The Political Effects of Immigrant Naturalization

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Abstract

Immigration is transforming the societies of Europe and North America. Yet the political implications of these changes remain unclear. In particular, we lack credible evidence on whether, and how, becoming a citizen of the country of residence prompts immigrants to engage with the political system. This paper uses panel data from Germany to test theories of citizenship and immigrant politics. I find that naturalization can promote political integration, but that this is more likely if new citizens have the chance to pick up habits of political engagement during the formative years of early adulthood.
INTRODUCTION

The political incorporation of immigrants is among the most urgent, and the most contentious, of issues now facing the democracies of Europe and North America. Around 110 million people who were born in another country now live in OECD member states, making up thirteen per cent of the total population (OECD 2013, 360). In this context, the concept of citizenship has acquired new relevance. In recent years many European governments have revised the procedures for immigrants to obtain citizenship, in an effort to promote or even require integration (Goodman 2012; Joppke 2007). Debate rages over a “path to citizenship” for undocumented migrants in the United States. Citizenship status affects people’s lives not only at state borders but also within countries, by distinguishing between full members of the polity and mere residents. At stake in current debates over citizenship laws are the broader questions of whether and how immigrants can participate in public life.

Some recent research claims that naturalization not only confers the right to vote but also makes immigrants more likely to engage with and seek to influence the political system (Just and Anderson 2012; Leal 2002; Wong 2000). If this is true, citizenship can serve as a tool for political incorporation. However, our knowledge of the political effects of naturalization rests on weak theoretical and empirical foundations. Scholars have missed opportunities to build on existing research on political participation, in order to better understand immigrant political behavior. And almost all of the research on the effects of citizenship relies on cross-sectional data, comparing migrants who have naturalized with those who have not. This risks mistaking the differences that make immigrants more or less likely to naturalize for the effects of citizenship status itself.
This paper tests theories that link citizenship and immigrant political engagement. Using panel data from Germany to compare the same people, before and after naturalization, I find little evidence that becoming a citizen boosts political interest or leads to higher rates of party identification among first generation immigrants. In contrast, there is evidence that naturalization does lead to increased partisanship among the second generation children of immigrants. These findings suggest that becoming a citizen of one’s country of residence can promote political integration, but that this is more likely if new citizens have the chance to pick up habits of political engagement during the “formative years” of early adulthood. In the closing sections of the paper I place these results in comparative context and discuss avenues for future research.

PREVIOUS RESEARCH

Large-scale immigration has inspired scholars to re-examine the concept of citizenship. Hence, whereas Marshall’s classic study (1950) of British political history emphasized the egalitarian logic of citizenship, Brubaker’s influential work (1992) on immigrants in France and Germany points out that citizenship is not only inclusive but also exclusive. Scholars now recognize multiple dimensions of citizenship, including legal status, political rights, political participation, and a sense of collective identity (Bloemraad, Korteweg and Yurdakul 2008; Bosniak 2000). Studying immigrant naturalization offers new opportunities for us to learn how these pieces fit together.

Holding citizenship of one’s country of residence is usually a pre-requisite for electoral participation. Many foreign residents in today’s liberal democracies have a range of civil and social rights, but few political rights. Foreign residents may enjoy
freedom of speech and assembly, but they are generally not allowed to vote or run for elected office. In some countries, non-citizens are barred from joining political parties or contributing to political campaigns. There is thus good reason to believe that naturalization makes it easier for immigrants to participate in electoral politics.

Recently, scholars have gone further, arguing that becoming a citizen not only allows immigrants to vote but also boosts other forms of political engagement. Research from a range of countries shows that, compared to foreign residents, naturalized citizens are more interested in politics, more likely to identify with a political party in their country of residence, and more likely to engage in a range of activities such as signing petitions or joining protests (Kesler and Demireva 2011; Leal 2002; Wong 2000; but see also Levin 2013). Some scholars interpret these differences as evidence that becoming a citizen causes increased political engagement (Just and Anderson 2012). However, this claim deserves close scrutiny, since theories of citizenship and political participation yield a range of predictions, and cross-sectional comparisons of foreign and naturalized residents are poorly suited for distinguishing between the possibilities. The next section of this paper introduces three relevant theories and discusses how they can be tested.

THEORIES OF CITIZENSHIP AND POLITICAL BEHAVIOR

Selection into Citizenship

A growing literature addresses the question of why immigrants naturalize (Bloemraad 2006; Cort 2012; Diehl and Blohm 2003; Street 2014). One key finding is that the

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1 However, intra-EU migrants hold local and European electoral rights. Some foreign residents can also vote in local elections in such countries as Denmark and the UK.
process of becoming a citizen is selective—indeed, it is doubly so. Foreign residents choose whether to apply, and citizenship laws make naturalization easier for some than it is for others. Migrants with more financial, human or social capital tend to find it easier to naturalize (Kahanec and Tosun 2009; Portes and Curtis 1987), and there is evidence that a desire to participate in politics is also a motive for naturalization (Kahanec and Tosun 2009; Leal 2002; Prümm 2004). Citizenship laws and public opinion often favor certain ethnic and racial groups, whether because of domestic politics or foreign policy goals (Brubaker and Kim 2011; Hainmueller and Hangartner 2013; Ngai 2005).

The selective logic of citizenship implies that differences between foreign residents and naturalized citizens often exist even before certain immigrants become citizens of their new homeland. Some immigrants never naturalize, and those who do so may be distinctive. This might be especially true in countries like Germany, where low naturalization rates suggest that the process is highly selective (OECD 2013, 375). The implication of this research is that although naturalized immigrants may appear to be more politically engaged than foreign residents, in fact the difference is often due to selection rather than any effects of citizenship status itself. If selection is the main force at work, we should expect to see no increase in political engagement, after immigrants naturalize. Based on this literature, I propose to test the following hypothesis:

HI, selection: Immigrants who naturalize are more politically engaged than those who remain foreign residents, even before the former acquire citizenship.

Citizenship as a Resource

Building on research showing that people draw on their resources in order to participate
in politics, Just and Anderson (2012, 487) argue that “citizenship is a resource provided by the state, and one that has the capacity to lower the legal risks and the potential costs of participation.” Following this logic, citizenship should have a larger effect on people with backgrounds not otherwise conducive to participation. Hence Just and Anderson predict larger effects among migrants from authoritarian regimes, who have no prior experience of democratic politics. Similarly, Kesler and Demireva (2011, 211) claim that citizenship confers social capital, helping immigrants engage with political institutions and organizations. If citizenship serves as a resource, we should see an immediate increase in political engagement upon naturalization, with larger effects among immigrants from non-democratic countries. Accordingly, I will test the hypothesis:

\[ H2, \text{citizenship as a resource: Immigrants who become citizens of their country of residence show an immediate increase in political engagement, and the effect is larger among migrants from non-democratic countries.} \]

\textbf{Citizenship in the Formative Years}

Finally, another body of research shows that politics is heavily habitual, and that these habits are often set in the “formative years” of early adulthood, typically defined as the late teens and twenties (Bartels and Jackman 2014; Mannheim 1952). For instance, people tend to form party preferences in young adulthood, and stick with them as they age (Campbell et al., 1960; Green, Palmquist and Shickler 2002). Electoral participation is likewise a matter of habit: people who vote in their teens or twenties generally continue doing so, whereas those who are less politically engaged at this age often remain inactive (Finkel 1985; Plutzer 2002). Prior (2010, 747) finds that political interest is set in early
adulthood, and is then “exceptionally stable” over the life cycle.

I contend that this literature, with its emphasis on early experiences and subsequent stability, can be reframed for the study of naturalization. One implication is that naturalization will have varying effects by life stage. Those who naturalize while young should be more open to forming participatory habits. The effects may be clearest for second generation migrants, who are socialized by schools and peers to engage with the political system in the same way as native-born citizens, but have fewer opportunities to do so, until they naturalize. Another implication is that the effects of naturalization should be gradual rather than instantaneous, since it takes time for participatory habits to take hold. Based on this theory, I propose to test the following hypothesis:

\[ H3, \text{citizenship in the formative years: Immigrants who naturalize in early adulthood show gradual, positive effects of citizenship on political engagement.} \]

Whether these hypotheses are compatible with one another is an empirical question. It is possible, for instance, both that a) migrants who go on to naturalize differ from those who do not, even before they become citizens, and also that b) acquiring citizenship causes a further increase in political engagement. Nonetheless, we can gain a better understanding of the mechanisms behind any political effects of immigrant naturalization by distinguishing between these theories.

\[ \text{This theory is consistent with findings that, while migrants who arrive as adults become more politically engaged over time, they still tend to lag natives (Bilodeau, McAllister and Kanji 2010; Cho 1999; Hajnal and Lee 2011; White et al., 2008).} \]
DATA, MEASURES AND METHODS

Data

Since prior research has revealed the selective logic of citizenship, it is crucial to distinguish between pre-existing differences that explain selection into citizenship, and differences that emerge only after this status is obtained. To do this, I turn to panel data. Repeated surveys of the same people reveal trends in the years before and after naturalization, and panel data also allow for “fixed effect” controls for unobserved factors that vary across individuals. Scholars have used panel data to estimate the effects of naturalization on earnings (Bratsberg, Ragan and Nasir 2004; Steinhardt 2012), and I argue that this approach should also be applied to study political outcomes.

The data source is the German Socio-Economic Panel (SOEP; Frick et al., 2007). Germany is home to a large number of foreign residents, at 7 million or 9% of the total population. Around 2% naturalize each year. SOEP is an annual household survey that began in 1984; I use 27 rounds of data. When a household is recruited, all residents aged over sixteen are eligible for interview. The initial SOEP panel included an over-sample of “guest workers” who came to Germany from Southern and South-Eastern Europe in the 1960s and 1970s. The analytic sample for this paper is made up of both foreign residents and naturalized citizens. The panel data provide “person-year” observations for each individual in each of the years in which he or she participated in the survey. The

3 I use the Scientific Use File, from which 5% of households were removed at random.

4 The survey is translated into the five main languages used by the “guest worker” migrants—Turkish, Greek, Italian, Spanish, and Serbo-Croatian—as well as English. This helps to ensure that the sample is representative of the immigrant population.
first 27 rounds of SOEP yield 49,439 person-year observations for people who remained foreign residents. Of particular interest are the individuals who were recruited into the survey as foreign residents, but who subsequently naturalized; SOEP yields 7,547 person-year observations for such people. I include both the first and second generations, since, until very recently, Germany did not grant citizenship by birth in the country, with the result that several million foreign residents were born in Germany to immigrant parents.\(^5\)

**Measures**

The predictor of interest is whether the survey respondent holds German citizenship. This question is asked annually and I used an indicator for each person-year (I cleaned the data to remove a handful of cases in which citizenship status switched back and forth). For outcomes, SOEP includes several questions on political behavior. I focus on two items that have been asked frequently, and are thus suitable for longitudinal analysis. Each year, survey participants are asked about their interest in politics and party identification. I treat partisanship as an indicator of political engagement because of the central role that parties play in representative democracy; partisans also participate at higher rates in a range of political activities (Finkel and Opp 1991; Hero et al., 2000). For each variable I use a binary outcome measure. I thus report the proportion of

\(^5\) Some foreigners born in the country acquire German citizenship in childhood, since they can be included on the application when their parents naturalize (Street 2014). The second generation sample in this paper is limited to those who did *not* become German citizens in childhood (by age 17), since children in SOEP households are not asked political questions, meaning that pre-naturalization data are not available.
partisans, and the proportion who are either “very strongly” or “strongly” interested in politics, as opposed to “not so strongly” or “not at all” (details of question wording and coding can be found in the Supporting Information with the online version of the article).

I also include several controls. Fixed effect models control for person-specific factors that do not change over time such as gender, country of birth, or ethnicity. I therefore add measures that vary over time. The models include person-specific controls for years of residence (linear and quadratic). Eight years of residence are required before naturalization (less time is required for refugees, or those married to a German). The controls for length of residence also account for familiarity with the country, and for smoothly changing unobserved variables at the individual level. I also control for educational attainment, which may help to explain variation in political engagement. Finally, I control for marital and employment status, and whether the person has children in Germany. These serve as measures of social integration, which is correlated with naturalization (Kahanec and Tosun 2009). Table 1 provides descriptive statistics on the sample of people for whom the SOEP contains both pre- and post-naturalization data.

[Table 1 about here]

**Methods**

The simplest approach is to calculate average levels of political engagement among foreign residents, and among naturalized citizens in the years before and after they acquired citizenship. This allows comparisons by citizenship status, while taking account of differences between people who never naturalize and those who do. I also estimate fixed effect models. These can be thought of as including a separate intercept for each
person, so that they hold constant any pre-existing differences between people and capture the effects of variables that change over time—in this case, becoming a German citizen. The interpretation is slightly more complex with binary outcomes. In such cases, scholars often use conditional fixed effect models. I use binary outcomes because there is no software available to estimate conditional fixed effect ordered regression (Allison 2009, 44). To test for robustness across specifications, I also report results from fixed effect linear probability models. Linear models generally yield similar results in such contexts and are easier to interpret (Angrist and Pischke 2009: 107; Beck 2015). One difference is that conditional fixed effect models only use units with variation on the outcome measure. Hence more observations are used in the linear models; this makes no difference to my substantive findings.

RESULTS

I begin by comparing average levels of political engagement. For the two outcomes, Figure 1 shows results for first generation immigrants who have not naturalized (on the left side of each chart), for migrants who naturalized both in the years beforehand and in the years after they did so (the two bars in the middle of the chart), and for native Germans (on the right).6 Standard errors are clustered by respondent, and I use design and longitudinal weights to account for sampling methods and for panel attrition.

[ Figure 1 about here ]

In the chart on the left side of Figure 1 we see that foreign residents are the least likely to say that they are “strongly” or “very strongly” interested in politics. Naturalized

6 By “native Germans” I mean German-born citizens with both parents born in Germany.
citizens show stronger political interest: the difference between foreign residents and naturalized citizens, even before naturalization, is significant at $p<0.01$ (all results are for two-tailed tests). However, those who became German citizens show no significant change in levels of political interest, comparing the years before and after naturalization ($p=0.7$). Native Germans show significantly stronger political interest than any of the immigrant groups (in all cases $p<0.01$). The chart on the right of Figure 1 shows substantively identical results for the proportion saying they tend to support a certain political party.\footnote{A possible concern with the measure of partisanship is that the question wording may lead people who have never voted in Germany to say “no” or decline to answer. The wording is: “Many people in Germany tend to support one party, even if they occasionally vote for another. Do you lean towards a particular party?” However, as the figures illustrate, many foreign residents say that they tend to support a particular party, even though they cannot vote. Regardless of immigration history, less than 1% of observations are missing because the survey participant refused to answer the question.} For both of the outcome measures in Figure 1, simply comparing foreign residents with people who have naturalized would yield different results. In a cross-sectional comparison, people who have naturalized would appear more interested in politics ($p=0.02$), and more likely to have a party preference ($p<0.01$).\footnote{To mimic the results for a cross-sectional comparison, I combine the observations for foreign residents and for people who have not yet naturalized, and compare these to the post-naturalization observations for people who went on to become German citizens.}

Figure 2 shows results from a parallel analysis of the second generation, i.e. people with immigrant parents who were born in Germany as foreign citizens. Starting
with the chart on the left, we see that second generation foreign residents report the lowest levels of political interest, although the difference is marginal when compared to those who became German citizens, in the years before naturalization ($p=0.1$). Focusing on those who naturalized, and comparing the years before and after they did so, does not yield a significant difference ($p=0.17$). Again, a cross-sectional comparison of second generation immigrants with and without German citizenship would yield much stronger support for the idea that political interest is greater among naturalized citizens ($p=0.02$). Finally, the chart on the left of Figure 2 also shows that native Germans report high levels of political interest, but not significantly higher than second generation immigrants in the years after naturalization ($p=0.26$).

[ Figure 2 about here ]

The chart on the right of Figure 2 shows the proportion of partisans among second generation foreigners, naturalized citizens and natives. Foreign residents again score lowest, but the difference is only marginally significant when this group is compared to people who naturalized, in the years before they did so ($p=0.1$). We also see that second generation migrants are significantly more likely to describe themselves as partisans in the years after naturalization than in the years before they became German citizens ($p<0.01$). This indicates a positive effect of citizenship on party identification. Finally, although native Germans report high levels of partisanship, they are not significantly different from naturalized second generation immigrants in this regard ($p=0.38$).

Figures 1 and 2 illustrate the differences between cross-sectional and longitudinal comparisons. In all cases, the before-and-after difference among those who naturalized is smaller than when people who remained foreign residents are lumped together with the
pre-citizenship data for people who subsequently naturalized. However, there is still some element of comparison across individuals in these figures, since scores are pooled for the years before and after naturalization. The results could be distorted if there were large imbalances between the number of years of pre- and post-naturalization data available for people with different levels of political engagement. I now restrict the analysis to people who naturalized, and report results from fixed effect models that rely on within-person variation over time.

Table 2 reports results from models of the political effects of naturalization for first generation immigrants. The outcome measures are political interest (models 1 to 4) and partisanship (models 5 to 8). For each outcome I report fixed effect models that compare average pre- and post-naturalization values, as well as models with controls for variables that change over time and may be related to political engagement. Recall that many factors which are stable over time—such as gender, ethnicity, or country of origin—are controlled with the fixed effects. Standard errors are clustered by survey participant. Across the models, the results in Table 2 suggest that length of residence is associated with rising political interest and higher rates of partisanship, especially in the first years of residence. However, there is no evidence that becoming a German citizen has any additional effect.

[ Table 2 about here ]

Table 3 presents results from parallel analyses of political engagement among second generation immigrants. For this group I include linear and quadratic controls for age (equivalent to years of residence), but the coefficients do not differ significantly from zero. This implies that, having grown up and been socialized in Germany, additional
years of residence are not important for the political engagement of the second generation. The table provides little support for the idea that acquiring citizenship causes an increase in political interest. However, becoming a citizen of the country of residence is estimated to have a positive effect on partisanship.

[ Table 3 about here ]

The limited sample size of naturalized immigrants in SOEP precludes detailed comparisons by country of origin. The only group large enough for separate analysis is made up of people with Turkish origins, who are forty-two per cent of naturalized first generation migrants, and fifty-six per cent of the naturalized second generation. In each case, separate analyses yield similar results to those in Tables 2 and 3, providing no support for the prediction that citizenship has larger effects among migrants from countries with a history of non-democratic politics. The SOEP also includes measures of participation in local politics and volunteer work, although these questions were asked less frequently. Longitudinal models of the kind described above show no evidence of naturalization effects in these domains, among either first or second generation migrants (see Supporting Information Tables SB1 and SB2).

The data reveal that the median age at naturalization is 25 in the second generation, compared to 37 in the first generation. According to the “formative years” hypothesis, we might expect positive effects of citizenship on political engagement not only in the second generation, but also among first generation immigrants who naturalized in early adulthood. There is some support for this prediction. Restricting the analysis to first generation immigrants who naturalized before the age of 30 (yielding just 762 person-years of data), a fixed effect model shows a positive effect of acquiring
German citizenship on partisanship ($p=0.01$), though the estimate is no longer statistically significant when length of residence and other covariates are included ($p=0.43$).

Finally, to provide evidence on the timing of the effects, I also estimate dynamic panel models (Autor 2003). If differences in political interest emerge shortly before the people in question became German citizens, this would suggest political interest was a motive for naturalization. If effects appear gradually after naturalization, this would be consistent with theories suggesting that habits of political engagement need some time to take hold. The dynamic panel models include indicators for the years that lead up to and lag the year of naturalization, as well as the individual fixed effects and controls. For the populations and outcomes with null results, as described above, these models provide no evidence of temporary effects of citizenship that happened to be cancelled out by subsequent trends. Figure 3 shows the estimates for the leads and lags for the clearest positive result, namely partisanship in the second generation. Due to the limited sample size and wide standard errors, years are grouped in pairs. Hence, the result for “0/1 yrs. after” on the horizontal axis in Figure 3 shows the estimate in the year of naturalization and the following year, whereas “2/1 yrs. before” shows the estimate for the two years prior to naturalization. The vertical lines through each point show 95% confidence intervals, based on clustered standard errors. Results in gray are for the period prior to naturalization, and results in black for the period thereafter. The fact that partisanship does not rise in the years leading to naturalization indicates that this is a causal effect, rather than merely an artifact of selection. Figure 3 also suggests that the effect of holding German citizenship on party identification tends to increase over time.

[ Figure 3 about here ]
To summarize, these results provide clear support for H1, the hypothesis that immigrants who naturalize are more politically engaged than those who don’t, but that this is also true long before the former naturalize. Differences due to the selective logic of citizenship are especially clear in the first generation. The results yield no support for H2, the hypothesis that citizenship serves as a resource for political participation, since we see no sudden increase in participation once immigrants naturalize, nor do the effects appear to be stronger among migrants from a country with a history of non-democratic politics. Finally, the results provide some support for H3, the hypothesis that acquiring citizenship allows people to start forming habits of political participation, provided that they naturalize in the “formative years” of early adulthood.

DISCUSSION

This paper provides some of the first credible evidence on the political effects of becoming a citizen of one’s country of residence. Previous research has shown that naturalization is a selective process, and the evidence presented here is consistent with those findings. Immigrants who are already more politically engaged are more likely to naturalize, while less-engaged immigrants often retain foreign resident status. However, this paper also shows that acquiring citizenship in early adulthood helps immigrants to form partisan preferences. Since political parties play a central role in organizing political competition and participation, becoming a partisan is an important step in the process of immigrant political incorporation (Hajnal and Lee 2011).

Even in the current era of mobility, international migrants are still in the minority among the residents of democracies. Most people are born with the citizenship of the
country where they live. Hence it is still natural to think of citizenship as a “bundle” of rights that belong together. But both the history of citizenship laws (Cohen 2009; Marshall 1950) and the experiences of today’s immigrants imply that we should take a differentiated approach to the study of citizenship. This paper’s findings indicate that it matters how one becomes a citizen. Specifically, the evidence for effects on partisanship, among those who obtain the right to vote in the formative years of early adulthood, suggests that citizenship status interacts with socialization experiences. Other research points in a similar direction. For example, Pantoja, Ramirez and Segura (2001) find that an anti-immigrant context in California of the 1990s politicized newly naturalized citizens in distinctive ways. Such findings suggest that scholars and policymakers should take a less abstract and more contextual approach to the concept of citizenship.

Previous research on habits of political engagement is also based largely on the study of native-born citizens. In this literature, scholars continue to debate why the “formative years” are so important (Bartels and Jackman 2014). Is this due to psychological reasons, or contextual factors? Going forward, scholars of immigration are in a unique position to provide further insights. Immigrants are often treated as outsiders, and are less likely to be encouraged to participate in the politics of the new homeland (Bloemraad 2006; Jones-Correa 1998). But in some contexts, immigrant political mobilization is successful (Maxwell 2012). Thus, studying immigrants is one way to study people in more or less inviting political contexts. For instance, there is evidence that first generation immigrants in Germany are less likely to be asked to vote by German political parties, but that this is no longer true in the second generation (Wüst 2011). Future research on immigrant political mobilization, especially in the second generation,
could enhance our understanding of how people develop habits of political participation.

Among the limitations of this paper are the modest sample size for naturalized immigrants, the small number of political questions asked in the survey, and the focus on a single country. The selective logic of citizenship is especially strong in Germany. The country has a low naturalization rate, compared to neighbors such as France, the Netherlands or the UK (OECD 2013, 298). When naturalization is difficult, selection should result in bigger differences between migrants who naturalize and those who do not. It is possible that acquiring citizenship has a greater impact on political engagement in countries where a broader range of immigrants are motivated and able to naturalize. However, the limited number of studies on this topic means that we are not yet in a position to evaluate this prediction. More research is needed.

Finally, despite the weak evidence for effects of citizenship on political engagement among first generation migrants, and the null result for political interest among second generation migrants, it is important to emphasize that this paper has not cast doubt on the idea that citizenship is crucial for electoral participation. Given that it is often illegal for non-citizens to vote, citizenship is a necessary condition for electoral engagement. Indeed, recent data from the SOEP suggest that naturalized immigrants vote at similar rates to natives. When asked in 2010 whether they had voted in the federal elections of the previous year, 78% of naturalized first generation immigrants said “yes,” as did 75% of naturalized second generation immigrants, and 84% of natives.9

9 The responses of the three sets of respondents are not statistically different (the lowest p-value is 0.23). Unfortunately, the SOEP began asking this question in 2010, so only one round of data is available. This may help to explain the non-significant finding.
CONCLUSIONS

This paper makes several contributions to the growing literature on immigrant political incorporation. Theoretically, I have worked to enhance the framework for research on citizenship and political behavior, by adapting theories about how people develop habits of political engagement over the life course, for the purpose of studying the effects of naturalization. The results support the idea that scholars should take a differentiated approach to the study of citizenship, and should focus on understanding the specific contexts and processes that allow people to exercise their rights as citizens. Methodologically, this paper demonstrates the advantages of using panel data to address such questions, by showing that cross-sectional and longitudinal comparisons yield quite different results on the impact of naturalization. Substantively, the finding that becoming a citizen is more likely to promote political participation when immigrants are able to start forming political habits in early adulthood, rather than later in life, is directly relevant to ongoing debates over how to ensure that immigrants in Europe and North America can become full members of the polity.
References


Supporting Information

Additional supporting information may be found in the online version of the article at the publisher’s website:

   **Appendix S1.** Question wording and coding.

   **Table SB1.** Longitudinal models of the effects of first generation immigrant naturalization on local political participation and voluntary work.

   **Table SB2.** Longitudinal models of the effects of second generation immigrant naturalization on local political participation and voluntary work.
### Tables

**TABLE 1.** Descriptive statistics on the naturalized sample.

<table>
<thead>
<tr>
<th></th>
<th>First generation sample</th>
<th>Second generation sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median age</td>
<td>37</td>
<td>25</td>
</tr>
<tr>
<td>Elementary/incomplete education</td>
<td>36%</td>
<td>42%</td>
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<tr>
<td>Secondary education</td>
<td>38%</td>
<td>41%</td>
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<tr>
<td>Higher education</td>
<td>26%</td>
<td>17%</td>
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<tr>
<td>Married</td>
<td>77%</td>
<td>43%</td>
</tr>
<tr>
<td>Living with children</td>
<td>40%</td>
<td>43%</td>
</tr>
<tr>
<td>Working</td>
<td>62%</td>
<td>62%</td>
</tr>
</tbody>
</table>

**Number of person-year observations**
- without German citizenship: 3286, 938
- with German citizenship: 2454, 869

*Source: German Socio-Economic Panel, 1984-2010.*


**TABLE 2.** Longitudinal models of the effects of first generation immigrant naturalization on political interest and partisanship.

<table>
<thead>
<tr>
<th>Model</th>
<th>Outcome: political interest</th>
<th>Outcome: partisanship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) c. logit</td>
<td>(2) c. logit</td>
</tr>
<tr>
<td>Citizenship</td>
<td>0.171</td>
<td>-0.146</td>
</tr>
<tr>
<td></td>
<td>(0.153)</td>
<td>(0.166)</td>
</tr>
<tr>
<td>Yrs. resid.</td>
<td>-</td>
<td>0.135***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.042)</td>
</tr>
<tr>
<td>Yrs. resid.²</td>
<td>-</td>
<td>-0.002**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.001)</td>
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<td>Secondary edu.</td>
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<td>Higher edu.</td>
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<td>Children</td>
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<td></td>
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<td>(0.234)</td>
</tr>
<tr>
<td>Working</td>
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<td></td>
<td></td>
<td>(0.166)</td>
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</tbody>
</table>

**Fixed effects** yes yes yes yes yes yes yes yes
**N observations** 3125 3125 5001 5001 3873 3873 4926 4926
**N individuals** 212 212 370 370 265 265 370 370

*Note.* Cluster-robust standard errors in parentheses. C. logit indicates conditional logit model, linear indicates linear probability model. Significance is shown at * p<0.1, ** p<0.05, *** p<0.01. Baseline education category is “elementary.” *Source:* German Socio-Economic Panel, 1984-2010.


<table>
<thead>
<tr>
<th>Model</th>
<th>Outcome: political interest</th>
<th>Outcome: partisanship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) c. logit</td>
<td>(2) c. logit</td>
</tr>
<tr>
<td>Citizenship</td>
<td>0.374 (0.288)</td>
<td>0.107 (0.326)</td>
</tr>
<tr>
<td>Age</td>
<td>- 0.032 (0.083)</td>
<td>- 0.003 (0.006)</td>
</tr>
<tr>
<td>Age²</td>
<td>- 0.000 (0.002)</td>
<td>- 0.000 (0.0002)</td>
</tr>
<tr>
<td>Secondary edu.</td>
<td>- 0.454 (0.421)</td>
<td>- 0.062* (0.032)</td>
</tr>
<tr>
<td>Higher edu.</td>
<td>- 0.140 (0.545)</td>
<td>- 0.031 (0.062)</td>
</tr>
<tr>
<td>Married</td>
<td>- 0.078 (0.370)</td>
<td>- 0.008 (0.033)</td>
</tr>
<tr>
<td>Children</td>
<td>- 0.167 (0.331)</td>
<td>- 0.020 (0.034)</td>
</tr>
<tr>
<td>Working</td>
<td>- -0.238 (0.254)</td>
<td>- -0.025 (0.026)</td>
</tr>
</tbody>
</table>

Fixed effects
N observations | yes | yes | yes | yes | yes | yes | yes | yes
N individuals | 987 | 987 | 1701 | 1701 | 1278 | 1278 | 1639 | 1639

Note. Cluster-robust standard errors in parentheses. C. logit indicates conditional logit model, linear indicates linear probability model. Significance is shown at * p<0.1, ** p<0.05, *** p<0.01. Baseline education category is “elementary.” Source: German Socio-Economic Panel, 1984-2010.
Figure 1. Political engagement of First Generation foreign residents, naturalized citizens and native-born Germans.

Note: Vertical lines indicate 95% confidence intervals, based on clustered standard errors.
Figure 2. Political engagement of Second Generation foreign residents, naturalized citizens and native-born Germans.

*Note:* Vertical lines indicate 95% confidence intervals, based on clustered standard errors.
Figure 3. Dynamic effects of naturalization on Second Generation partisanship.

Note: Estimated change in probability of party identification in the years leading up to and lagging the time of naturalization. Based on fixed effect models with individual-level controls for education and demographic variables. Years are grouped in pairs because of limited sample size. Vertical lines show 95% confidence intervals, based on clustered standard errors.
**Supporting Information** for “The Political Effects of Immigrant Naturalization”

**Appendix S1: Question wording and coding**

*Political interest.* “Generally speaking, how strongly are you interested in politics?” Coded 1 if “very strongly” or “strongly,” 0 if “not so strongly” or “not at all.”

*Partisanship.* “Many people in Germany tend to support one party, even if they occasionally vote for another. Do you lean towards a particular party?” Coded 1 for “yes,” 0 for “no.”

*Local politics.* Based on frequency of “involvement in a civic group, political party, or local government.” Coded 1 if “at least once a week” or “at least once a month,” or 0 if “less often” or “never.”

*Volunteer work.* Based on “volunteer work in clubs or social services.” Coded 1 if “at least once a week” or “at least once a month,” or 0 if “less often” or “never.”

*Citizenship.* Coded 1 if German citizen in the relevant survey-year, 0 otherwise.

*Age.* Recoded to begin at 0, to avoid extrapolating beyond the available data.
**Elementary education.** Less than ten years of education, or, when years of education are missing, in the category “general elementary” on the ISCED scale.

**Secondary education.** Ten or eleven years of education, or, when years of education are missing, in the category “middle vocational” on the ISCED scale.

**Tertiary education.** Twelve or more years of education, or, when years of education are missing, in the categories “vocational plus Abitur,” “higher vocational” or “higher education” on the ISCED scale.

**Children.** Coded 1 if respondent has children living in the same household, 0 otherwise.

**Working.** Coded 1 if working full- or part-time, 0 otherwise.
TABLE SB1  Longitudinal models of the effects of first generation immigrant naturalization on local political participation and voluntary work.

<table>
<thead>
<tr>
<th>Model</th>
<th>Outcome: local politics</th>
<th>Outcome: voluntary work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) c. logit</td>
<td>(2) c. logit</td>
</tr>
<tr>
<td>Citizenship</td>
<td></td>
<td>-0.108</td>
</tr>
<tr>
<td></td>
<td>(0.282)</td>
<td>(0.351)</td>
</tr>
<tr>
<td>Yrs. resid.</td>
<td>-</td>
<td>-0.022</td>
</tr>
<tr>
<td></td>
<td>(0.081)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Yrs. resid.(^2)</td>
<td>-</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Secondary edu.</td>
<td>-</td>
<td>0.412</td>
</tr>
<tr>
<td></td>
<td>(0.522)</td>
<td>(0.019)</td>
</tr>
<tr>
<td>Higher edu.</td>
<td>-</td>
<td>0.933</td>
</tr>
<tr>
<td></td>
<td>(0.712)</td>
<td>(0.028)</td>
</tr>
<tr>
<td>Married</td>
<td>-</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>(0.511)</td>
<td>(0.019)</td>
</tr>
<tr>
<td>Children</td>
<td>-</td>
<td>-0.368</td>
</tr>
<tr>
<td></td>
<td>(0.362)</td>
<td>(0.013)</td>
</tr>
<tr>
<td>Working</td>
<td>-</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>(0.302)</td>
<td>(0.013)</td>
</tr>
</tbody>
</table>

Fixed effects  yes yes yes yes yes yes yes yes
N observations 906 906 3316 3316 1698 1698 3310 3310
N individuals 83 83 369 369 161 161 369 369

Note. Cluster-robust standard errors in parentheses. C. logit indicates conditional logit model, linear indicates linear probability model. Significance is shown at * p<0.1, ** p<0.05, *** p<0.01. Baseline education category is “elementary.” Source: German Socio-Economic Panel, 1984-2010.
TABLE SB2 Longitudinal models of the effects of second generation immigrant naturalization on local political participation and voluntary work.

<table>
<thead>
<tr>
<th>Model</th>
<th>Outcome: local politics</th>
<th>Outcome: voluntary work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) c. logit</td>
<td>(2) c. logit</td>
</tr>
<tr>
<td>Citizenship</td>
<td>0.586 (0.358)</td>
<td>0.460 (0.537)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.137 (0.132)</td>
<td>-</td>
</tr>
<tr>
<td>Age²</td>
<td>-0.003 (0.004)</td>
<td>-</td>
</tr>
<tr>
<td>Secondary edu.</td>
<td>-0.614 (0.612)</td>
<td>-</td>
</tr>
<tr>
<td>Higher edu.</td>
<td>-1.143 (1.272)</td>
<td>-</td>
</tr>
<tr>
<td>Married</td>
<td>-0.545 (0.564)</td>
<td>-</td>
</tr>
<tr>
<td>Children</td>
<td>-0.822 (0.502)</td>
<td>-</td>
</tr>
<tr>
<td>Working</td>
<td>-0.236 (0.452)</td>
<td>-</td>
</tr>
</tbody>
</table>

Fixed effects | yes | yes | yes | yes | yes | yes | yes | yes |
N observations | 365 | 365 | 1129 | 1129 | 683 | 683 | 1126 | 1126 |
N individuals  | 38 | 38 | 134 | 134 | 68 | 68 | 134 | 134 |

Note. Cluster-robust standard errors in parentheses. C. logit indicates conditional logit model, linear indicates linear probability model. Significance is shown at * p<0.1, ** p<0.05, *** p<0.01. Baseline education category is “elementary.” Source: German Socio-Economic Panel, 1984-2010.