Age	0.083	0.001	1.069	86.807	0.000
agesq	-0.001	0.000	-1.031	-85.223	0.000
ysim	0.013	0.001	0.167	26.372	0.000
ysimsq	-8.944E-5	0.000	-0.064	-10.192	0.000
Home language	0.056	0.004	0.025	14.523	0.000
High school	0.124	0.005	0.056	25.790	0.000
College education	0.268	0.005	0.132	56.960	0.000
Bachelor's degree	0.578	0.005	0.270	116.466	0.000
Master's degree	0.853	0.006	0.297	144.758	0.000
Professional degree	0.904	0.010	0.162	93.751	0.000
Doctoral degree	1.036	0.009	0.211	118.840	0.000
Full year worked	0.735	0.004	0.304	182.931	0.000
Marital status	0.167	0.004	0.083	46.373	0.000
Mexican or other Central American origin	-0.072	0.004	-0.036	-19.927	0.000
Logarithm of weekly hours	0.822	0.005	0.274	162.457	0.000

a. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "male."

Foreign-born female noncitizens

Model summary

Model	R	R squared	Adjusted R squared	Standard error of the estimate
	Sex = Female (selected)			
1	0.735 ^a	0.540	0.540	0.65707

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age.

ANOVA^a

Model	Sum of squares	df	Mean square	F	Sig.
1 Regression	92849.805	15	6189.987	14337.318	0.000 ^a
Residual	79181.029	183400	0.432		
Total	172030.834	183415			

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "female."

Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard error	Beta		
1 (Constant)	4.817	0.022		219.770	0.000
Age	0.050	0.001	0.564	50.368	0.000
agesq	-0.001	0.000	-0.535	-48.098	0.000
ysim	0.018	0.000	0.185	38.393	0.000
ysimsq	0.000	0.000	-0.088	-18.550	0.000
Home language	0.124	0.005	0.044	26.168	0.000
High school	0.110	0.004	0.047	24.595	0.000
College education	0.247	0.005	0.102	50.531	0.000
Bachelor's degree	0.581	0.005	0.221	107.809	0.000
Master's degree	0.868	0.007	0.240	126.736	0.000
Professional degree	0.846	0.012	0.120	71.948	0.000
Doctoral degree	0.981	0.011	0.144	85.657	0.000
Full year worked	0.816	0.003	0.389	235.628	0.000
Marital status	0.017	0.003	0.009	5.146	0.000
Mexican or other Central American origin	-0.213	0.004	-0.109	-54.498	0.000
Logarithm of weekly hours	0.848	0.004	0.344	209.982	0.000

a. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "female."

Foreign-born male noncitizens

Model summary

Model	R	R squared	Adjusted R squared	Standard error of the estimate
	Sex = Male (selected)			
1	0.707 ^a	0.499	0.499	0.63228

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age.

ANOVA^a

Model	Sum of squares	df	Mean square	F	Sig.
1 Regression	112131.392	15	7475.426	18698.902	0.000 ^a
Residual	112410.228	281181	0.400		
Total	224541.621	281196			

a. Predictors: (Constant), logarithm of weekly hours, Mexican or other Central American origin, ysimsq, high school, professional degree, doctoral degree, marital status, full year worked, master's degree, home language, college education, citizen, agesq, bachelor's degree, ysim, age. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "male."

Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard error	Beta		
1 (Constant)	5.044	0.019		264.280	0.000
Age	0.064	0.001	0.784	83.332	0.000
agesq	-0.001	0.000	-0.734	-79.605	0.000
ysim	0.017	0.000	0.184	45.425	0.000
ysimsq	0.000	0.000	-0.092	-23.179	0.000
Home language	0.171	0.004	0.059	41.492	0.000
High school	0.086	0.003	0.041	26.692	0.000
College education	0.168	0.004	0.065	42.015	0.000
Bachelor's degree	0.571	0.005	0.208	126.306	0.000
Master's degree	0.871	0.005	0.252	158.604	0.000
Professional degree	0.715	0.010	0.096	69.511	0.000
Doctoral degree	0.884	0.008	0.164	113.062	0.000
Full year worked	0.736	0.003	0.345	251.074	0.000
Marital status	0.129	0.003	0.070	47.269	0.000
Mexican or other Central American origin	-0.137	0.003	-0.076	-43.081	0.000
Logarithm of weekly hours	0.779	0.004	0.264	191.708	0.000

a. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "male."

Native-born population

Males

Model summary

Model	R	R squared	Adjusted R squared	Standard error of the estimate
	Sex = Male (selected)			
1	0.784a	0.615	0.615	0.63555

a. Predictors: (Constant), logarithm of weekly hours, high school, doctoral degree, professional degree, agesq, master's degree, full year worked, bachelor's degree, marital status, college education, age.

ANOVA^a

Model	Sum of squares	df	Mean square	F	Sig.
1 Regression	1788899.635	11	162627.240	402616.755	0.000 ^a
Residual	1118955.679	2770202	0.404		
Total	2907855.314	2770213			

a. Predictors: (Constant), logarithm of weekly hours, high school, doctoral degree, professional degree, agesq, master's degree, full year worked, bachelor's degree, marital status, college education, age. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "male."

Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard error	Beta		
1 (Constant)	3.730	0.005		716.519	0.000
Age	0.097	0.000	1.227	444.389	0.000
agesq	-0.001	0.000	-1.039	-384.210	0.000
High school	0.176	0.002	0.079	114.333	0.000
College education	0.307	0.002	0.141	202.005	0.000
Bachelor's degree	0.640	0.002	0.247	390.921	0.000
Master's degree	0.778	0.002	0.192	384.381	0.000
Professional degree	0.926	0.003	0.113	278.152	0.000
Doctoral degree	0.871	0.004	0.090	225.822	0.000
Full year worked	0.844	0.001	0.338	841.490	0.000
Marital status	0.227	0.001	0.109	256.351	0.000
Logarithm of weekly hours	0.923	0.001	0.308	758.345	0.000

a. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals "male."

Females

Model summary

Model	R	R squared	Adjusted R squared	Standard error of the estimate
	Sex = Female (selected)			
1	0.778 ^a	0.605	0.605	0.63779

a. Predictors: (Constant), logarithm of weekly hours, high school, doctoral degree, professional degree, agesq, master's degree, full year worked, bachelor's degree, marital status, college education, age.

ANOVA^a

Model	Sum of squares	df	Mean square	F	Sig.
1 Regression	1745166.153	11	158651.468	390020.460	0.000 ^a
Residual	1141518.383	2806249	0.407		
Total	2886684.537	2806260			

a. Predictors: (Constant), logarithm of weekly hours, high school, doctoral degree, professional degree, agesq, master's degree, full year worked, bachelor's degree, marital status, college education, age. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals 'female.'

Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Standard error	Beta		
1 (Constant)	3.693	0.005		762.164	0.000
Age	0.077	0.000	0.991	359.738	0.000
agesq	-0.001	0.000	-0.820	-302.357	0.000
High school	0.196	0.002	0.084	105.336	0.000
College education	0.380	0.002	0.181	210.024	0.000
Bachelor's degree	0.742	0.002	0.297	389.701	0.000
Master's degree	0.971	0.002	0.276	455.655	0.000
Professional degree	1.115	0.004	0.134	315.153	0.000
Doctoral degree	1.094	0.005	0.096	238.000	0.000
Full year worked	0.772	0.001	0.335	840.636	0.000
Marital status	0.058	0.001	0.029	70.848	0.000
Logarithm of weekly hours	1.004	0.001	0.410	1021.274	0.000

a. The dependent variable is the logarithm of wage earnings. We selected only cases for which sex equals 'female.'

Notes

Sample size: Multiple monthly surveys are included in this sample, and individuals are all different. The sample includes:

- Employed workers (Self-employed workers are excluded)
- People ages 18 to 65
- People whose annual earnings are between \$1,000 and \$300,000

Key variable definitions

Lnwage: natural logarithm of wage earnings (in 2010 dollars)

HLAN: English spoken at home

HS: high school graduate

COL: some college, but less than one year; one or more years of college, no degree; associate's degree

BACH: bachelor's degree

MAST: master's degree

PRO: professional school degree

DOC: doctoral degree

FYW: full year worked (more than 47 weeks)

MarSt: marital status ("1" if married, "0" if otherwise)

MCA: Mexican or other Central American origin

Lnhours: natural logarithm of regular weekly hours

About the authors

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Endnotes

- 1 See, for example, Robert Lynch and Patrick Oakford, "The Economic Effects of Granting Legal Status and Citizenship to Undocumented Immigrants" (Washington: Center for American Progress, 2013), available at <http://www.americanprogress.org/wp-content/uploads/2013/03/EconomicEffectsCitizenship-1.pdf>; Ather H. Akbari, "Immigrant Naturalization and Its Impacts on Immigrant Labour Market Performance and Treasury." In Pieter Bevelander and Don J. DeVoretz, eds., *The Economics of Citizenship* (Malmö, Sweden: Malmö University, 2008), available at <http://dspace.mah.se/dspace/bitstream/handle/2043/7487/The%20economics%20MUEP.pdf;jsessionid=B7FEE94F4D656B94E012826B9DC45668?sequence=1>; Manuel Pastor and Justin Scoggins, "Citizen Gain: the Economic Benefits of Naturalization for Immigrants and the Economy" (Los Angeles: Center for the Study of Immigrant Integration, 2012), available at http://csii.usc.edu/documents/citizen_gain_web.pdf. For a thorough review of the literature on legalization and increased wages, see David Dyssegaard Kallick, "Three Ways Immigration Reform Would Make the Economy More Productive" (New York: Fiscal Policy Institute, 2013), Appendix A, available at <http://fiscalpolicy.org/wp-content/uploads/2013/06/3-ways-reform-would-improve-productivity.pdf>.
- 2 The United States has seen its immigrants gain a significant economic premium from naturalization in the past, but it has also seen low rates of naturalization over the past few years. See, for example, Manuel Pastor and others, "Nurturing Naturalization: Could Lowering the Fee Help?" (Los Angeles: Center for the Study of Immigrant Integration and National Partnership for New Americans, 2013), available at http://csii.usc.edu/documents/Nurturing_Naturalization_final_web.pdf; Lynch and Oakford, "The Economic Effects of Granting Legal Status and Citizenship to Undocumented Immigrants."
- 3 S. 744, *Border Security, Economic Opportunity, and Immigration Modernization Act*, 113th Cong., 1st sess. (2013), available at <https://www.govtrack.us/congress/bills/113/s744/text>.
- 4 For example, federal government positions in Canada have a Canadian citizenship preference, implying that, from an acceptable pool of applicants, Canadian citizens are drawn first.
- 5 See Francesca Mazzolari, "Dual citizenship rights: Do they make more and better citizens?," *Demography* 46 (1) (2009): 169–191.
- 6 This is true in the Swiss case, with a 15-year waiting period. See Max Friedrich Steinhardt, "Does Citizenship Matter? The Economic Impact of Naturalization in Germany," Working Paper 266 (Centro Studi Luca d'Agliano, 2008).
- 7 Pastor and others, "Nurturing Naturalization."
- 8 Barry R. Chiswick, "The effect of Americanization on the earnings of foreign-born men," *The Journal of Political Economy* 86 (5) (1978): 897–921.
- 9 Brent Bratsberg, James F. Ragan Jr., and Zafar M. Nazir, "The Effect of Naturalization on Wage Growth: A Panel Study of Young Male Immigrants," *Journal of Labor Economics* 20 (3) (2002): 568–597, available at <http://www.terry.uga.edu/~mustard/courses/e8420/Citizenship.pdf>.
- 10 Don J. DeVoretz and Sergiy Pivnenko, "The Recent Economic Performance of Ukrainian Immigrants in Canada and the U.S." (Bonn, Germany: IZA, 2003).
- 11 See Bevelander and DeVoretz, eds., *The Economics of Citizenship*; Organisation for Economic Co-Operation and Development, *Naturalisation: A Passport for the Better Integration of Immigrants?* (2011), available at http://www.oecd-ilibrary.org/social-issues-migration-health/naturalisation-a-passport-for-the-better-integration-of-immigrants_9789264099104-en.
- 12 Pieter Bevelander and Ravi Pendakur, "Citizenship acquisition, employment prospects and earnings: Comparing two cool countries." Working Paper 2012/07 (Robert Schuman Centre for Advanced Studies, 2012); Aysegul Kayaoglu and Ayhan Kaya, "Is National Citizenship Withering Away? Social Affiliations and Labor Market Integration of Turkish Origin Immigrants in Germany and France" (Louvain, Belgium: University of Louvain, 2011).
- 13 Bratsberg and others, "The Effect of Naturalization on Wage Growth"; Kirk Scott, "The Economics of Citizenship: Is There a Naturalization Effect?" In Bevelander and DeVoretz, eds., *The Economics of Citizenship*; Steinhardt, "Does Citizenship Matter?"; Pieter Bevelander and Jonas Helgertz, "Naturalisering, har det en inkomsteffekt, Rapport för Arbetsmarknadsdepartementet" (Malmö, Sweden: Malmö University, 2012).
- 14 This phenomenon of the emigration of recently naturalized Canadians actually reduces Canada's reported high acquisition rates. For example, DeVoretz cites Canada's 80 percent acquisition rate for Asians, coupled with their 20 percent postnaturalization emigration rate, as reducing Canada's actual Asian acquisition rate to 60 percent or less if their Canadian-born children accompany them abroad. Moreover, it presents a problem if the newly naturalized leave the country—thus not paying into the tax base—only to return after retirement to consume unfunded health care, federal pensions, and other social services. The Canadian experience suggests a longer waiting period than three years is needed to forestall Canada's selected immigrants from gaming the citizenship-acquisition system. See Don J. DeVoretz, "Canada's Secret Province: 2.8 Million Canadians Abroad" (Vancouver, Canada: Asia Pacific Foundation Canada, 2010).
- 15 German Federal Statistical Office, "Bevölkerungsstand auf Grundlage früherer Zählungen," available at <https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/Bevoelkerung/Bevoelkerungsstand/Tabellen/GeschlechtStaatsangehoerigkeit.html> (last accessed January 2014). Data are for 2011.
- 16 Steinhardt, "Does Citizenship Matter?"
- 17 Those immigrants married to a German citizen can become a citizen after three years, with the rationale that the spouse will ease the candidate's integration into German society.
- 18 Martin Kahanec, "Political Economy of Immigration in Germany: Attitudes and Citizenship Aspirations" (Bonn, Germany: IZA, 2007). This phenomenon has also been observed in interviews conducted by one of the authors of this study.
- 19 Steinhardt, "Does Citizenship Matter?," p. 14, Table 3.
- 20 Refugees can become citizens after four years of residency.

- 21 Scott's estimates suggest three patterns of Swedish citizenship acquisition. First, immigrants from industrialized and nonlabor-surplus countries acquire Swedish citizenship at initially low, but gradually increasing, rates. Second, immigrants from labor-surplus countries show generally high acquisition rates, which slow over time. Third, refugees immediately ascend to citizenship at high rates. See Scott, "The Economics of Citizenship." For differences in speed of acquisition by region of birth, see Statistics Sweden, "Medborgarskap" (2010), available at <http://www.scb.se/Statistik/BE/BE0101/2010A01L/Medborgarskap.pdf>.
- 22 Scott, "The Economics of Citizenship"; Bevelander and Helgertz, "Naturalisering, har det en inkomsteffekt, Rapport för Arbetsmarknadsdepartementet"; Mattias Engdahl, "The Impact of Naturalisation on Labour Market Outcomes in Sweden." In Organisation for Economic Co-Operation and Development, *Naturalisation: A Passport for the Better Integration of Immigrants?*
- 23 Ibid.
- 24 Pieter Bevelander and Justus Veenman find that the odds ratio of having Dutch citizenship on having employment is between 1.4 to 1.9, compared to not having Dutch citizenship. See Pieter Bevelander and Justus Veenman, "Naturalization and Employment Integration of Turkish and Moroccan Immigrants in the Netherlands," *Journal of International Migration and Integration* 7 (3) (2006): 327–346; Pieter Bevelander and Justus Veenman, "Naturalization and Socioeconomic Integration: The Case of the Netherlands." In Bevelander and DeVoretz, *The Economics of Citizenship*.
- 25 These results are reiterated by Euwals and others, who compare the effects of naturalization of Turkish immigrants in the Netherlands and Germany. They find a positive effect of naturalization on employment in the Netherlands and a negative effect in Germany. See Rob J. Euwals and others, "Citizenship and labor market position: Turkish immigrants in Germany and the Netherlands," *International Migration Review* 44 (3) (2010): 513–538.
- 26 John E. Hayfron, "The Economics of Norwegian Citizenship." In Bevelander and DeVoretz, eds., *The Economics of Citizenship*.
- 27 Hayfron argues that his observed citizenship premium appears for only refugees and not for all immigrants, including mainly Nordic immigrants who are completely assimilated before attaining citizenship. Ibid. See also Bernt Bratsberg and Oddbjørn Raaum, "The Labour Market Outcomes of Naturalised Citizens in Norway." In Organisation for Economic Co-Operation and Development, *Naturalisation: A Passport for the Better Integration of Immigrants?*
- 28 In fact, Canada has an actual waiting period of four years.
- 29 For the role of Canada's social programs in hastening citizenship acquisition, see Irene Bloemraad, *Becoming a Citizen: Incorporating Immigrants and Refugees in the United States and Canada* (Berkeley, CA: University of California Press, 2006).
- 30 There are some exceptions to the prohibition on holding dual citizenship in the German context if the newly naturalized can demonstrate hardship arising from loss of their original citizenship.
- 31 Less-than-transparent citizenship-acquisition policies refer to citizenship-acquisition policies that vary by country of origin for the citizen candidate. For example, Nordic immigrants in Sweden or Norway have shorter waiting periods for acquisition than non-Nordics.
- 32 See Pastor and others, "Nurturing Naturalization."
- 33 The individual age-earnings profiles depicted in Figure 3 are the result of tracing out the full-time wages for a random survey of all immigrants—both male and female and with and without citizenship status. The controls in the earnings equation used in this simulation are reported in Appendix E and include age, age squared, years since immigration, home language, educational level, full- or part-time labor-force status, marital status, and whether immigrants are of Mexican or Central American origin.
- 34 Pastor and Scoggins, "Citizen Gain"; Heidi Shierholz, "The Effects of Citizenship on Family Income and Poverty" (Washington: Economic Policy Institute, 2010), available at <http://www.epi.org/publication/bp256/>; Lynch and Oakford, "The Economic Effects of Granting Legal Status and Citizenship."
- 35 Positive discrimination in this context arises when naturalized citizens receive a greater reward than an immigrant with identical human-capital characteristics.
- 36 Lynch and Oakford, "The Economic Effects of Granting Legal Status and Citizenship to Undocumented Immigrants."
- 37 Ibid.
- 38 Ibid.
- 39 Pastor and others, "Nurturing Naturalization."

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