The Effect of Birthright Citizenship on Parental Integration Outcomes[*]

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Abstract

This paper provides empirical evidence on whether child legal status at birth affects the level of cultural integration of immigrant parents with native community. We consider the 1999 reform of the German nationality law, which introduced birthright citizenship for children born in Germany to non-German citizen parents. Our results show that changes in the rules that regulate child citizenship have significantly increased parents' propensity to establish contacts with German citizens and use the German language. The effect on parents' integration varies according to the initial endowment of human capital and the level of integration in their local ethnic community.

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1 Introduction

In the last four or so decades Western societies have experienced large increases in migration inflows, and the immigrant population in the OECD countries has more than tripled since the 1960s. Ethnic riots in the current decade[1] have promoted lively discussion on how governments can deal with the rising levels of diversity, and what are the best frameworks to regulate the social status of newcomers and their descendants and promote their integration with the local community.

The legal institution of citizenship has frequently been a key issue in political and cultural debates on immigration, welfare programs, multiculturalism, and nationalism. However, there is no evidence on whether the attribution of formal citizenship has an effect on how immigrants and ethnic groups identify themselves within host country societies. More generally, it is unclear whether migration policies help to foster social cooperation within society, and avoid the divisiveness of racial, religious, and ethnic affiliation.

Citizenship laws vary across countries and over time,[2] but they generally fall into two main groups based on the principles underlying the possibility to be granted citizenship at birth: *jus sanguinis* ("right of blood"), and *jus soli* ("right of soil") or *birthright citizenship*. According to the jus sanguinis principle, citizenship is determined by having an ancestor who is citizen of the country. Under the jus soli principle instead, citizenship is granted to any individual born in the territory of the related country. The United States historically has adopted a very inclusive approach and the melting-pot metaphor is often used to describe its successful assimilation of non-natives. While in the United States the jus soli was encoded in the Constitution and has never been changed, in Europe rules on citizenship are characterized by a mix of jus soli and jus sanguinis and are often subject to debate and revision. In 1984 the British Nationality Act restricted the jus soli in the UK; in 1999 a new citizenship law injected some elements of jus soli into the German jus sanguinis system.

This paper studies how the introduction of the birthright citizenship for children born in Germany to non-German citizen parents affects the degree of parental inte-

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[1]Outbreaks of social unrest occurred in towns in the north of England in 2001 and in Paris suburbs in 2005 and 2006.

[2]Bertocchi and Strozzi (2010) provide empirical evidence on how economic, legal and cultural variables affected the evolution of citizenship laws in the post-world war period.

gration with the local community measured by the probability of visiting and being visited by Germans, and the propensity to speak in German and read German newspapers. While the first two variables proxy for the willingness to interact with the local population, the latter two measure proxy for the level of acquaintance with local culture. In May 1999, the German parliament amended the Citizenship and Nationality Law of 1913. Under the original law, a child born in Germany was granted German citizenship if at least one parent had German citizenship at the time of its birth. The reform introduced elements of the birthright citizenship system: a child born to foreign parents on 1st January 2000 or after was eligible for citizenship at birth if a) at least one parent had been ordinarily resident in Germany for eight years and b) had been granted a permanent right of residence. The law also introduced a transitional provision for the children of foreign residents, aged under age 10 on 1st January 2000. These children would be naturalized upon application (to be completed before the 31st of December 2000) if at least one parent had been ordinarily resident in Germany for 8 years at the time of their birth.

In order to avoid potential problems of endogeneity related to the child bearing decisions of immigrants, and variations over time in the composition of immigrants' inflows, we identify the effect of the regulatory framework of child citizenship by exploiting the retrospective component of the 1999 German reform. Among households composed of foreign parents whose youngest child was born in Germany between 1990 and 1999, only those where at least one of the parents had resided in Germany for more than 8 years at the time of its birth were affected by the reform. In the terminology of the evaluation literature this represents the *treatment* group. All households where the youngest child was born between 1980 and 1989, or where parents had stayed for less than 8 years when the youngest child was born between 1990 and 1999, are the *control* group. Using data from the German Socio-Economic panel (GSOEP), a household-based panel survey that over samples immigrants, and comparing the integration outcomes of parents in the *treatment* and *control* groups before and after the reform, we investigate how the legal framework of child citizenship can affect parental integration.

Our results show that the introduction of jus soli citizenship determines a significant and not negligible increase in the probability of socializing (visiting and being visited by) with Germans, and reading German newspapers. We then investigate

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whether the effect of the birthright citizenship system on parental integration varies with the parental level of human capital, measured by the number of years of education, and level of integration of the community to which they belong. The Turkish community, while being the largest ethnic group in Germany, has consistently displayed lower levels of integration than among other foreign communities. We find that the effect of the reform on the level of interaction with the local community is independent of whether or not the respondent belongs to the Turkish group, but that the reform increased the propensity to speak German and read German newspapers only among non-Turkish immigrants. Interestingly, we also found that the respondents' level of human capital produced different patterns of integration after the reform: poorly educated respondents' interactions with the local community increased after the reform, while for the better educated respondents the level of integration with local culture increased.

A number of robustness checks support the causality of the link between child legal status and immigrants' integration. We use a semiparametric differences-in-differences approach and perform falsification tests in order to exclude the possibility that our results are driven by differential trends between the treatment and control groups. Possible selection biases are discussed and controlled for. Finally, the sample is opportunely restricted in order to rule out confounding effects driven by other of the provisions of the new citizenship law.

To our knowledge, this is the first work to provide a quantitative assessment of the effects of policies on immigrants' levels of integration. So far, scholars have devoted little attention to what determines immigrants' levels of cultural assimilation. Difficulties to integrate can potentially contribute to explain some of the persistent differences between natives and non-natives, i.e. fertility rates and school performance.[3] Our results suggest that migration policies might play an important role in explaining some of these differences. Moreover, in showing that the regulatory framework of child legal status can significantly affect parental behavior, we provide evidence that migration rules can have indirect effects on individuals other than those directly targeted by policy.

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[3]Algan et al. (2010), when studying the educational attainments of natives and immigrants in France, Germany and UK, find that the gap of second-generation immigrants is smaller than first-generation ones, but still significant in each of the three countries.

This paper is related to the large economic literature on migration developed in the past two decades. As stressed by Borjas and Hilton (1996), the historical debate over immigration policy, especially in the US, has focused primarily on two issues: 1) how well immigrants integrate in the native community; and 2) whether or not the presence of immigrants affects the labor market outcomes of natives. While the economic literature mainly addresses the second issue,[4] there is very little evidence on the determinants of immigrants' integration processes. We consider the 1999 German nationality law reform and present evidence that changes in the rules that regulate child legal status have increased the level of parental integration with German society, as measured by the extent to which they use the local language, and the level of social interactions with the native community. Language proficiency has been shown to be positively correlated with earnings (see, among others, Chiswick (1991), Angrist and Lavy (1997) and Dustmann and Van Soest (2002)), while Bertrand et al. (2000) provide evidence that networks involving only the socially disadvantaged can inhibit upward mobility. Borjas (1992) argues that intergenerational transmission of skills and earnings among immigrants depends on parental input as well as on the quality of the ethnic environment, the so called *ethnic capital*. He provides evidence suggesting that the quality of the ethnic environment acts as an externality in the human capital accumulation process and partially explains persistent differences between natives and non-natives. Therefore, policies that facilitate the integration of immigrants might affect ethnic capital, and thus promote intergenerational mobility and foster convergence with the levels of natives.[5]

We also contribute to the literature on the determinants of ethnic assimilation and identification. Bisin et al. (2006) find that in the UK, ethnic identity is more intense in mixed than in segregated neighborhoods, Clots-Figueras and Masella (2008) argue that the introduction of bilingual education in Catalonia in 1983 had an effect on the identity of Catalan residents and on their political preferences. Indeed, the level of usage of the German language and the extent of interactions with German

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[4]The existing evidence on the effects of migration on natives' labor outcomes is not conclusive. Borjas (2003) finds that the presence of immigrants lowers the wages for competing workers. Ottaviano and Peri (2008) provide evidence of complementarities between local and immigrant workers, showing that, in the long run, migration has a small positive effect on the wages of natives.

[5]Mazzolari (2009) finds that dual citizenship rights have a positive effect on the economic assimilation of immigrants in the United States. Steinhardt (2008) documents that the acquisition of citizenship is associated with a positive wage premium in Germany.

citizens might be interpreted as a measure of self-identification with the host country. We focus on citizenship laws and isolate another possible determinant of ethnic identification: the legal status of the children.

Finally, by focussing on the effect of child status on parental integration, we also contribute to a recent stream of literature that studies how the characteristics of the children can affect parental behavior. The current literature tends to emphasize the effects of child gender on parental choices and preferences.[6] This paper provides evidence that legal status is another way through which children can affect parental outcomes.

The paper is organized as follows: Section 2 provides a brief description of citizenship systems across the world, and of the reform studied here. Data, empirical strategy, basic empirical evidence and the possible channels through which the citizenship rights of the children might have an effect on parental behavior are discussed in Section 3. Section 4 provides several robustness checks. Section 5 looks at the heterogeneous effects of the German reform. Finally, Section 6 concludes.

2 Background on Citizenship Laws

2.1 Jus Sanguinis vs. Jus Soli

In this section we provide an overview of the legal framework of citizenship and some descriptive evidence on the link between citizenship systems and immigrant integration. While both the benefits associated with citizenship and the rules that regulate its acquisition vary across countries, for the purpose of our analysis we keep the discussion in this section general. Historical information on the evolution of citizenship systems largely draws on Bertocchi and Strozzi (2010).

Citizenship is the legal institution that assigns full membership in a state and determines associated rights and duties. There are different ways to achieve citizenship: through birth, by naturalization, by adoption, and by marriage. Citizenship at

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[6]Dahl and Moretti (2008) show that the child gender has an impact on the living arrangements, marital status and reproduction decisions of a significant fraction of American families. Washington (2008) finds that the number of daughters increases the propensity of US male congressmen to vote liberally, particularly on reproductive rights issues; similarly, Oswald and Powdthavee (2006) describe how the preferences towards political parties in the UK are driven by the proportion of offspring who are girls.

birth determines the legal position of second generation immigrants. In most cases citizenship provides the right to vote, the right to run for public office, the possibility to travel without restrictions and to obtain visas for relatives, and legal protection in the case of a criminal charge. There may be additional benefits in the form of a wider range of public benefits and better employment opportunities. On the other hand, citizenship status often implies costs such as the military draft and renunciation of original citizenship. A broader set of monetary and non-monetary costs is associated with the acquisition of citizenship by naturalization. For example, those applying for naturalization are required not only to pay some administrative charges and taxes, but in many cases also need to take language and culture tests, spend time queuing at registration offices, and avoid any activities that might determine disqualification.

Citizenship laws should be seen as constituting parts of broader migration policies. However, as stressed by Bertocchi and Strozzi (2010), while other measures (i.e. quotas and visa requirements) tend to change in response to short term contingencies (economic conditions and current government orientation above all), citizenship laws are the outcome of long term and complex processes that often require constitutional changes. The rules that determine the acquisition of citizenship in most cases reflect the interplay between a country's legal origins and the historical process.

In the 18th century jus soli was the dominant rule in Europe as a result of the feudal tradition that linked the individual to the lord of the manor in whose confines the individual was born. The French revolution marked a clear discontinuity with this tradition and the reintroduction of the principle based on the right of descent that was central in the ancient Roman system. During the 19th century the jus sanguinis principle was adopted throughout Europe and was extended by most countries to their colonies with the notable exception of Britain;[7] jus sanguinis regulated citizenship law in most civil law countries while jus soli was the norm in common law countries. By the end of the 19th century, a dramatic sequence of historical events led to a continuous process of transformation of the citizenship laws throughout the world.[8] After the Revolution experience, in 1889 France reintroduced the jus soli mainly in order to include the sons of immigrants in the draft.[9] After progressive tightening

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[7]The British maintained the jus soli principle and applied it in all their colonies, starting with the US, which later encoded it in the constitution.

[8]More detailed analysis can be found in Bertocchi and Strozzi (2010), Joppke (1999).

[9]After long and lively debate, in 1993, the Chirac government introduced a restrictive revision

of the criteria in Britain, following the postwar mass colonial migration, in 1984 the British Nationality Act restricted the jus soli by establishing that a child born in the UK qualified for British citizenship only if at least one parent was a British citizen or resident. Legislation along similar lines, based on the jus soli, was in place in Australia until 1986, after which time a child born in Australia needed at least one parent who was either an Australian citizen or a permanent resident in order to be granted citizenship.

Bertocchi and Strozzi (2010) in their study of the determinants of citizenship rules compiled a data set of the citizenship laws in 162 world countries and classified each country according to the principle regulating access to citizenship at birth as recorded in three different years after World War II: 1948, 1975, and 2001. They organize countries into three groups: 1) jus sanguinis; 2) mixed regime; 3) jus soli. The mixed regime categories include all those countries where the system includes elements of jus soli and jus sanguinis.[10]

As a preliminary step in understanding the relationship between type of citizenship system and level of immigrants' integration, we provide cross country evidence based on the data obtained by merging the Bertocchi and Strozzi database with the World Values Survey (WVS). The fourth wave of the WVS collects information on the socio-cultural and political attitudes and beliefs of 76,303 individuals in 53 countries. Unlike previous waves, the fourth wave reports specific information on both parents' country of birth. In order to achieve the largest possible sample within each country (the number of individuals surveyed by the WVS in each country is typically very small), we consider both first and second generation immigrants, as defined by whether both parents were born abroad. In this way we consider individuals who have been directly affected by the citizenship system or whose children might have been affected. In order to measure the level of integration we report evidence on two types of outcomes: language usage and participation in social activities. Respondents were

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of the criteria for citizenship, which required formal citizenship requests from second-generation immigrants. In 1997, these restrictions were considerably revised by the left-wing government, to allow automatic assignment of citizenship at 18, to the children of immigrants born in France, who had neither requested, nor declined citizenship.

[10]According to the evidence presented by the authors, in 1948 jus sanguinis was the dominant principle in 41% of countries, while jus soli was the rule in about 47%, with the remaining 12% with mixed regimes. By 2001, 54% of the 162 countries had adopted jus sanguinis regimes, 24% relied on a jus soli system and 22% had mixed regimes.

asked what language was normally spoken at home and based on this information we constructed a dummy variable that takes the value 1 if the language spoken at home by the individual was the main language spoken in the country, and 0 otherwise. We define the main language as the language spoken by at least 50% of the population, as measured by the index of linguistic fractionalization (Alesina et al. (2003)).[11] The measure of involvement in social activities is based on participation in the following: 1) church or religious organization; 2) sport or recreational organization; 3) art, music, or educational organization; 3) labor union; 4) political party; 5) environmental organization; 6) professional association; 7) humanitarian or charitable organization; 8) consumer organization. We define a dummy variable that takes the value 1 if the individual participates in at least one of these activities, and 0 otherwise. Later in the paper we rely on measures of interaction with natives, however, this information is not available in the WVS. Figure 1 shows that in countries where the jus sanguinis is in place around 65% of first and second generation immigrants speak the main language of the country, at home. The percentage is slightly higher in those countries where there is a system that combines jus sanguinis and jus soli, while it is around 77% in countries where the jus soli system is in place. Consistently, while less than 50% of first and second generation immigrants in jus sanguinis countries are involved in at least one social activity, the percentage is around 70% in the other two groups of countries.

2.2   The German Reform

In May 1999, the German Parliament amended the Citizenship and Nationality Law of 1913. The reform had three main elements:

- introduction of jus soli citizenship;

- changes to naturalization criteria;

- denial of dual citizenship.

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[11]We rule out of the sample South Africa, India, Zambia, Indonesia, and Mali as there is no language that is spoken by at least 50% of the population. The final sample consists of 1,681 individuals in 44 countries.

Before the reform, a child born in Germany was granted German citizenship if at least one of the parents was a German citizen at the time of its birth.[12] Under the new regime, elements of the jus soli system were introduced. A child born in Germany to foreign parents on 1st January 2000 or after is granted citizenship at birth if: a) at least one parent has been ordinarily resident in Germany for eight years and b) has been granted permanent right of residence. The law also introduced a transitional provision for those foreigner residents in Germany under the age of 10 on 1st January 2000. They would be granted naturalization upon application (to be completed before 31st December 2000) if at least one parent had been ordinarily resident in Germany for 8 years when the child was born. Moreover, the child would be allowed dual citizenship until the age of 23, at which age it would be necessary to choose whether to retain German citizenship and renounce former citizenship (known as the *Optionmodell*).

Unlike the citizenship at birth provision, the naturalization policy for adults had been subject to a series of changes in the years before the reform. There were laws affecting naturalization applications passed in 1990 and 1993. These changes were introduced to limit the discretion of officials to deny naturalization and to provide foreigners with the legal right to claim entitlement to naturalization; the 1990 law, in particular, established that foreigners between 16 and 23 years of age with 8 or more years of residency, and foreigners above the age of 23 with a minimum of 15 years of residency, had a *legal* claim to naturalization. The law approved in 1999 involved further changes to the naturalization criteria: it introduced a minimum residency requirement of 8 years without any age restriction and replaced the legal entitlement to naturalization with certain requirements such as expressing loyalty to the German Constitution, being able to support oneself and one's family without social security or unemployment benefits, a clean criminal record, adequate command of the German language and renunciation of previous citizenship.

Finally, the law passed in 1999 by the German Parliament includes an explicit denial of dual citizenship. Pre-reform, dual citizenship was not legally recognized and Anil (2006) reports anecdotal evidence suggesting that the German officialdom was generally unwilling to tolerate the idea of dual citizenship.

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[12]In the case that only the father was a citizen, citizenship was dependent on the recognition or determination of paternity under the German law.

According to Thomsen et al. (2008), in 2005 one fifth of the population had an immigration background - i.e. they either had migrated to Germany themselves or were descendants of former immigrants - and among them 47% possessed foreign citizenship. Our empirical analysis will consider immigrants who were not citizens when the citizenship reform was approved and test how the reform's transitional provision changes their incentives to integrate with native Germans. Those targeted by the transitional provision include individuals who had not exerted their right to become German citizens, gained by meeting the residency requirements described above. It is therefore necessary to discuss: 1) the reasons why eligible parents did not apply for German citizenship; 2) why the incentives for citizenship might be more important for their children.

Guest workers who arrived in Germany during the 1960s and the 1970s were encouraged by their home governments to maintain ties with their home countries in order to guarantee flows of remittances.[13] Because of the German denial of dual citizenship, immigrants had to relinquish their citizenship in order to become German citizens. However, for many years emigrants who decided to renounce their citizenship of origin faced various restrictions in their home country. For instance, as reported by Mueller (2006), until 1996 Turkish regulations deprived individuals of property rights in Turkey if they abandoned Turkish citizenship. While children born to immigrants in Germany will be more likely to have less strong ties with the home country of their parents, it should be noted that under the new citizenship system introduced in Germany they can enjoy dual citizenship (and its benefits) up to the age of 23, when they are required to make a choice. Therefore, by taking advantage of the transitional component, foreign born parents can enable their children to have an extended period to choose which country's citizenship rights they prefer.

The economic benefits of citizenship are supposed to be higher for children than for parents. In fact, citizenship rights should matter more when agents enter the labor market rather than later when the relevant skills and experience have already been acquired. Among first generation immigrants, relinquishing birth country citizenship might also imply some psychological costs; these costs are likely to be much lower for

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[13]Sayary (1986) reports that Turkish migrants were encouraged to remit their savings through the offer of special interest rates for foreign currency savings accounts in Turkey and by certain privileges related to the import of goods.

their children who were born, and have grown up and completed their schooling in Germany. Finally, parents able to apply for citizenship for their children under the transitional regime might do so in anticipation of higher naturalization costs in the future as the result of the new provisions.

Finding measures for those who might have potentially taken advantage of the transitional provision of the reform and those who actually applied is impossible: the GSOEP provides information only on parents but not children's citizenship, and, to the best of our knowledge, this information is not obtainable from other survey data. However, we do have data on number of naturalizations by birth cohort which provides indirect evidence on the extent to which non-citizen immigrants exploit the transitional clause in the reform. Figure 2 plots for each year in the time interval between 1999 and 2002 the fraction of naturalizations granted to individuals born between 1990 and 1999 (including those who could potentially benefit from the transitional component of the reform) over the total number of naturalizations granted in that year, compared to the fraction of naturalizations granted to those born between 1980 and 1989, none of whom are eligible under the transitional scheme. The graph shows that in the year before the reform, the number of naturalizations for each of the two cohorts accounted for approximately 15% of all the naturalizations granted in that year. There is a sharp increase in the number of naturalizations for individuals born between 1990 and 1999 during the time window when parents were allowed to apply for citizenship.[14] As a result, in 2000 and 2001, the fraction of naturalizations for those born between 1990 and 1999 over the total number of naturalizations is almost double than that for those born between 1980 and 1989 and it accounts for about one fourth of the total number of naturalizations conceded in that year. In 2002, the two groups display the same fraction of naturalizations.

3 Empirical Analysis

3.1 Identification Strategy and Econometric Method

The objective of our empirical analysis is to identify whether introduction of the jus soli system has an effect on the level of integration of foreign born parents. We

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[14]The time lag is usually 1 year between the application and registration as a citizen.

exploit the retrospective provision in the 1999 citizenship reform which allows foreign born parents without German citizenship, to naturalize all children born in Germany between 1990 and 1999 subject to the requirement the parents had been resident in Germany for at least 8 years before the child was born.

By exploiting the retrospective component of the reform we rule out two potential sources of *endogeneity*. First, in deciding whether to have a child or not foreign born individuals might potentially be affected by the regulatory changes that became effective with the reform. Second, the composition of the migrant population might change after the reform since potential incomers might be attracted by the fact that, under the new regime, any children born to them would have full German citizenship.

In our context, foreign citizen parents who had resided for at least 8 years in Germany when the youngest child was born between 1990 and 1999 represent the *treatment* group. The *control* group includes all foreign citizen parents whose youngest child was born in Germany between 1980 and 1989, or who had been resident in Germany for less than 8 years when their youngest child was born in Germany in the period 1990 to 1999.[15] By comparing the integration outcomes of the treatment and control groups before and after the reform, we are able to capture the effect of the provision that introduces jus soli citizenship on parental integration.

Since the treatment group includes all those individuals who were offered the possibility to apply for their children's citizenship, irrespective of whether or not they did so, our strategy identifies the effect of eligibility to apply, the so called intention-to-treat (ITT) effect. The main advantage of this strategy relies in the possibility to control for the potential selection issues inherent in the decision to apply for citizenship.[16]

In order to test formally how the introduction of jus soli citizenship affects parental integration, we estimate the following differences-in-differences (DD) model:

$$Y_{ijt} = \beta_0 + \beta_1 T_j + \beta_2 D_t + \beta_3 T_j * D_t + \gamma' \mathbf{X}_{ijt} + \mu_t + u_{ijt} \qquad (1)$$

where Y_{ijt} is the integration outcome of parent i living in household j at time t. T_j

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[15]The sample size would be too small if the control group were restricted only to parents resident in Germany for less than 8 years.

[16]The ITT is smaller than the average causal effect for those parents who actually took advantage of the transitional scheme to naturalize their children.

is the treatment dummy that is equal to 1 if in household j, between 1st January 1990 and 31st December 1999, at least one parent had lived in Germany for more than 8 years when the youngest child was born, and is equal to 0 if the foreign born parents youngest child was born between 1980 and 1989, or they had been resident for less than 8 years when the youngest child was born between 1990 and 1999. The dummy D_t takes the value 1 for the surveys after the reform was passed in Parliament (May 1999), and 0 otherwise.

$\mathbf{X}_{ijt}$ includes a full set of individual and household characteristics. In particular, since we will show in the next section that treatment and control groups differ in age, we estimate two alternative specifications. In the first we control linearly for age, in the second we allow for non-linear age effects by including single year age dummies. Additional controls include gender, household head status, years of education, dummies for number of years living in Germany, number of children, marital status, and household income deciles. Since the speed of the integration process might vary according to immigrants' origins, we include country of origin dummies in both specifications. A full set of year dummies, μ_t, controls for time specific shocks affecting all individuals in the time interval covered by our analysis.

The main parameter of interest is β_3 which identifies the average causal effect of the introduction of jus soli citizenship on parental integration. In the main specification standard errors are clustered at the individual level in order to account for individual shocks which are correlated over time.

The key identifying assumption relies on the fact that integration trends would be the same for both the treatment and control groups in the absence of treatment. In section 4.1 we test whether there are differential time trends that potentially could explain our results.

At each period in time our sample includes only foreign born parents who are not German citizens.[17] Given the panel nature of our dataset this restriction might potentially determine two sources of sample attrition. First, individuals might become citizens and exit the sample.[18] Second, individuals might exit from the sample to

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[17]Questions on language used and social interactions were addressed only to foreign born respondents who were not German citizens.

[18]As already mentioned, the criteria to apply for citizenship after 2000 remained the same for individuals who had lived in Germany for less than 8 years. A priori it is not clear whether the reform increased the cost of becoming a citizen for those who had been in Germany for more than 8 years.

return to their home countries. As sources of attrition might vary differentially for the treatment and control groups,[19] in section 4.2 we use different strategies to control for this potential bias. Finally, in section 4.3 we restrict the sample in order to rule out confounding effects driven by other of the provisions of the new citizenship law.

3.2 Data and Descriptives

The main data source for our analysis is the GSOEP, which is the longest-running longitudinal survey of private households and persons in the Federal Republic of Germany. It started in 1984 and there are 21 waves currently available. This survey provides representative micro-data on individuals and households. Most importantly, it oversamples migrants.[20] The data therefore are unique in providing continuous information on a large sample of immigrants over a long period of time. Each individual in the relevant household, aged over 15 is interviewed. The household head provides information on children under 15. Individuals who have left the household to set up on their own are tracked and included in the panel.

The dataset contains detailed information on country of origin and arrival date of immigrants, and family composition. Crucial for our analysis, is that foreign born individuals are asked about their citizenship status. This allows us to construct a data set of foreign born, non-citizen parents, with at least one child born in Germany in the time period 1980-1999, and to define the treatment and the control groups as specified in the previous section. In order to make our treatment and control groups more homogeneous in terms of observable characteristics, in the main analysis we restrict our sample to those households where both parents were born after 1950. Our main specification considers only surveys after 1993 in order to avoid possible confounding effects due to the changes in the naturalization policies enacted in 1990 and 1993.

As expected, individuals living in treated households on average are younger than those in control households (34 vs. 40 years), as shown in Table 1 which reports the socio-demographic characteristics of the two groups elicited in the 1999 survey, the

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[19]Results in Dustmann (2001) for Germany suggest that the probability of returning home increases with age.

[20]Questionnaires for migrant households are available in native languages . This rules out potential sample selection problems due to differential response rates.

year prior the implementation of the reform we consider. Consistent with the age difference, individuals in the control group have lived for longer in Germany and have higher annual earnings. However, differences are statistically not significant and, as shown in column (4) of Table 1, become negligible when we control for single year age dummies. These results are reassuring as they boost confidence in the assumption that the control group represents a valid counterfactual of the treatment group, after accounting for age differences.

Table 2 reports the average levels of integration for the treatment and control groups before and after the reform. Respondents were asked whether, in the previous year, they had visited Germans in their homes and if they had received a visit from Germans.[21] We convert the answers to these two questions into two dummy variables, respectively *Visited Germans* and *Visited by Germans*. Before the reform, on average 77% of the individuals in the control group had made visits to German homes as opposed to 69% of those in the treatment group. After the reform, the percentage for the control group is virtually the same, but it increases by about 3 percentage points among those in the treatment group. Around 82% of the control group had received Germans in their homes both before and after the reform. Among those in the treatment group there is a sharp increase in the post reform period, with the percentage of those who received visits from German citizens increasing from 74% to 81%.

The survey includes a question on the use of the German language. Immigrants were asked what language they mainly spoke in Germany : i) mostly German; ii) mother tongue ; iii) both.[22] The variable *German spoken* is defined as a dummy, where 0 denotes that the individual mostly uses his/her mother tongue, and 1 if the individual speaks either both or mostly German. On average, around 70% of the individuals in the control group declared they spoke German before the reform, as opposed to the 63% of those in the treatment group. On average there is no variation in the use of the German language for those in the control group after implementation of the new citizenship law, while the proportion of those who regularly speak German increases to 69% among those in the treatment group.

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[21]In the period covered by our analysis these questions were asked every second year, starting from 1995.

[22]This question was included in the surveys for 1996, 1997, 1998, 1999, 2000, 2001, 2003 and 2005.

Foreign born respondents were asked whether they read: i) newspapers only from their country of origin; ii) newspapers mainly from their country of origin; iii) about half and half - German and country of origin; iv) mostly German newspapers; v) only German newspapers; vi) not applicable, does not read a newspaper regularly.[23] The variable *German newspaper* is defined over the range 1-5 and takes the value 1 if the individual reports reading only home country newspapers or no newspapers, and 5 if she/he reads only German newspapers. Column (4) of Table 2 reports the score for the two groups before and after the reform. While there is an increase in the propensity to read German newspapers for both groups after the reform, the increase is noticeably larger only for those in the treatment group.

In summary, the results suggest an increase in the level of assimilation of foreign born individuals affected by the transition scheme in the reform, as measured both by level of social interactions with native Germans and by level of knowledge about German culture. At the opposite extreme, those immigrants unaffected by the reform display no change in their level of integration.

3.3   Baseline Results

Baseline ordinary least square (OLS) estimates of equation (1) for outcomes related to socializing with Germans are reported in Table 3. Column (1) reports the estimated effect of the reform on the probability of visiting Germans in their homes, *Visited Germans*, for the specification that controls linearly for age. The probability increases significantly, by 9.0 percentage points, as a result of the reform. When controlling for single year age dummies, the effect of the reform, while slightly smaller (8.2 percentage points), is still statistically significant. The effect corresponds approximately to one fifth of the standard deviation of the dependent variable. Column (3) of Table 3 reports the effect of the reform on the probability of immigrants receiving Germans in their home, *Visited by Germans*. The effect is large and statistically different from zero (11.2 percentage points). The inclusion of single year age dummies does not affect the magnitude of the effect, which is in line with the results for *Visited*, as it corresponds to approximately one fourth of the standard deviation of the dependent variable. Female respondents display systematically lower levels of interaction with

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[23]In the period covered by our analysis this question is included in the survey every second year, starting from 1994.

the local community. The number of years of education is positively correlated to the level of integration: an additional year of education corresponds to an increase in the probability of visiting Germans in their homes (being visited by Germans) of 3.7 (2.9) percentage points. It could be argued that the variable *Visited by Germans* might be a proxy for the level of acceptance by German citizens. However, if this were the case, it would be hard to justify the differential increase between the treatment and control groups after the reform, as the attitude of native Germans would change towards all immigrants, irrespective of their treatment status.

Estimates for the outcomes related to the use of the German language are reported in Table 4. Columns (1) and (3) of Table 4 report the OLS results respectively for *German Spoken* and *German newspaper* when age is included linearly, columns (2) and (4) report the results when single year age dummies are introduced. When age is included linearly there is a positive and significant effect of the reform on the propensity to speak the German language. However, the coefficient becomes smaller and not significant when single year age dummies are accounted for. It should be noted, however, that the propensity to speak German does not capture the situations when German is the language used or the quality of the spoken German. The effect of the reform on the variable measuring the propensity to read German newspapers is positive and significantly different from zero, irrespective of whether age is included linearly or in single year age dummies. The magnitude of the effect corresponds approximately to one fifth of the standard deviation of the dependent variable. When we exclude those who do not read newspapers, the results are in line with those presented.[24] Integration with the German culture is lower among less well educated, and female respondents.

In summary, our results suggest that the reform has had a large and significant effect on both the level of cultural integration of immigrants and their propensity to socialize with Germans.[25]

There are three broad mechanisms through which the citizenship rights of children might have affected parental integration. First, parents' preferences and attitudes towards the host country might change when they realize their descendants

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[24]These results are not reported but available from the authors on request.

[25]Ordered probit estimates for the *German newspapers* regressions are in line with the OLS estimates. Results are available from the authors on request.

will have more economic opportunities as a result of their new status. Second, immigrants might not relish being culturally distant from their offspring and may decide, therefore, to integrate more with the culture of the host country as they anticipate their children growing up as German citizens, speaking German and adopting German habits. The third mechanism focuses on economic incentives without implying changes in preferences. Suppose that the future earnings of one's child depend on the investment of both child and parent, in the latter case in terms of quality of social networks and language spoken at home. In this setting, a change in citizenship status can be interpreted as a technological shock to the child's earnings' function. If parents are altruistic and care about the future earning power of their children, they might decide to spend more effort on improving the quality of their social networks and their grasp of the host country language once their children acquire citizenship status.

4 Robustness

4.1 Differential Trends

The identification assumption relies on the fact that integration trends will be the same in the absence of the reform for both the treatment and control groups. If this were not the case, our estimates could be an artifact of these exogenous trends in the propensity to interact with German born citizens, to speak German, and to read German newspapers.

In order to check the robustness of our identifying assumption we perform several tests. First, we acknowledge the possibility that differences in observed characteristics might create non-parallel integration dynamics between the treatment and control group in the absence of the reform. In order to control for this potential bias we estimate the average effect of the reform on those individuals entitled to apply for citizenship for their children using a two step procedure (see Abadie (2005) and Heckman et al. (1997)). First, we estimate the propensity score with a logit model and compute fitted values for the sample. We then estimate eq. (1) by weighted least squares (WLS) for those observations for which the common support assumption holds. Results for this specification are presented in Table 5. The coefficients are in

line with those discussed above. As before, the effect of the reform on the propensity to speak German is not significantly different from zero.

Second, we test whether differences in time trends driven by unobservable characteristics can potentially bias our results. For this purpose, we perform the following falsification exercise. After restricting the sample to the pre-1999 survey results, we assume that the reform was implemented in a year x prior to 1999 and we estimate the same specification as in eq. (1). In other words, we compare the integration outcomes of the treatment and control groups before and after such year x. If our results are artificially generated by non-parallel trends in the integration outcomes of the treatment and control group, we would expect the difference between the level of integration of the treatment and the control group to be significantly different after the "placebo" reform. The results reported in the top panel of Table 6 (Placebo I) were obtained assuming that the reform was implemented in 1997. Reassuringly, the coefficients are much smaller than our baseline coefficients and not significantly different from zero.

Parents in the treatment group have on average younger children than those in the control group. The previous falsification test does not fully control for the possibility that our results are driven by a non-linear relationship between degree of parental integration and age of their children. In order to rule this out, we perform a falsification test similar to the one discussed above. Foreign citizen parents resident in Germany for at least 8 years when the youngest child was born, between 1988 and 1997, now become the *treatment* group. The *control* group includes all foreign citizen parents whose youngest child was born between 1978 and 1987 or whose residency in Germany was less than 8 years when the youngest child was born between 1988 and 1997. The age structure of the children of individuals belonging to the fictitious treatment (control) group is the same as in the treatment (control) group in the main specification presented in Section 3.3. We then consider only the surveys prior to 1999, assume the reform was passed in 1997 and estimate the specification in eq. (1). If the results in our main specification are capturing a bias due to a relationship between level of parental integration and the age of their children, we would expect β_3 to be significantly different from zero. The results in the bottom panel of Table 6 (Placebo II) show that the coefficients of interest are negative and not significantly different from zero. For both falsification exercises the results are robust to choosing

alternative reference years.

The results in this subsection suggest that in the absence of the reform the treatment and control groups would not display differential integration trends, due to either observable or unobservable characteristics.

4.2   Attrition

The validity of our results might be affected by the possibility that individuals exit the sample in a non-random way. In particular, the reform we study might have affected differentially the probability of leaving the sample of individuals in the treatment and control groups, in which case our estimates might be capturing the effect of the reform on the composition of the sample rather than on the level of integration of the respondents.

In our case, there are two potential sources of sample attrition that might be relevant. First, foreign born parents might leave the sample because they become naturalized citizens. Second, they might return to their home countries. A priori, it is not clear in which direction the overall attrition bias would affect our results. In fact, while it is more likely that only the most integrated immigrants might apply for and obtain naturalization, the decision to return home might be affected by the difficulty to integrate within German society.

Since our data contain information on the naturalization year of foreign born individuals, we can measure sample attrition separately for naturalization and other reasons, return migration, in our view being the most important for our analysis. On average, around 1.4% of the individuals in our sample made the transition from non-citizen to citizen status. While there is an overall increase in the probability of becoming citizen after the reform, the difference between the treatment and the control group is close to zero and does not significantly change after the reform. The size of the attrition related to the naturalization of the respondent is thus negligible and does not differ between the two groups.

Before the reform, on average around 11% of individuals leave the sample for reasons other than award of German citizenship. Our measure is in line with that in other works that document sample attrition for immigrants in GSOEP (see Bellemare (2007)). Consistent with the age difference documented above, the level of attrition

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is higher for the control group (15%) than the treatment group (7.3%). Reassuringly the difference in the attrition rate of the two groups is constant over time and does not change after the reform. We interpret this result as evidence that the reform does not determine any differential variation in the probability of leaving the sample between treatment and control groups.

There could be some concern that the different attrition rate might determine non-parallel trends between the treatment and control groups. While the falsification tests performed in the previous section provide strong evidence against this possibility, it should be stressed that any sample selection related to return migration would potentially determine a downward biased estimate of the effect of the reform. In fact, under the assumption that return migration is negatively correlated with the level of integration of the respondent, the higher attrition rate in the control group would make the least integrated individuals in the control group more likely to exit the sample than those in the treatment group.

In order to rule out any residual doubt related to sample attrition biases, we present the results from two further specifications. In the first specification, we restrict the sample to respondents interviewed both before and after the reform. In the second specification, in order to control for time invariant unobserved characteristics that could be correlated with integration outcomes and the propensity to leave the sample, we control for individual fixed effects.[26] Results from the two specifications are reported in Table 7; in both cases estimates are very similar to our baseline results. For three out of our four outcomes, the estimated coefficient of interest is slightly higher than the coefficient in the main specification. This result is not surprising since, as discussed above, our main source of sample attrition - return migration - should determine a downward biased estimate in our results.

4.3 Other Provisions of the Reform

The results of the analysis in this paper show that children's citizenship rights have a positive impact on parental integration into the adopted home country, in this case

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[26]In the main specifications we opted to ignore the panel dimension for the following reasons: (i) because the estimates based on the repeated cross sections are more conservative; (ii) because we can exploit variations in the treatment status over a larger set of individuals; and (iii) the strict exogeneity assumption required for the consistency of the fixed effect estimator might not necessarily hold.

Germany, as measured by the propensity to speak the language (German), read the national newspapers and interact with Germans. However, the other provisions of the reform relating to the naturalization of immigrants might also have an effect on their integration. Thus, part of the effect could be due to these provisions.

Before the reform, foreigners between 16 and 23 years of age with 8 or more years of residency, and foreigners over the age of 23 with a minimum of 15 years residence, had a legal claim to naturalization. The citizenship law approved in 1999 and which came into force at the beginning of 2000, establishes a minimum residency requirement of 8 years without any age restriction. However, it imposes certain requirements for naturalization: expressing loyalty to the German Constitution, being able to support oneself and one's family without receipt of social security or unemployment benefit, a clean criminal record, adequate command of the German language, and renunciation of previous citizenship.

On the one hand, the seeming more lenient residency requirements might encourage higher levels of integration among immigrants - particularly within the treated group; on the other hand, the response of immigrants to the additional requirements introduced by the law might have been an increased frequency of interactions with German individuals, and increased interest in learning more about German culture and language in order especially to meet the new language requirements for naturalization. This might bias our results if the number of respondents in the treated group that plan to apply for naturalization is larger than the number in the control group.

As shown in the previous section, very few individuals in our sample apply for naturalization, and the proportions of individuals who applied for naturalization in the control and treatment groups do not vary significantly before and after the reform. Thus, it seems unlikely that our results are driven by a differential effort to meet the new citizenship requirements. However, in order to check whether the results of our analysis capture the effects of other of the reform provisions, we restrict our sample to respondents who in 2000 had been resident in Germany for 15 years or more. Individuals in this restricted sample are not affected by the changes in the residency requirements, while the way how they are influenced by the additional conditions does not depend on whether they belong to the treatment or control group. The results for this restricted sample are presented in Table 8: the coefficients of our variables of interest remain positive, of similar size and significantly different from zero, even

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though the variable for visiting Germans in their own homes is no longer significant.

5 Heterogeneous Effects

In this section we analyze whether the reform has heterogeneous effects, which affect different nationalities and individuals with different levels of education in different ways.

Since the signing in 1961 of a bilateral agreement with Turkey for the recruitment of guest workers, Germany has seen continuous growth in its Turkish immigrant community that now accounts for about one third of the total immigrant population in Germany. A variety of studies, however, document the lack of integration of the Turkish community with the native population. According to Mueller (2006), the rate of exogamy among Turks living in Germany is impressively low. In 1995, 98% of married Turkish women and 95% of all married Turkish men had partners of the same nationality. Moreover, the very small fraction of mixed marriages between German and Turkish spouses proved to be dramatically unsuccessful: Turkish and German couples had the highest divorce rates compared to Germans who married Italian, Greek, Yugoslav or Spanish persons.[27] Marginalization seems to affect younger generations as well. Linguistic deficiencies and poor educational performance of young Turks have been extensively discussed by Sohn and Ozcan (2006); *Der Spiegel* (24th February 2002) reports that four out of five first graders have no knowledge at all of the German language. In our sample only 64% of the Turkish people in our sample speak either mostly German or German and their native language in equal amounts, versus an average 72% among other minorities. Similar patterns are observed for the other measures of integration employed in this paper.

Analysis of whether the effect of the reform varies according to whether the immigrant is of Turkish origin or not, helps to explain whether the level of integration of the immigrant community of origin plays a role in the way that foreign parents respond to the introduction of the jus soli system. We split the sample into two groups, Turkish and non-Turkish respondents, and estimate the model in eq. (1) using each

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[27]The Berlin Institute for Population and Development classifies migrants with a Turkish background as the least integrated ethnic group when using the IMI ("Integration Measurement Index"), a complex index based on 20 different indicators that are supposed to capture the performance of each group in terms assimilation, social security, education and labor outcomes.

of the two subsamples. The results in top panel of Table 9 show that the effect of the reform on the level of interaction with the local community is independent of whether or not the respondent belongs to the Turkish group, but that the reform increased the propensity to speak German and read German newspapers only among non-Turkish immigrants.

As a second step, we study whether the levels of education shape the influence of the reform on the level and the nature of integration of immigrants. We split the sample into two subsamples according to number of years of education: 9 or fewer years of education, and more than 9 years of education.[28] When we estimate eq. (1) using each of the two subsamples, we find that different levels of human capital promote different patterns of integration as a result of the reform: less well educated respondents show an increased level of interaction with the local community while the better educated respondents show a greater level of integration with the local culture. This finding is in line with previous evidence. Chiswick (2008) suggests that education might increase the efficiency of acquisition of the second country language, and other things being equal, those with more schooling are more proficient at the second language. This might be because those with higher levels of schooling are more efficient learners, either inherently (due to their higher abilities) or because they acquire learning skills in school.

In section 3.3 we identify different channels through which the introduction of the jus soli system might affect parental outcomes. Our data do not allow us to test to what extent changes in preferences and incentives affect the propensity to integrate. In this section we provide evidence suggesting that the effect of the reform on the level of integration varies with the initial level of integration of the group to which the respondent belongs and the initial endowment of human capital.

6   Conclusions

This paper contributes to the debate on the effects of migration policy, focusing on the levels of integration of immigrants. We study how the introduction of elements of jus soli in the jus sanguinis German system had an effect on the acquisition by

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[28]For most of the immigrants in the sample 9 years represent the minimum requirement to complete the lower level of secondary education in their country of origin.

immigrants of the German language and on their social networks. Our results show that the introduction of the jus soli system determines a significant increase in the integration of the adults. Parents of children affected by the reform are more likely to read German newspapers and have social interactions with native Germans.

The information available on the respondents in our samples do not allow us to identify the exact mechanisms behind our findings. However, this study represents a first attempt to understand the causal link between citizenship status and immigrant integration and, although more evidence is needed, we can derive some policy implications. In particular, our findings help to explain why some countries are more successful than others in assimilating immigrants into their cultures and habits, and should provide some guidance on the instruments and frameworks that should be adopted in order to deal with the increased levels of diversity in Western societies.

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Figure 1: Integration by type of citizenship law
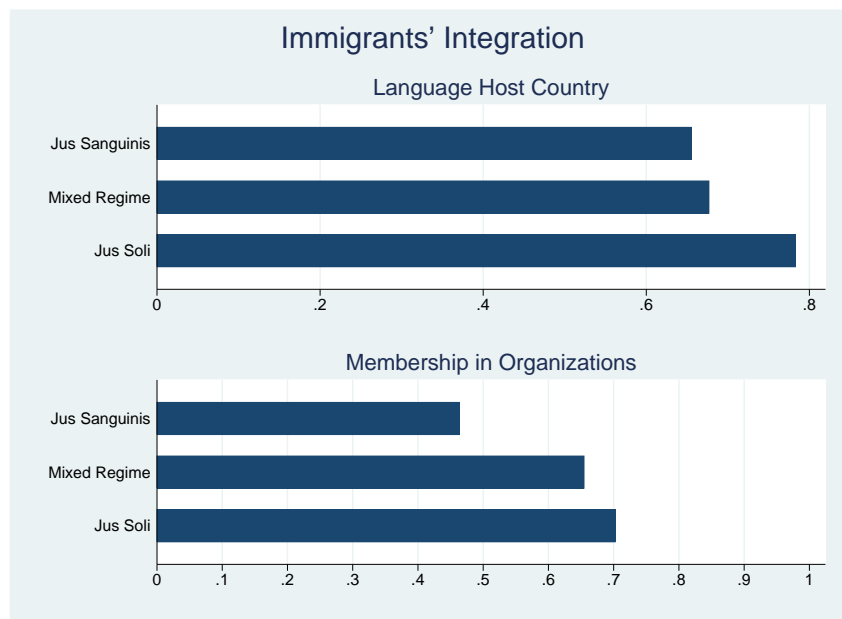
Note: The final sample consists of 1681 observations in 44 countries and it has been obtained by merging the 2005-2008 wave of the World Value Survey with the dataset compiled by Bertocchi and Strozzi (2010) on the evolution of citizenship laws in the postwar period. Country classification is based according to the system that regulates citizenship at birth in 2001. The sample includes individuals whose both parents are foreign born.

Figure 2: Naturalizations

Fraction of Naturalizations
by Year

Born between 1990–1999
Born between 1980–1989
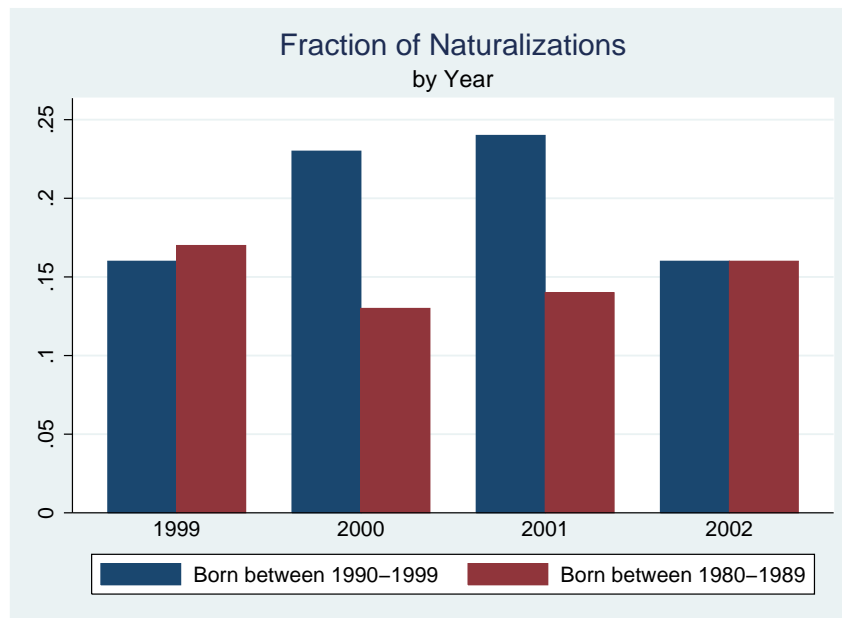
Note: The graph plots the ratio of naturalizations by birth cohort over the total number of naturalizations for each year in the time period between 1999 and 2002. Data from the German Statical Office.

Table 1: Individual Characteristics: Descriptives

	Treatment Group (1)	Control Group (2)	**Diff** (3)	**Diff with Age F.E** (4)
Age	34.602	41.562	-6.960***	
	(5.052)	(4.953)	(0.619)	
Male	0.456	0.362	0.094	0.098
	(0.500)	(0.483)	(0.061)	(0.081)
Married	0.959	0.895	0.064	0.076
	(0.199)	(0.308)	(0.034)	(0.044)
Head of Household	0.515	0.429	0.086	0.036
	(0.501)	(0.497)	(0.062)	(0.081)
Years of Education	9.640	9.238	0.402	0.009
	(1.640)	(1.914)	(0.225)	(0.309)
Number of children	2.456	2.610	-0.153	0.364
	(1.102)	(1.061)	(0.133)	(0.203)
Years in Germany	20.509	22.038	-1.529	1.046
	(7.645)	(7.573)	(0.942)	(1.133)
Annual Labor Inc.	15230.039	17038.326	-1808.287	-1176.774
	(18052.692)	(13386.826)	(1900.355)	(2551.502)

Note: Sample characteristics as reported in the 1999 wave. The Treatment and the Control groups are defined at household level. The Treatment group includes all foreign born couples who had resided in Germany for at least 8 years when the youngest child was born between 1st January 1990 and 31st December 1999. The Control group includes foreign born couples who had resided for less than 8 years when the youngest child was born between 1990 and 1999 and those whose youngest child was born between 1980 and 1989. Annual Labor Inc. is expressed in Euros.

Table 2: Integration Outcomes: Descriptives

	Visited Germans (d) (1)	Visited by Germans (d) (2)	German Spoken (d) (3)	German News. (1-5) (4)
	Before the Reform			
Control Group	0.776	0.815	0.701	2.723
Treatment Group	0.691	0.739	0.633	2.609
Total	0.73	0.77	0.67	2.67
	After the Reform			
Control Group	0.777	0.819	0.697	2.906
Treatment Group	0.724	0.811	0.691	2.895
Total	0.75	0.81	0.69	2.9

Note: The variable *German newspaper* varies over the range 1-5 and takes the value 1 if the individual only reads newspapers from the country of origin or does not read any newspapers, and takes the value 5 for reading only German newspapers. All the others are dummy variables. The Treatment group includes all foreign born couples who had resided in Germany for at least 8 years when the youngest child was born between 1st January 1990 and 31st December 1999. The Control group includes foreign born couples who had resided for less than 8 years when the youngest child was born between 1990 and 1999 and those whose youngest child was born between 1980 and 1989.

Table 3: Baseline results: Network

	Visited Germans		Visited by Germans	
	(1)	(2)	(3)	(4)
Treatment Group	-0.051	-0.039	-0.054	-0.049
	(0.042)	(0.045)	(0.039)	(0.041)
Treatment Group*After	0.090**	0.082*	0.112***	0.111**
	(0.042)	(0.049)	(0.041)	(0.046)
Female	-0.066*	-0.059	-0.046	-0.038
	(0.036)	(0.037)	(0.035)	(0.035)
Years of Education	0.037***	0.037***	0.029***	0.029***
	(0.007)	(0.008)	(0.007)	(0.007)
Time Dummies	Yes	Yes	Yes	Yes
Country Orig. Dummies	Yes	Yes	Yes	Yes
Age Dummies	No	Yes	No	Yes
Observations	1804	1804	1803	1803
Clusters	556	556	556	556
R^2	0.105	0.119	0.091	0.107

Note: Additional regressors include marital status, household head status, number of children, the number of years spent in Germany and the household income deciles. Robust standard errors are clustered at the individual level. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.

Table 4: Baseline results: Language

	German Spoken		German Newspaper	
	(1)	(2)	(3)	(4)
Treatment Group	-0.073*	-0.055	-0.031	0.004
	(0.040)	(0.041)	(0.099)	(0.106)
Treatment Group*After	0.081**	0.044	0.292***	0.242**
	(0.037)	(0.041)	(0.107)	(0.118)
Female	0.002	-0.002	-0.058	-0.066
	(0.039)	(0.040)	(0.098)	(0.100)
Years of Education	0.039***	0.038***	0.113***	0.114***
	(0.008)	(0.008)	(0.021)	(0.021)
Time Dummies	Yes	Yes	Yes	Yes
Country Orig. Dummies	Yes	Yes	Yes	Yes
Age Dummies	No	Yes	No	Yes
Observations	2508	2508	2110	2110
Clusters	541	541	597	597
R^2	0.147	0.16	0.253	0.264

Note: Additional regressors include marital status, household head status, number of children, the number of years spent in Germany and the household income deciles. Robust standard errors are clustered at the individual level. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.

Table 5: Semiparametric DD

	Visited Germans (1)	Visited by Germans (2)	German Spoken (3)	German Newspaper (4)
Treatment Group	-0.013	-0.034	-0.058	-0.043
	(0.049)	(0.045)	(0.047)	(0.112)
Treatment Group*After	0.086*	0.123**	0.079	0.327**
	(0.052)	(0.051)	(0.049)	(0.127)
Time Dummies	Yes	Yes	Yes	Yes
Country Orig. Dummies	Yes	Yes	Yes	Yes
Age Dummies	Yes	Yes	Yes	Yes
Observations	1724	1723	2367	2007
R^2	0.126	0.114	0.147	0.27

Note: Additional regressors include gender, marital status, household head status, years of education, number of children, the number of years spent in Germany and household income deciles. Robust standard errors are clustered at the individual level. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.

Table 6: Falsification Tests

	Visited Germans (1)	Visited by Germans (2)	German Spoken (3)	German Newspaper (4)
	Placebo I			
Placebo	-0.057	-0.013	0.015	-0.080
	(0.058)	(0.057)	(0.054)	(0.139)
Observations	657	657	983	971
	Placebo II			
Placebo	-0.078	-0.092	-0.009	-0.175
	(0.066)	(0.058)	(0.065)	(0.153)
Observations	574	575	819	853

Note: In both tests the placebo reform is in 1997. All regressions control for survey year, country of origin and single year age dummies. Additional regressors include gender, marital status, head of household status, years of education, number of children, the number of years spent in Germany and household income deciles. Robust standard errors are clustered at the individual level. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.

Table 7: Sample Attrition

	Visited Germans (1)	Visited by Germans (2)	German Spoken (3)	German Newspaper (4)
	Restricted Sample			
Treatment Group*After	0.126**	0.109**	0.048	0.312**
	(0.058)	(0.054)	(0.043)	(0.144)
Observations	1209	1208	1743	1334
R^2	0.145	0.141	0.159	0.257
	Individual FE Effects			
Treatment Group*After	0.145**	0.106*	0.063	0.323**
	(0.064)	(0.063)	(0.043)	(0.145)
Observations	1677	1676	2468	1974
R^2	0.555	0.566	0.548	0.633

Note: The restricted sample includes all individuals who have been surveyed at least once before the reform and once after the reform. All regressions control for survey year, country of origin, and single year age dummies. Additional regressors include gender, marital status, head of household status, years of education, number of children, the number of years spent in Germany and household income deciles. Robust standard errors are clustered at the individual level. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.

Table 8: Other Provisions

	Visited Germans (1)	Visited by Germans (2)	German Spoken (3)	German Newspaper (4)
Treatment Group	-0.021	-0.021	-0.083*	-0.079
	(0.051)	(0.048)	(0.049)	(0.120)
Treatment Group*After	0.090	0.098*	0.069	0.378***
	(0.058)	(0.054)	(0.047)	(0.142)
Time Dummies	Yes	Yes	Yes	Yes
Country Orig. Dummies	Yes	Yes	Yes	Yes
Age Dummies	Yes	Yes	Yes	Yes
Observations	1321	1320	1775	1531
R^2	0.122	0.108	0.121	0.27

Note: The sample is restricted to foreign born individuals who have been in Germany for more than 15 years. Additional regressors include gender, marital status, head of household status, years of education, number of children, the number of years spent in Germany and household income deciles. Robust standard errors are clustered at the individual level. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.

Table 9: Treatment Heterogeneity

	Visited Germans (1)	Visited by Germans (2)	German Spoken (3)	German Newspaper (4)
	Turkish			
Treatment Group*After	0.084	0.095	-0.028	-0.033
	(0.075)	(0.068)	(0.056)	(0.153)
Observations	834	832	1147	974
R^2	0.124	0.101	0.197	0.211
	Non Turkish			
Treatment Group*After	0.071	0.113*	0.101*	0.503***
	(0.070)	(0.067)	(0.056)	(0.180)
Observations	970	971	1361	1136
R^2	0.202	0.214	0.205	0.29
	Low Educated			
Treatment Group*After	0.139**	0.131*	0.019	0.104
	(0.070)	(0.067)	(0.058)	(0.163)
Observations	1060	1058	1444	1229
R^2	0.139	0.129	0.135	0.241
	High Educated			
Treatment Group*After	-0.040	0.032	0.089	0.342*
	(0.068)	(0.060)	(0.065)	(0.182)
Observations	744	745	1064	881
R^2	0.171	0.168	0.212	0.304

Note: Individual are classified as Low Educated if they have completed 9 or less years of formal schooling. They are classified as High Educated if they have completed more than 9 years of formal schooling. All regressions control for survey year, country of origin and single year age dummies. Additional regressors include gender, marital status, head of household status, years of education, number of children, the number of years spent in Germany and household income deciles. Robust standard errors are clustered at the individual level. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.