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Caught between Cultures: Unintended Consequences of Improving Opportunity for Immigrant Girls

Abstract

What happens when immigrant girls are given increased opportunities to integrate into the workplace and society, but their parents value more traditional cultural outcomes? Building on Akerlof and Kranton's identity framework (2000), we construct a simple theoretical model which shows how expanding opportunities for immigrant girls can have the unintended consequence of reducing their well-being, since identity-concerned parents will constrain their daughter's choices. The model can explain the otherwise puzzling findings from a reform which granted automatic birthright citizenship to eligible immigrant children born in Germany after January 1, 2000. Using survey data we collected in 57 German schools and comparing those born in the months before versus after the reform, we find that birthright citizenship lowers measures of life satisfaction and self-esteem for immigrant girls. This is especially true for Muslims, where traditional cultural identity is particularly salient. Birthright citizenship results in disillusionment where immigrant Muslim girls believe their chances of achieving their educational goals are lower and the perceived odds of having to forgo a career for family rise. Consistent with the model, immigrant Muslim parents invest less in their daughters' schooling and have a lower probability of speaking German with their daughters if they are born after the reform. We further find that immigrant Muslim girls granted birthright citizenship are less likely to self-identify as German and are more socially isolated. In contrast, immigrant boys experience, if anything, an improvement in well-being and other outcomes we examine. Taken together, the findings point towards immigrant girls being pushed by parents to conform to a role within traditional culture, whereas boys are allowed to take advantage of the opportunities that come with citizenship. Alternative models can explain some of the findings in isolation, but are not consistent more generally.

JEL-Codes: Z100, J150, J160.

Keywords: identity, citizenship, immigration, integration.

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1 Introduction

A frequent occurrence in immigrant families is a clash between parents and children over cultural values. This can have far-reaching consequences for the welfare of immigrant youth. For example, in Germany, five times as many adolescent girls with Turkish roots attempt to commit suicide compared to native girls, and many experts attribute this to conflicts that arise from immigrant parents adhering to traditional cultural beliefs while their children want to endorse mainstream Western values (Heredia-Montesinos et al. 2019). In a similar vein in Canada, differences in parent and child expectations regarding religious and cultural practices is cited as the most common reason for immigrant youth ending up homeless (McKenzie et al. 2014).

Although this evidence is alarming in itself, it also raises the possibility that well-intentioned, opportunity-enhancing interventions for immigrant youth could backfire by increasing the cultural tension between generations. Take, as an example, the case study of 17-year old Havva (El-Mafaalani and Toprak 2017, p. 89). Based on her affinity for mathematics and accounting, a supportive teacher suggests she pursue commercial training. One challenge is that Havva wears a headscarf because she is Muslim, but her teacher finds companies which will accommodate this. Havva receives two offers and is initially excited, but soon tells her teacher she has changed her mind. When pressed, Havva admits she still wants the training, but her family does not support the decision. The teacher meets with her parents to try and persuade them, but Havva's father responds that such training is not for their daughter. Havva reluctantly agrees not to pursue the opportunity. In this case study, the teacher's well-meant intervention leads to a collision of two worlds of thought, and eventual disappointment for Havva.

Against this backdrop, this paper studies theoretically and empirically the consequences of expanding economic and political opportunities for immigrant youth. Neoclassical economics predicts that improving opportunities for members of a minority group should increase their welfare and integration into mainstream society. This should be especially true for second-generation immigrant youth, who are still at an age where they are malleable and assimilation into a host country is arguably easier. But it is also possible that immigrant youth get "caught between cultures," where the parents' preferences are for the child to retain the traditional norms of the original home country. If such identity concerns are relevant, increasing opportunities for immigrant youth could lead to the unintended consequence of making them worse off.

To capture this in a formal way, we build on the seminal paper of Akerlof and Kranton (2000), which argues that (i) "because identity is fundamental to behavior, choice of identity may be the most important 'economic' decision people make" and (ii) "[l]imits on this choice may be the most important determinant of an individual's economic well-being" (p. 717). Importantly, in this class of models, policy-makers face a dilemma as it is not possible to incentivize individuals to engage in certain activities and, at the same time, protect them from the reactions of others for whom these activities cause discomfort and anxiety. Translated into our intergenerational context, as economic and political opportunities increase, immigrant youth aspire to assimilate into mainstream

society, but identity-concerned parents "sabotage" their assimilation by restricting their choices and investments. Our simple game theoretic model shows how this can reduce children's well-being.

Intergenerational identity concerns could be gender specific, especially since daughters are often tasked with being "keepers of the culture" (Suárez-Orozco and Qin 2006). Identity spillovers should play a larger role for daughters than sons if the parents come from origin countries where women have different roles in society compared to the roles they are expected to have in the host country, such as an expectation to raise large families and not work outside the home. Immigrant parents may even have "traditional" identity concerns for girls, but "mainstream" identity concerns for boys, where they value their son's integration into the labor market because it conforms with the roles of men in the culture they come from. This would generate opposite effects for welfare and assimilation based on a child's gender when economic opportunities increase.

Testing whether parents' identity concerns matter for child well-being and assimilation is a challenging task. The first reason is that immigrant children with more opportunities likely also differ in other unobservable ways. In particular, immigrant youth with more opportunities to integrate may also have parents for whom traditional identity concerns are less salient. To break this link, the ideal research design would take advantage of an exogenous shift in the opportunity set for some immigrant youth, but not others, while at the same time not directly affecting parents. A second challenge is that measures of well-being, career aspirations, parental investments, national identity, and assimilation are usually not available in most datasets. An ideal dataset would include these types of variables in a context where second-generation immigrant youth can be identified.

In this paper, we test for intergenerational identity spillovers using a legal reform which granted automatic citizenship to eligible immigrant children born in Germany after January 1, 2000. The probability of being a citizen at birth jumps 52 percentage points for second-generation immigrant children born post-reform. A nice feature of the reform is that it occurs in between school year cutoffs. This means that immigrant youth born six months before and after the cutoff will typically be in the same grade in school, while having different probabilities of being a German citizen at birth. To learn more about the effects of this reform, we conducted in-class surveys of immigrant and native students in their final year of compulsory schooling (normally 15-16 years old) in 57 German schools. This setting is well-suited to test our model, as it provides the ability to customize questions and yields high participation for a sample of second-generation immigrants.

We use this birth date cutoff as an exogenous shock to youth immigrant opportunity. Citizenship provides new rights and possibilities, such as the ability to vote in general elections, be employed in the public sector and work in other EU countries (but does not change access to social assistance benefits). Prior research suggests that citizenship improves economic outcomes: naturalized adult immigrants earn more compared to their non-naturalized peers (Chiswick 1978; Steinhardt 2012), have higher job-finding rates (Fougère and Safi 2009; Gathmann and Keller forthcoming), and experience steeper wage-tenure profiles (Bratsberg et al. 2002).

Using this large jump in citizenship, we analyze how the reform affected youth's subjective well-being

and a host of other outcomes. Focusing on a narrow one-year window around the cutoff, we compare second-generation immigrant children born in the months before versus after the reform. Native German children are used to difference out any common age effects within a school year.[1]

Our empirical analysis yields several key findings. First, birthright citizenship lowers subjective well-being for immigrant girls. Self-reported life satisfaction falls by almost a third of a standard deviation for those born after the reform. The implied effect is similar in magnitude to the effect of a medium-level depression on life satisfaction (Frijters et al. 2020). The estimate is robust to a narrowing of the sample window (± 6, ± 5, ± 4, ± 3, or ± 2 months around the cutoff) or the use of a regression discontinuity design, but with larger standard errors. The effects are concentrated among immigrant daughters in Muslim families, where cultural differences relative to German mainstream culture are starkest. We find the same pattern using self-esteem measures, consistent with the loss in well-being being identity driven as hypothesized by Kranton (2016) and Akerlof (2017).

Our second main finding is that citizenship results in disillusionment for Muslim immigrant girls, where they believe the chances of achieving their educational and career goals are lower. Muslim immigrant girls exposed to the citizenship reform are more likely to aspire to get tertiary schooling, but the odds they place on reaching their educational goals fall by 21 percentage points. This finding is consistent with daughters experiencing regret when they are unable to pursue their individually optimal choice, due to traditional parents proscribing choices. In contrast, there is no disillusionment for immigrant boys or non-Muslim immigrant girls. We further find that for Muslim immigrant girls, the perceived odds of having to forgo a career for family rise by 8 percentage points. The opposite is true for non-Muslim immigrant girls, and there is no significant effect for boys.

Third, parents' investments in mainstream culture fall and in traditional culture rise for Muslim immigrant girls. Starting with formal labor market investments, Muslim immigrant girls who have access to birthright citizenship are 15 percentage points less likely to receive parental support with their homework and learning compared to their non-naturalized peers. Turning to the transmission of cultural heritage, Muslim immigrant parents are 7 percentage points more likely to never speak German with their daughters born after the reform, which is a 50% increase relative to daughters born prior to the reform.[2] No such effects are found for Muslim immigrant sons. These findings are consistent with our intergenerational identity model, where Muslim parents try to constrain the assimilation of their daughters, but not their sons, in response to the increased opportunity set that citizenship provides.

Finally, we find that Muslim immigrant girls affected by the reform feel less integrated into German society. Immigrant Muslim girls are 14 percentage points less likely to self-identify as German if they have been granted birthright citizenship. Likewise, their belief that foreigners can have a good life in Germany falls by a third of a standard deviation. There are no effects for immigrant boys or immigrant girls from non-Muslim backgrounds. Bolstering these results, Muslim immigrant girls are

[1] We find no evidence of manipulation by parents in the timing of births around the reform.

[2] Language has been argued to be a primary measure of integration (e.g., Algan et al. 2012).

less likely to participate in after-school social activities with natives and are less likely to have a friendship network they can turn to for support when they experience challenges.

The results for boys fit easily within a neoclassical framework (or with parents having "mainstream" identity concerns for their sons), but the counterintuitive results for girls do not. Citizenship has been argued to be an effective policy to foster social inclusion (National Academies of Sciences, Engineering, and Medicine 2015), but for daughters from a traditional culture, the opposite occurs. This gender split supports the idea that Muslim immigrant daughters are expected to adopt a more neotraditional role compared to sons.

While our intergenerational identity model is consistent with the empirical facts we document, we also recognize that other mechanisms could simultaneously be at play. Two leading alternatives for the drop in well-being are what we label the "unmet expectations" and "resource shifting" hypotheses. The unmet expectations hypothesis says that Muslim girls granted citizenship expect to be able to accomplish more, but are disappointed when they realize that society continues to discriminate against them even though they are citizens.[3] The resource shifting hypothesis says that after birthright citizenship occurs, parents shift resources away from their daughters and towards their sons, because they favor their sons succeeding above their daughters. These are both interesting possibilities, but the entirety of our results and supplementary analyses do not fully support these explanations (see Section 7).

Our paper contributes to an emerging literature on the importance of identity and cultural norms for economic outcomes. There are two strands of the literature which are particularly germane: gender identity and immigrant identity. These two identities intersect to form the "traditional" identity concerns of parents in our study, and the clash of cultures their daughters experience.

Several papers have used the implications of gender identity models to help explain changes in women's employment, education, and family choices (Goldin 2006; Bursztyn et al. 2018), relative income within households (Bertrand et al. 2015), the division of labor within a household (Ichino et al. 2019), marriage markets (Bertrand et al. 2016; Bursztyn et al. 2017, 2018), work and fertility choices of second-generation immigrant women (Fernández 2007; Fernández and Fogli 2009), and female labor market participation across countries (Fortin 2005, 2015). In addition, several papers look at how childhood environment contributes to the shaping of preferences over family and career (e.g., Fernández et al. 2004; Kleven et al. 2018).[4]

Other work has looked at how immigrant or ethnic identity affects economic outcomes such as employment, wages, job search, and schooling (Austin-Smith and Fryer 2005; Frijters et al. 2005; Nekby and Rödin 2007; Constant and Zimmermann 2008; Battu and Zenou 2010; Casey and Dustmann 2010; Fryer and Torelli 2010; Pendakur and Pendakur 2011). These papers report correlations between self-reported ethnic or country identity and labor market outcomes or academic

[3]The unmet expectation hypothesis has to be specific to girls and not boys, which could be the case if outward signs such as headscarves make Muslim identity more salient for girls versus boys.

[4]There is also a related literature on the factors which shape and change gender roles (Goldin 1995; Fernández et al. 2004; Blau and Kahn 2007; Alesina et al. 2013; Fernández 2013; Goldin and Olivetti 2013; Albanesi and Olivetti 2016).

achievement. Some studies find that immigrants who partake in the origin country's identity do better in the labor market, while others find no effect or even the opposite.

Our results are also informative when viewed through the lens of the theoretical literature on intergenerational transmission of preferences and beliefs (for pioneering work see Bisin and Verdier 2000, 2001). In this literature, cultural transmission is modeled as an interaction between direct vertical socialization (i.e., parental influences) and oblique horizontal socialization (i.e., societal influences). Our study highlights the consequences of intra-family conflict that can arise in this process, and can be viewed as the first causal test of the impacts on and effects of vertical socialization when there is an exogenous shock in horizontal socialization.

The current paper is also related to two papers which study the same reform and find that increasing immigrant opportunities through birthright citizenship improves educational outcomes using register data (Felfe et al. 2020) and cooperation with natives using a lab-in-the-field experiment (Felfe et al. 2019). These effects are entirely a male phenomenon, raising the puzzle of why immigrant boys seem to benefit from the reform, but immigrant girls do not. Two other papers look at how the reform impacts parents, finding that parents become more culturally assimilated (Avitabile et al. 2013) and that labor market participation decreases for immigrant mothers (Sajons 2019).

We add to the literature by examining how parental identity concerns affect children, both theoretically and empirically. While most research thinks about limits placed by society on an individual's identity, we consider how parents' proscriptions on their children's choices can tighten as opportunities to assimilate into society increase. We provide some of the first causal evidence on the policy dilemma that can arise when identity concerns shape interdependent decision making à la Akerlof and Kranton (2000). Our results are a sobering illustration that increased opportunities are not offered to people in isolation of competing claims on the loyalty of a person. From a policy perspective, the fact that immigrant girls are made unintentionally worse off and less integrated after receiving birthright citizenship suggests other measures are needed to promote second-generation assimilation of females.

The remainder of the paper proceeds as follows. We begin by developing a simple model for how increased opportunities affect child well-being in a model with intergenerational identity concerns. In Sections 3 and 4, we describe our setting, empirical strategy, and data. In Section 5, we present our results, followed by a discussion of alternative models in Section 6. The final section concludes.

2 Theoretical Framework

To motivate our empirical analysis, we develop a simple model for how connecting immigrant youth to opportunity affects their well-being. Since we will be looking at students who are in their final year of compulsory schooling, we frame this discussion in terms of an early career effort choice, such as investment in education. But the ideas are more general than this, and can easily be adapted to other investments a child can make to integrate into a host country's economic and social life.

The child chooses between two levels of effort: e_H ("high") and e_L ("low"). The outcome of a child's effort can be either a high-success or low-success career: j_H or j_L. The probability of the high outcome is $p \in (0,1)$ if the child chooses e_H, but $p = 0$ if the child chooses e_L. We think of p as a parameter that captures the economic opportunities immigrants face in the host country. The cost of effort e_H (respectively, e_L) is given by c (respectively, 0).

Within this framework, we analyze the implications of two models. First, we consider a model in which young immigrants exhibit neoclassical preferences and decide on career effort independently of their parents. In this model, we briefly discuss changes in welfare in response to better economic opportunities for immigrant youth (i.e., an increase in p). Second, in the spirit of Akerlof and Kranton (2000), we consider the same comparative static in an economic model of identity in which the career choices of young immigrants are determined through a sequential bargaining game between them and their parents. Crucially, in this model, we assume that children impose an "identity externality" on parents if their career outcome deviates from the exogenous identity-based reference point of a low-success career (i.e., a traditional career which has low returns in the labor market, such as remaining at home to take care of children).

2.1 Individual Decision-Making with Neoclassical Preferences

Consider first a single agent model, which we label as neoclassical, where the child makes decisions without any interference by their parents. Suppose the preferences of a young immigrant are given by a utility function that is additively separable into u_k ($k \in \{H, L\}$), which converts career outcomes j_k into utility, and the cost of effort supplied. The individual then chooses $e \in \{e_L, e_H\}$ to maximize her expected payoff

$$V(e) = \begin{cases} u_L & \text{if } e = e_L; \\ pu_H + (1-p)u_L - c & \text{if } e = e_H. \end{cases} \tag{1}$$

The resulting effort choice is then:

$$e^* = \begin{cases} e_L & \text{if } c > \hat{c} \\ e_H & \text{if } c \leq \hat{c} \end{cases} \quad \text{where} \quad \hat{c} \equiv p(u_H - u_L). \tag{2}$$

The comparative static of interest is the effect of an increase in economic opportunities for immigrants, captured by p, on their well-being. Suppose that p increases, from p^- to p^+. This has two effects. First, conditional on high effort under p^- (i.e., for children with $c \leq \hat{c}^-$), better economic opportunities for young immigrants increases their expected payoffs by $(p^+ - p^-)(u_H - u_L)$. Second, the increase in p raises the cutoff from $\hat{c}^-$ to $\hat{c}^+$, i.e., children with $c \in (\hat{c}^-, \hat{c}^+)$ will now choose e_H instead of e_L, and increase their utility by $p^+(u_H - u_L) - c$. Finally, for children with $c > \hat{c}^+$, the increase in p has no effect.

2.2 Family Bargaining with Traditional Identity-Based Preferences

We now extend the model along four dimensions (see Figure 1). First, we assume a sequential bargaining game between a child and her parents. In particular, since our data captures immigrant children at an age where parents arguably still hold considerable decision-making power over them, we assume that parents are dictators who have the last say on the child's career effort.[5] The sequence of events is as follows. In the first stage, the child proposes a career effort $e \in \{e_L, e_H\}$. In the second stage, the parents can either accept the child's effort proposal or reject it and enforce the opposite effort level. In the last stage of the game, which we think of as the child's "adult stage", career outcomes are realized.

Second, we include frictions between immigrant identities and children's career choices. In order to keep the model as parsimonious as possible, we only impose identity-based preferences on the parents. In particular, we follow the prototype identity model outlined by Akerlof and Kranton (2000), where immigrant parents have a preference for their children to pursue a low-success career (j_L), and experience a loss of identity (λI) whenever their child's realized career deviates from this outcome. The loss of identity comes from the child assimilating into "mainstream" culture, versus "traditional" immigrant culture. A low success career refers to success in terms of formal labor market returns, and could include forgoing paid work to remain at home to take care of children and the household. More generally, immigrant parents could experience an identity loss whenever their children assimilate in other ways into mainstream society.

Third, to stay as close as possible to Akerlof and Kranton's identity model, and to make the implications of parents' identity concerns as salient as possible, we abstain from making the (realistic) assumption that parents are altruistic and care about their children's career outcomes.[6] We do, however, assume that both parents and the child incur a cost κ whenever parents enforce an effort level $e \in \{e_L, e_H\}$ which differs from the child's proposed effort level. We think of this cost as capturing payoff losses due to intra-family conflict.

Fourth, we assume that the child feels regret R if she has to forgo pursuing her individually rational strategy as in the neoclassical model. For example, for a child with $c \leq \hat{c}$, it is individually rational to choose high effort e_H. If, in a subgame perfect outcome, the child either proposes e_L (and the parents accept it) or the parents enforce e_L (after the child proposes e_H), the child feels regret because the foregone effort level is individually preferable to the chosen one. A natural assumption we make is that R is an increasing function of the career opportunities a child has to forgo by not being able to pursue her individually rational strategy. Thus, if in equilibrium a child with $c \leq \hat{c}$ realizes e_L instead of her preferred e_H, her foregone career opportunities are given by $p(u_H - u_l) - c$, and she experiences regret in the amount $R = R(p(u_H - u_l) - c)$. By a similar logic, if a child with

[5] Allowing parents to be "imperfect" dictators, where parents can punish their children when they do not comply with their parents' wishes, yields similar insights.

[6] This could easily be relaxed by adding a term αu_k to parental payoffs at the end nodes of the game in Figure 1 (bottom payoff). It would not change the main gist of our results, but would come at the cost of having to make some additional assumptions.

$c > \hat{c}$ realizes e_H instead of e_L, she experiences regret of $R = R(c - p(u_H - u_l))$.

Expected payoffs are given at the end nodes of the game in Figure 1. The top payoff is for the child, and the bottom payoff for parents. Consider, for example, a child with $c \leq \hat{c}$. If the child proposes e_H (which is individually rational), and the parents accept this, then the expected payoff of the child is $pu_H + (1-p)u_L - c$, i.e., she has a positive probability of a high-success career, but has to incur the cost of effort c. For parents, the expected payoff is given by $y - p\lambda I$. It increases with parents' exogenous income y; however, with probability p, the child realizes a high-success career, which causes traditional immigrant parents to suffer identity losses in amount λI. If the parent had instead rejected the child's proposal of e_H and enforced e_L instead, the child would have no chance at a high-success career, face intra-family conflict at cost κ, and feel regret R because the forgone effort level is individually preferable to the one chosen by her parents. The parent would now face intra-family conflict κ, but no longer suffer an identity loss.

To solve the game, it is useful to define the following critical value for the intensity of identity, λ:

$$\hat{\lambda} = \frac{\kappa}{pI}$$

Given this critical value, it is straightforward to verify the game has three possible subgame perfect outcomes:

(a) If $\lambda < \hat{\lambda}$ and $c > \hat{c}$, then the child proposes low effort e_L, and the parents accept it.

(b) If $\lambda < \hat{\lambda}$ and $c \leqslant \hat{c}$, then the child proposes high effort e_H, and the parents accept it.

(c) If $\lambda \geqslant \hat{\lambda}$, the child proposes low effort e_L for any c, and the parents accept it.

The first two subgame perfect outcomes correspond to the neoclassical outcome described above; they arise if parents' identity concerns are sufficiently low, relative to the cost of intra-family conflict. The more interesting case is where identity concerns are more salient, $\lambda \geqslant \hat{\lambda}$.

In the third subgame perfect outcome, traditional parents suffer a large identity loss whenever their child realizes a high-success career (j_H). When $\lambda \geqslant \hat{\lambda}$, parents' identity concerns are so high that they enforce e_L if the child proposes e_H. Anticipating this, and to avoid intra-family conflict (i.e., costs κ), the child proposes low effort e_L irrespective of whether $c > \hat{c}$ or $c \leqslant \hat{c}$, which the parents accept. From the point of view of a child with $c < \hat{c}$, the third outcome features parents who are "under-ambitious" due to identity concerns: by enforcing low effort, parents hold their children back to a low success career. This outcome features children who also feel regret R.

An increase in economic opportunities for young immigrants (i.e., an increase in p) has an ambiguous effect on their well-being, depending on how important identity concerns are for their parents. This is illustrated in Figure 2, which considers the simple thought experiment of increasing p from p^- to p^+. In terms of the model basics, this has two effects. First, it increases the critical value from $\hat{c}^-$ and $\hat{c}^+$: more children – i.e., those with $c \in (\hat{c}^-, \hat{c}^+)$ – will now find it individually rational to

supply high effort (e_H) instead of low effort (e_L). Second, it decreases the critical value $\hat{\lambda}$ from $\hat{\lambda}^+$ and $\hat{\lambda}^-$: due to identity concerns, more parents – i.e., those with $\lambda \in (\hat{\lambda}^+, \hat{\lambda}^-)$ – will now enforce e_L regardless of their child's proposed effort. We now provide some interpretation of the various regions in Figure 2.

In regions (i)-(iii) ("low identity intensity"), the identity parameter is low enough that both initially and after the increase in p, parents do not make use of their "veto" threat, and subgame perfect outcomes are neoclassical in nature. Children with $c > \hat{c}^+$ choose low effort both initially and after the increase in p; children with $c \in (\hat{c}^-, \hat{c}^+)$ choose e_H instead of e_L after the change, and realize an (expected) utility gain in amount $p^+(u_H - u_L) - c$; and children with $c \leqslant \hat{c}^-$ choose high effort both before and after the increase in p, and see their expected payoffs increase by $(p^+ - p^-)(u_H - u_L)$.

In regions (iv)-(vi) ("moderate identity intensity"), the increase in p causes some subgame perfect outcomes to change from being neoclassical in nature to being shaped by parents' identity concerns. In region (iv), choosing low effort remains individually optimal from the child's perspective, and this does not conflict with parents' identity, so there is no change in outcomes or utility. But in region (v), the increase in p makes choosing high effort individually rational now, but due to parents' identity concerns, the child is "held back" to low effort. Thus, her expected career outcomes are unaffected by the increase in p, but she feels regret R due to not being able to pursue what has become her individually optimal strategy. In region (vi), if a child proposes e_H as they did prior to the increase in p, the parents no longer accept it, but threaten to enforce e_L; anticipating this, the child immediately proposes e_L (which the parents accept), and her expected payoff decreases by $c - p^-(u_H - u_L) - R$.

In regions (vii)-(ix) ("high identity intensity"), the parameters are such that both initially and after the increase in p, subgame perfect outcomes are shaped by parents' identity concerns. In region (vii), the increase in p leaves children's well-being unaffected. However, this is not the case in region (viii), where the child initially preferred e_L; with the increase in p, the child now prefers e_H over e_L, but parents' veto threat forces the child to accept e_L, i.e., she ends up in a regret equilibrium. In region (ix), the child already had regret for not being able to pursue a high success career; after the increase in opportunity p, this regret increases and hence the child is even worse off than before.

Taken together, the model predicts the welfare effects of connecting immigrant youth to opportunity depends on the underlying strength of parents' identity concerns. Children whose parents have little or no traditional identity concerns will be (weakly) positively affected by an increase in p (positive effects in regions (ii), (iii) and no effect in region (i)). In contrast, the welfare of children whose parents have moderate to strong identity concerns will be (weakly) negatively affected (negative effects in regions (v), (vi), (viii), (ix) and no effect in regions (iv), (vii)). We find support for this model, and against the neoclassical model, for immigrant girls in the empirical work which follows.

2.3 Mainstream Identity-Based Preferences

It is straightforward to extend the model described in subsection 2.2 to the case where immigrant parents have mainstream identity instead of traditional identity. In this case, parents have a preference for their children to achieve a high-success career (j_H), and experience a loss of identity (λI) whenever their child's (realized) career outcome deviates from this reference point. As before, both parents and the child incur a cost κ whenever parents enforce an effort level which differs from the child's proposed effort level. This happens when the child would like to choose low effort (e_L) but the parent enforces high effort (e_H) due to identity concerns.

The expected payoffs for the case with mainstream identity are given in Appendix Figure A1. There are three possible subgame perfect outcomes. The first two are the same as (a) and (b) listed for the traditional case in subsection 2.2, and correspond to the neoclassical outcome. But the third differs as follows:

(c′) If $\lambda \geqslant \hat{\lambda}$, the child proposes high effort e_H for any c, and the parents accept it.

In this third subgame perfect outcome, parents' identity concerns are so high that they enforce e_H if the child proposes e_L. Anticipating this, and to avoid intra-family conflict with costs κ, the child proposes high effort for any effort cost c.

In Appendix Figure 2, we again consider the thought experiment of increasing p from p^- to p^+, as we did in Figure A2. If parents have mainstream identity concerns, an increase in youth opportunity will, for most combination of parameter values, increase children's welfare (regions ii, iii, v, vi, vii, viii, ix). In region (i) it remains unchanged. Only in region (iv) will child well-being decrease. This exception is the region where parents force children to "overachieve" by making them exert high effort e_H when they would prefer to exert e_L.

In what follows, the model of traditional identity-based preferences presented in subsection 2.2 best explains our results for immigrant girls. The model of mainstream identity-based preferences presented in this subsection is consistent with the results for immigrant boys. But so is a neoclassical model, since we do not have direct evidence for whether parents force some boys to overachieve, which is the only distinguishing prediction between the two models.

3 Identification Strategy

3.1 Birthright Citizenship Reform

At the turn of the millennium, Germany undertook a major reform of its citizenship law. The most prominent aspect of this reform related to the acquisition of citizenship at birth. We discuss the background and details of this reform in some of our previous work (Felfe et al. 2019, 2020), and so only briefly repeat the most relevant details here. Prior to January 1, 2000, citizenship at birth was

granted according to *jus sanguinis* (right of blood), i.e., children became German citizens only in cases in which at least one parent held German citizenship. The legal status of immigrant children born to non-German citizens was either that of a temporary or a permanent resident.

Although citizenship and permanent residency both allow individuals to live in Germany indefinitely, the rights and benefits of the two are not the same. Permanent residents can work in Germany and have access to the same welfare benefits. But they do not have the right to vote in general elections, are unable to apply for civil servant positions, cannot work in other EU countries, may lose their residency status if out of Germany for more than a year, and face the risk of deportation if they commit a crime. Prior research has documented that the two legal statuses, citizenship and residency, are associated with different labor market outcomes: compared with their non-naturalized peers, naturalized immigrants earn more (Chiswick 1978; Steinhardt 2012), have higher job-finding rates (Fougère and Safi 2009; Gathmann and Keller forthcoming) and experience steeper wage-tenure profiles (Bratsberg et al. 2002).

Starting January 1, 2000, the prevailing regime changed to a restricted version of *jus soli* (right of soil), i.e., every child born on German territory gained a conditional right to German citizenship. The conditionality attached was that at least one parent was a legal resident in Germany for eight years or more at the time of birth of the child. If the condition was satisfied, German citizenship was automatically registered in the child's birth record with no need for the parents to apply for it, but also with no right to disclaim it.[7] A transition rule applied for the year 2000, where parents residing in Germany for at least 8 years could apply for their existing children to become citizens. However, only a small fraction of parents took advantage of this (approximately one-sixth), possibly due to poor publicity or a low demand by parents for their children to become German citizens.

3.2 Empirical Model

The reform of Germany's citizenship law specifies a birth date eligibility cutoff, which creates a discrete and plausibly exogenous shock to immigrant opportunity. We exploit the quasi-random assignment of birthright citizenship around the cutoff using a local difference-in-differences design. We model outcome Y_i for child i as:

$$Y_i = \beta_0 + \beta_1 \text{Immig}_i + \beta_2 \text{Post}_i + \beta_3 (\text{Immig}_i \times \text{Post}_i) + \gamma_m + \epsilon_i \tag{3}$$

where $Immig_i$ is an indicator for whether a child is a second-generation immigrant versus a native and $Post_i$ is an indicator for whether a child was born in the months after January 1, 2000. The coefficient of interest is β_3, which identifies the effect of the reform for immigrant children born after

[7] The law originally allowed children granted birthright citizenship to hold two passports until age 23. At that point, they would be required to choose German citizenship or the citizenship of their parents. In 2014, this was relaxed even further, so that children with birthright citizenship now have the ability to hold dual citizenship even past the age of 23 (as long as they have lived in Germany for 8 years, attended German school for 6 years, or acquired formal education in Germany). Many origin countries for immigrants, such as Turkey, allow for dual citizenship.

the policy cutoff. We include a set of birth month dummies (γ_m) in all regressions to capture any effects which are common to both natives and immigrants within the same birth month during the year.[8] In extended specifications, we also include a vector of controls which contain a limited set of family characteristics (maternal and paternal age, maternal and paternal education) and city characteristics (city size and group-specific local unemployment rates).

An advantage of our estimation approach is that we are comparing students in the same grade and in the same class as each other. This eliminates many potential confounders, with the only remaining difference being a student's age within a class. To make the estimate even more local, we also consider robustness checks which narrow the birth window around the reform. For our main welfare outcome (self-reported life satisfaction), we report what happens when the window narrows from ±6 months around the cutoff to ±5, ±4, ±3, or ±2 months. In a related robustness check, we also estimate a regression discontinuity model, using date of birth as the running variable. The RD estimates have standard errors which are roughly twice as large compared to our baseline specification, and similar to the standard errors with a window of ±2 months. There is enough precision for our main welfare outcome that these robustness checks are informative. However, there is not enough power to use such a small window or an RD for the majority of our secondary outcomes.

Equation 3 captures the reduced form effect of the introduction of birthright citizenship, or alternatively, the intention-to-treat (ITT) effect. This ITT effect is a lower-bound estimate of the impact of citizenship at birth, since our sample includes pre-policy children who may have qualified for citizenship at birth through *jus sanguinis* or the transition rule. Moreover, our sample includes post-policy children whose parents did not meet the 8 year residency requirement and hence these children were ineligible for birthright citizenship.

To gauge the magnitude of the reform's effect on citizenship at birth, we use the German Microcensus from 2001. This dataset has information on both parent and child citizenship *around the time of the child's birth*, country of birth and length of residence. We define second-generation immigrant children as those born in Germany to parents who are both foreign born. Using second-generation immigrant children in the 2001 survey wave who were recently born, we find the reform substantially increased the fraction who acquired German nationality at birth. As illustrated in the first panel of Figure 3, 28% of second-generation children born pre-reform qualified for citizenship either from *jus sanguinis* (right of blood) or the transition rule, while 80% of children born post-policy qualified for German citizenship from *jus soli* (right of soil).[9] In order to obtain back-of-the-envelope estimates of the local average treatment effect of endowing immigrant children with citizenship at birth, this gap of 52 percentage points means we need to scale our reduced form coefficients by a factor of 1.9.

An alternative estimate for the effect of the reform can be constructed using questions we asked on our own survey. We asked students whether they were born in Germany, whether they are

[8] An extra birth month dummy has to be dropped due to colinearity with the $Post_i$ indicator.

[9] These estimates are based on families where both the mother and the father reside in the household.

citizens, and if so, when they acquired citizenship (at birth or later on), as well as the year each of their parents arrived in Germany. This series of questions can be used to construct a measure of citizenship at birth. While students often give inconsistent answers, after correcting obvious errors (such as reporting being born in Germany post reform, but not being a citizen) and imputing citizenship status based on combinations of the questions, we find a similarly large jump in birthright citizenship. The second panel of Table 3 shows a jump of 45 percentage points (78%-35%).

We view the German Microcensus estimate as more reliable (since it is based on parental reports near the time of the birth), and will use it when we talk about how to scale our main reduced form estimates. But an advantage of our survey measure is that it can be calculated for Muslim versus non-Muslim immigrants. For second-generation children with a Muslim background, the gap using our survey measure is 54 percentage points (83%-29%), while for non-Muslims the gap is smaller at 27 percentage points (73%-46%). Taking the estimate from the German Microcensus as accurate, and our survey measure as biased downwards, we can inflate the Muslim survey measure by multiplying 54 percentage points by 52 divided by 45. This yields an inflated Muslim-specific jump of 62 percentage points, implying a reduced form scaling factor of 1.6 for this group. When reporting results in tables, we focus on the reduced form, but keep these scaling factors in mind when interpreting the magnitudes of the estimates.

3.3 Threats to Identification

Since we compare individuals born earlier versus later in the same school year, a possible threat to identification is bias due to age or season of birth effects. Age and season of birth could matter for two reasons. First, older children might do better academically (Cascio and Lewis 2006; Black et al. 2011; Cornelissen and Dustmann 2019) or differ on other margins such as self confidence or competitiveness (Page et al. 2019) and these factors could influence the outcomes we study. Second, socioeconomic characteristics of parents have been shown to change over the year (Buckles and Hungerman 2013; Carlsson et al. 2015), so children born at different times may not have comparable backgrounds. We perform a variety of robustness check related to age and season of birth, which we preview here.

Our local difference-in-differences design uses native German children (who were unaffected by the reform cutoff date) as a control group to account for any common age and season of birth effects. As we shall see shortly (Figure 2), there is no evidence that being born early versus late in the year matters for the well-being of natives. This suggests, at least in our setting, that age and season of birth are not likely to be first order confounding factors unless they are completely immigrant specific. Consistent with this finding, the inclusion of month of birth effects has little impact on our estimates.

Another way to minimize age and season of birth effects is to narrow the sample window around the reform, which we do as a robustness check. We try a range of window widths, ranging from ± 2

months around the cutoff to using our entire sample of ±6 months. We find that, if anything, the effect for our main outcomes are larger for smaller windows, although they are also less precisely estimated. A similar finding holds for our main outcome when we use an RD approach.

A conceptually distinct, but additional age-related concern, is manipulation. Since our identification strategy relies on a birth date cutoff, the worry is strategic fertility choices. Two types of sample restrictions are useful to assess this concern. The reform was ratified in July 1999, so narrowing the window to ±3 months or less around the cutoff limits the sample to children who were all conceived in advance. Second, we implement a "donut" strategy that drops children born in the 2-week window around January 1, 2000. This avoids potential selection into treatment through birth-date manipulation by parents via the postponement of inductions or elective c-sections. Our main outcomes are robust to both of these exercises.

Another way to assess self-selection into treatment is by looking at whether immigrants time their births differently compared to natives, who were not affected by the reform. We regress a dummy variable for immigrant status on birth month dummies. The resulting p-value for the joint test without any control variables is 0.25. Including our baseline set of controls, the p-value drops further to 0.57.[10] We conclude there is no evidence for differential timing of births by immigrants.

4 Survey Data

Our analysis is based on data we collected to assess the effects of the introduction of birthright citizenship in Germany. This data collection (i) took place between June and November 2015, (ii) covered 15 to 16 year old students in 219 classes in 57 German schools (all in their final year of compulsory schooling), and (iii) included both a traditional survey and a lab-in-the-field experiment on cooperation. In this paper, we only draw upon our survey data. Felfe et al. (2019) reports results for the lab-in-the-field experiment; much of the following data description is taken from that work, which provides more detail.

4.1 Survey Design

Our data collection took place in 2015 in two German federal states: Schleswig-Holstein (SH), where compulsory schooling lasts for nine years; and North Rhine-Westphalia (NRW), where compulsory schooling lasts for ten years. In both federal states, a school year starts in August/September and ends in June/July. In a first step, we sought approval for our data collection from the ministries of education in SH and NRW, respectively. In a second step, the two ministries strongly encouraged the principals of the targeted schools to participate. In a third step, we contacted the principals directly and asked for formal permission to conduct the experiment and survey in all ninth grade classes in SH and in all 10th grade classes in NRW.

[10] We also performed a McCrary (2008) density test for the immigrant sample; the p-value is 0.88.

Fifty-seven schools agreed to participate. We collected the data in two waves. In the first wave from June 2 to July 16, we targeted all 9th graders from 31 schools (spread over 122 classes) in six cities of SH.[11] In the second wave from October 19 to November 16, we targeted all 10th graders of 26 schools (spread over 97 classes) in two cities of NRW.[12] There are five types of schools in our sample: 10 secondary general schools ("Hauptschule"), 8 intermediate ("Realschule"), 29 comprehensive without the final years of grammar education ("Gesamtschule ohne gymnasialer Oberstufe"), 8 comprehensive with the final years of grammar education ("Gesamtschule mit gymnasialer Oberstufe"), and 2 grammar schools or high schools ("Gymnasium").

Our target populations give us a single school cohort of children primarily born in 1999 and 2000. This allows us to exploit the introduction of birthright citizenship in Germany on January 1, 2000. An advantage of our design is that the introduction of birthright citizenship falls in the middle of the school year, whereas the school starting age cutoffs occur in the summer.

Two weeks prior to the study, school principals informed parents about the study, but not informed about the objectives of the study. Parents were given an opt-out option, i.e., they could proscribe their children's participation. Moreover, immediately before the experiment started, all students present in class were informed by us that participation was voluntary.

The study was run at the school class-level during two regular consecutive school periods, which lasted 45 minutes each. One class period was used for the survey, while the other for the lab experiment discussed in Felfe et al. (2019). The survey was conducted in regular classrooms using pen and paper, with the order of the survey versus the lab experiments being randomly assigned each day. To increase privacy, mobile screens were set up between students.

4.2 Analysis Sample

On the days we conducted the study, a total of 4,634 students were present in the 219 classes. Parents made use of an opt-out option for 44 students (less than 1%), while 154 students (3.5%) chose to opt out themselves. Thus, 4,436 students participated in the study. Of those, 270 did not provide the survey information necessary for our analysis (i.e., own gender, birth date, country of birth or parental migration background). This leaves us with a baseline sample of 4,166 students.

The survey provides information, *inter alia*, about participants' date of birth, country of birth, gender, religion, well-being, aspirations, preferences and interests, personality traits, school achievements, and family background. Two key family background variables are the birthplaces of both parents, which we use to categorize participants into three groups: (i) native children, whose parents are both German-born; (ii) immigrant children, whose parents are both foreign-born; and (iii) mixed-background children, who have one German-born and one foreign-born parent. Overall, according to our definitions, the sample comprises 2,250 native children (54%), 1,260 immigrant children (30%)

[11] The cities are Flensburg, Kiel, Lübeck, Neumünster, Elmshorn, and Pinneberg, with population sizes ranging from 42,266 to 246,306.

[12] The cities are Duisburg and Wuppertal, with population sizes of 491,231 and 350,046, respectively.

and 672 mixed-background children (16%). Roughly 77% of all immigrant children in our sample are German-born (i.e., second-generation immigrants), while 23% are foreign-born (i.e., first-generation immigrants).

For the current paper, we restrict the baseline sample along several dimensions. We drop first-generation immigrants, since the introduction of birthright citizenship only affected second-generation immigrant children. Mixed-background children are not used in the analysis, as we cannot determine whether they were affected by the reform. We draw upon native German children as a control group. Since our identification strategy centers around the birthdate cutoff of January 1, 2000, we only retain second-generation immigrants and German children born in a ± 6-month window of this cutoff. This leaves us with a sample of 598 second-generation immigrant children and 1,535 native German children.

4.3 Summary Statistics

Table 1 reports summary statistics for our estimation sample of native and immigrant children, broken down by gender. Natives and immigrants differ along several dimensions. Second-generation immigrant boys and girls have less educated and younger parents compared to their native counterparts. Immigrant children are also concentrated in bigger cities (>100,000 residents).

The third and fourth columns of Table 1 further break down immigrants into two groups: those born before the cutoff date of January 1 (and hence ineligible for birthright citizenship) and those born after. There are no statistically significant differences in any of the background characteristics for girls in the top panel. For boys, there is a small difference in regional unemployment and mother's education being at the middle level. The finding of two estimates significant at the 10% level and one at the 5% level is roughly what one would expect by chance for these 30 variables. We conclude that immigrants born pre and post reform appear to be similar to each other on average.

Additional summary statistics for religion and mother's country of origin are found in Appendix Table A1. For natives, the dominant religion is Protestant, with some Catholics and some claiming no religious affiliation. In sharp contrast, 60% of immigrants are Muslim, and only 3% claim no religious affiliation. Turning to the mother's country of origin, the largest group of immigrant mothers come from Turkey (42%). Other common origins include Balkan, European, and Post-Soviet bloc countries. We will use both of these variables later to define "traditional" parents.

For reference, descriptive statistics for all of the dependent variables we use can be found in Table A2. We explain the construction of these outcome variables as we discuss our empirical findings.

5 Results for Child Well-Being

In this section, we test the main prediction of the intergenerational model outlined in Section 2 for traditional versus mainstream identity concerns. Namely, we test whether immigrant girls' and

boys' well-being goes up or down in response to the increased opportunities offered by birthright citizenship. We use self-reported life satisfaction as our main measure of well-being, supplementing this with related questions on self-esteem.

5.1 Birthright Citizenship and Life Satisfaction

A standard approach to measuring well-being in a survey is to ask respondents directly how they think things are going in their life. Our primary measure of well-being was prefaced with the statement: *"Finally, we would like to ask you about your satisfaction with your life as a whole!"* We then asked the question: *"Overall, how satisfied are you with your life?"* Respondents were given a visual scale with 11 boxes ordered on a line to chose from. The left side of the scale, which started at 0, was labeled *completely dissatisfied* and the right side of the scale, which ended at 10, was labeled *completely satisfied*. Respondents checked the appropriate box to indicate their answer. We also asked two follow-up questions about life satisfaction in the future: *"And what do you think, what will it be in a year?"* and *"And what do you think, what will it be in five years?"* These questions were answered on the same scale. We delay talking about future life satisfaction until the end of the paper.

This type of life satisfaction question has the advantage of being asked as a simple, single question. It is meant to capture a global measure of subjective well-being across all areas of one's life and has been asked in a variety of ways.[13] Life satisfaction measures have been shown to correlate with measures of mental health, and predict future behavior such as suicide attempts.[14] It is advocated by the Sen-Stiglitz-Fitoussi report, which in general argues for the use of many indicators in a policy dashboard, but considers life satisfaction as the best all-encompassing single measure (see Stiglitz et al. 2017).

We start with a simple graphical comparison of how life satisfaction varies for children born before and after the policy cutoff. To ease interpretation, we first transform the life satisfaction variable so that it is mean 0 and has a standard deviation of 1 for the sample of natives of both genders. Average life satisfaction for natives is 7.46 on the 0 to 10 scale, with a standard deviation of 2.27. The first panel in Figure 4 plots average life satisfaction by month of birth for girls. The red dots are for immigrants, while the blue dots are for natives. In the graph, we have normalized January to be month 0 and drawn a vertical line to separate children born before versus after the cutoff date. Horizontal lines indicate the group means for those born in the six months before versus after the reform cutoff date.

[13] See Linton et al. (2016). Variants compared to our question introduce slight wording changes, differences in the labeling and range of the Likert response scale, and difference in the reference time period. For example, the World Happiness Report, which is conducted annually by the United Nations (Helliwell et al. 2019), uses a Cantril ladder survey, where individuals are asked to think of the rungs of a ladder, with the best possible life being a 10 and the worst possible life being a 0. Related life satisfaction measures, such as the Satisfaction with Life Scale (Diener et al. 1985), ask a series of questions and create an index based on the responses.

[14] See Frijters et al. 2020 for key estimates from the literature on the determinants of life satisfaction.

The first thing to notice in the graph is that immigrant girls have higher life satisfaction compared to natives. For girls born before the cutoff (July to December), immigrants report being almost one-half of a standard deviation better off compared to natives. The second thing to notice is that native girls born before and after the cutoff have similar life satisfaction, which is not surprising since the reform did not apply to them. The final thing is that immigrant girls born after the cutoff (January to June) self-report much lower life satisfaction compared to those born before. Turning to panel (b), we find a very different pattern for boys. To start, there is almost no gap in life satisfaction between immigrants and natives for those born in the pre-period. Moreover, if anything, immigrant boys become better off in the post period.

Table 2 presents regression results analogous to the figures, using the model described in equation 3. Panel A, column (1) includes no additional controls, and confirms that the gap between immigrant and native girls in life satisfaction is large, and that immigrant girls born post-reform suffer a sizable drop in well-being. Immigrant girls born after the birthright citizenship reform are .31 standard deviations less satisfied with their life, and this drop is statistically significant. To put the estimate in perspective, the drop eliminates two-thirds of the gap in life satisfaction between immigrant and native girls. As a reminder, these are reduced form estimates, and as discussed in Section 3.2, to get the effect of birthright citizenship, they should be scaled up by roughly 1.9, for a scaled effect of .59 standard deviations.

Another way to think about the size of the estimate is to calculate the change not in standard deviation terms, but rather as the percent decrease in the raw index, which has a mean of 7.46 on a 0-10 point scale. The scaled drop is 1.34, which represents a 16 percent decrease on the raw scale (1.34/7.46). To put this in perspective, this effect size is similar in magnitude to the effect of a medium-level depression on life satisfaction (Frijters et al. 2020) and larger than the effect of moving from rich to poor (Frijters et al. 2011).

Column 1 does not account for more granular age or season of birth effects which are common to both immigrants and natives. Adding in birth month fixed effects does little to alter the estimates (see column 2). In columns 3 and 4, we further include a basic set of controls for family characteristics (parental education and age) and regional characteristics (group specific local unemployment and city size).[15] These additions do not change the estimate appreciably.

Turning to panel B for boys, we find that the introduction of birthright citizenship increased life satisfaction by a little over one-tenth of a standard deviation. But these results are not statistically significant. As with girls, the introduction of controls does little to change the estimates.

In sum, the results in Figure 4 and Table 2 are consistent with parents having traditional identity concerns for their daughters, but mainstream identity concerns for their sons. As we will discuss in Section 7, other models can explain this well-being result in isolation. However, we also estimate

[15]While we have other family characteristics from the survey, such as whether the parents are divorced, we do not include them in the regression as controls, as they could be endogenous to the cutoff. Including these potentially endogenous covariates has little effect on the estimates, however.

the effect of birthright citizenship on other outcomes, and as we discuss in Section 7, the sum of the results are best explained by our intergenerational identity model. But before we get to these other outcomes, we first probe the robustness of our main finding, use an alternative measure of well-being, and examine heterogeneity by religion.

5.2 Robustness

To explore the robustness of our main finding that the introduction of birthright citizenship decreased immigrant girls' well-being, we estimate a variety of additional specifications. To start, in Table 3 we narrow the sample window. In our main specification, we included all children born 6 months before and after the reform date. By narrowing the sample window, we make the estimate more local to the cutoff, minimizing concerns that differential age or season of birth effects between immigrants and natives are driving our results.

In each column of Table 3 we shrink the window by 1 month on each side of the birth cutoff. In the first column of panel A, with a window of ±5 months, there is little change in the estimate and only a small increase in the standard error. As we move across the columns, the standard error continues to increase, and the estimates are larger compared to the baseline window.[16] The estimates remain statistically significant, but by the time we have a ±2 month window, the standard error has increased by 75 percent (consistent with the sample size falling by almost a third). In panel B for boys, the different windows do not materially affect the results either.

In Table 4 we report additional robustness checks. In the first specification, we use a regression discontinuity estimator. We limit the sample to immigrants, use birthdate in days as the running variable, and have January 1, 2000 as the cutoff. We estimate the RD using triangular weights, separate linear trends to the left and right of the cutoff, and the full sample window of ±6 months. The RD estimate of the reform is -.488, which is larger than our baseline estimate appearing in Table 2. Interestingly, it is very similar to the estimates in Table 3 which restrict the window to be ±4 months or less. In column 2 we estimate a difference in RDs, where we subtract the jump at the cutoff for natives from the jump at the cutoff for immigrants. This effect is even larger, and remains statistically significant.

A natural question is why we don't use an RD specification as our baseline specification throughout the paper. The answer is revealed by looking at the standard error of the RD estimate in column 1, which is substantially larger compared to our baseline approach (s.e. = .255 versus .139). To make another comparison, the standard error of the RD estimate is close to the standard error which uses a ±2 month window in Table 3 (s.e. = .255 versus .244). While the RD estimate for our main outcome variable of life satisfaction is precise enough to be informative in Table 4, once we start to

[16] Interestingly, the increase in the point estimate for the post-reform*immigrant interaction term is matched by an increase in the immigrant term, so that the percent reduction in the immigrant-native gap is roughly equal in percent terms.

split the sample or look at other outcomes, the RD standard errors generally become too large to permit a useful analysis.

Turning to column 3, we perform a different type of robustness check. Instead of including birth month fixed effects, we now control for age in days. This has little effect on the estimate. Column 4 adds in a donut hole, where observations within 1 week on either side of the cutoff are excluded. This is to deal with mothers who may have strategically delayed birth to obtain citizenship for their child. The results remain virtually unchanged. As a reminder, narrowing the sample window to be within ± 3 months of the reform, as we did in the prior table, deals with parents who may have strategically tried to time conception, as the reform was not announced until July 1999. Finally, in column 5, we cluster our standard errors at the school level (57 schools). This has little effect on the standard errors. We note that there is no reason to cluster the standard errors at the school level, as the level of randomization is at the individual level within a school. But we include them just to show this does not matter for inference for the interested reader.

5.3 Alternative Measures of Well-Being

We now explore an alternative set of well-being measures. In particular, we asked students a series of questions assessing their self-esteem, which are intended to capture a person's overall sense of self-worth or personal value. Self-esteem is particularly relevant as a measure of well-being for teenagers. It differs conceptually from life satisfaction, in that it is meant to capture confidence and satisfaction with oneself, rather than satisfaction with life more generally. The two measures are related, with self-esteem being found to be a strong predictor of life satisfaction (e.g., Diener and Diener 1995). Self-esteem has recently been argued to be a crucial component in identity theory, as it is the esteem placed on one's own identity (Akerlof 2017; Kranton 2016).

The self-esteem portion of our survey began with the preface *"How well do the following statements apply to you?"* We listed five statements which are generally viewed as indicators of positive self-esteem: (i) *Overall, I am satisfied with myself*, (ii) *I have many positive character traits*, (iii) *I am as capable as other people*, (iv) *I am a person with value and self-worth*, and (v) *I have a positive attitude towards myself*. Respondents were given 6 boxes ordered on a line to chose from. The left side of the scale, which started at 1, was labeled *"not at all accurate"* and the right side of the scale, which ended at 6, was labeled *"completely accurate"*. Respondents checked the appropriate box to indicate their answer.

As we did for the life satisfaction question, for ease of interpretation we normalize the responses to be mean 0 and standard deviation 1 relative to the population of all natives. We further create an aggregate index which sums across these 5 normalized variables, and divides by 5. Our positive self-esteem index has a correlation of .54 with our life satisfaction measure.

Results using these positive self-esteem measures as outcomes can be found in Table 5. Start with panel A, which reports results for girls. As we found for life satisfaction, the self-esteem index

is higher for immigrants compared to their native counterparts. And the index similarly falls for immigrant girls born post-reform: self-esteem falls by one-fourth of a standard deviation, a drop which is statistically significant. All five of the individual components entering the index have large and negative signs, with two of the components being statistically significant.

Turning to panel B for boys, the effect of the reform flips signs. The self-esteem index rises by .17 standard deviation for immigrant boys born after the reform relative to their native counterparts. And each of the components of the index has a sizable and positive estimated coefficient, although only one is statistically significant at the 10% level.[17]

This alternative measure of well-being comports well with those reported using life satisfaction. Both sets of results are consistent with parents having traditional intergenerational identity concerns for their daughters, but mainstream identity concerns for their sons.

5.4 Heterogeneity by Religious Background

One of the most salient cultural identities in many countries is religion. There are particularly stark differences in gender norms in Muslim and non-Muslim societies (Alba 2005; Bisin et al. 2008; Ersanilli 2012). To illustrate these stark differences in the context of Germany, we draw upon the Global Gender Gap Index constructed by the World Economic Forum. Appendix Table A3 displays the overall gender gap index as well as the various subindices based on the mother's country of birth. For each child in our sample, we assign them the gender index associated with their mother's birth country, and report the average of the indices weighted by the number of children.

For native children, whose mothers are all from Germany, the overall gender gap index is .75, which has the interpretation that there are 25 percent fewer resources and opportunities available to German women compared to German men. Looking at the subindices, the gender gap is larger for access to economic opportunities and participation and political leadership, while the gap has basically closed in terms of educational attainment and health.

We next split second-generation immigrant children into two groups: those who report their religion as Muslim versus non-Muslim. Non-Muslim immigrant children have mothers who stem predominantly from Poland and Russia. Gender disparities are already more pronounced for this weighted set of countries compared to Germany: the overall gender gap index amounts to .67 and the gap is again most pronounced when it comes to access to economic opportunities and representation in political leadership positions. The are only small disparities in terms of education or health.

Mothers of Muslim immigrant children come predominantly from Turkey, but also from Iraq, Lebanon, and Morocco. In these countries, women's access to opportunities and resources is severely restricted. The overall global gender index is .59, with the biggest gap existing in the sphere of

[17] In the survey, we also listed five statements which are generally viewed as indicators of negative self-esteem. When we run similar regressions using a negative self-esteem index (a larger score here means worse self-esteem), the post-reform x immigrant interaction term is .16 (s.e.=.15) for girls and -.11 (s.e.=.13) for boys. So while insignificant, the results broadly line up with those for the positive self-esteem index.

political empowerment (0.06), followed by a gap in economic opportunities (.44). There is also a gender gap in terms of educational attainment (0.89), a gap which does not exist for native Germans or non-Muslim immigrants.

This large discrepancy in gender norms motivates a heterogeneity analysis by religious affiliation. In Table 6, we repeat our baseline specification, but estimate separate regressions for second-generation Muslim and non-Muslim immigrant children. This stratification by religion does not reveal any interesting heterogeneities for boys. In contrast, the subgroup results for girls are striking. The citizenship reform had at most a modest, but insignificant effect on the well-being of non-Muslim immigrant girls. Among Muslim immigrant girls, however, it caused a significant drop in life satisfaction of almost half of a standard deviation. In other words, the reduction in life satisfaction observed around the introduction of birthright citizenship is an entirely Muslim-girl phenomenon. Although not shown, a similar hetergeneity by religion shows up for the index of positive self-esteem.

In Appendix Table A4, we further probe the effects we found for Muslim immigrant boys and girls. While unlikely, a possible concern is that being born before versus after the reform changes one's religion from Muslim to something else. To explore whether this affects our results, we use a predicted Muslim measure based on exogenous characteristics instead. Using the sample of second-generation immigrants, we first regress the self-reported Muslim variable on dummy variables for the countries of origin for both mothers and fathers. Using these estimated coefficients, for each child we predict the probability they are Muslim. We then estimate the effect of the reform for the sample of immigrant children whose probability of being Muslim is over 75%. These results are reported in column 1. The estimate is -.412, which is slightly larger than our baseline estimate. As a second approach, in column 2 we restrict the sample to immigrant children whose mother comes from either Turkey or the Middle East, regions which are predominantly Muslim. The estimate of -.362 is remarkably similar to our baseline.

6 Birthright Citizenship and other Outcomes

Our theoretical model predicts that immigrant children whose parents have strong traditional identity concerns will be made worse off by a policy that enhances assimilation opportunities, whereas children of mainstream parents will be made better off. The model we laid out in Section 2 also has several other implications relating to mechanisms, which we explore in this section.

According to the standard neoclassical model, a policy that connects immigrant youth to opportunity increases the expected payoff to investments in human capital, and hence educational aspirations. But with the intergenerational identity model, whether such aspirations materialize depends on whether parents perceive the pursuit of a high-success career to be a desirable life path for their child. Parents with a mainstream identity, and thus a preference for a high-success career, will reinforce their child's increased aspirations. Parents with a traditional identity, in contrast, have different preferences and thus objectives regarding their child's future. As such, they will not support, and

may even sabotage, their child's educational and professional aspirations.

The prediction is that children whose parents adhere to a mainstream identity will have increased aspirations, have confidence they will have the ability to achieve them, and will receive investments and support from their parents. In contrast children whose parents exhibit more traditional preferences (Muslim immigrant girls) will be less able to make use of the opportunities presented to them, and their parents will not support their educational and labor market goals. Immigrant parents could likewise respond to the citizenship reform by ramping up efforts to transmit traditional culture, including speaking their home country language to their daughters rather than German.

6.1 Disillusionment and Family/Career Tradeoffs

Disillusionment. We start by looking at educational aspirations, which are analyzed in the first two columns of Table 7. We define an indicator variable for high educational aspirations which equals one if the child states they would like to pursue a university education. Fifty-six percent of all native girls and 62 percent of Muslim immigrant girls born pre-reform have high educational aspirations. Being born after the reform raises this probability by 11 percentage points for Muslim immigrant girls. While this is a large effect, it is not statistically significant (p-value=0.16).

Even more interesting are the results in columns 3 and 4. We asked respondents two questions: *"How likely is it that you will be able to complete the training or education required for your desired profession?"* and *"How likely is it that you will be able to find a job in your desired profession?"* Respondents answered both questions on a scale which went from 0 to 100% in increments of 10%. We create an indicator variable which equals one if the answers to both questions are greater than 50%. We think of this variable as capturing a high versus low chance of achieving one's professional aspirations. Immigrant Muslim girls born before the reform are more optimistic compared to natives, with 80% believing they have a high chance of reaching their professional goals compared to 67% of natives. But this optimism falls dramatically for Muslim immigrant girls born after the reform: their estimated coefficient falls by 21 percentage points and is statistically significant. No such drop is found for immigrant Muslim boys, non-Muslim boys, or non-Muslim girls, where the estimates go in the other direction and are not statistically significant.

In columns 5 and 6, we go one step further and interact the two indicator variables used in the first two columns. We create a variable capturing disillusionment, which is defined as having high educational aspirations but a low perceived probability of achieving one's professional aspirations. The baseline value of this disillusionment variable is low: 17% for natives and 10% for Muslim immigrant girls born pre-reform. But disillusionment spikes upwards for Muslim immigrant girls born after the reform by 19 percentage points, a result which is statistically significant. This finding indicates that it is the same immigrant Muslim girls born post reform whose aspirations increase who also believe they won't be able to reach them.

Family versus Career. In the last two columns of Table 7, we examine the tradeoff between pursuing one's professional aspirations versus family responsibilities. We asked respondents *"How likely is it that you will have to forgo your career for family reasons, such as parenting?"* Respondents answered on a scale which went from 0 to 100% in increments of 10%. This question is tightly linked to gender norms. As we discussed in Section 5.4, second-generation immigrants from Muslim countries are much more likely to have mothers who come from countries where women receive less education, participate less in politics, and work substantially less often outside the home (see Appendix Table A3).

Starting with girls in panel A, 48% of natives and 37% of pre-reform Muslims believe they will have to forgo a career for family. But for Muslim immigrant girls born post-reform, the odds of having to forgo a career to take care of a family rise by 8 percentage points, a result which is significant at the 10% level. When scaled by the first stage, the effect is a 15 percentage point increase. This suggests that even as birthright citizenship increases opportunities for Muslim immigrant girls, they feel less able to take advantage of those economic opportunities relative to family responsibilities. Interestingly, the results go in the opposite direction for non-Muslim immigrant girls, and significantly so.Both the disillusionment and family-career estimates align well with what we found in Section 5, where the drop in child well-being was exclusively an immigrant Muslim girl phenomenon.

6.2 Parental Investments

If traditional parents do not want their daughter to take advantage of the increased opportunities provided by birthright citizenship, our model predicts they will discourage educational investments. We investigate this using a question which asks *"Do your parents support you in your homework and learning?* Students could answer that either their mother, their father, both parents or neither parent supports them. We create an indicator for whether one or both parents provide schooling support interacted with whether the child lives with them.[18] We view this measure as capturing parental investments in their child's education.

The results are striking. Column 1 in the top panel of Table 8 reveals that for Muslim immigrant daughters affected by the reform, parents' schooling investments fall by a statistically significant 15 percentage points.[19] This is a sizable drop. When scaled by the first stage effect of the reform on birthright citizenship, it implies a lowering of parental support of 24 percentage points (a 39% drop relative to their non-naturalized peers). As we saw for the aspiration and disillusionment outcomes, this drop is limited to immigrant Muslim girls. The other immigrant groups experience, if anything, a rise in parental investments (with significant increases for non-Muslim immigrant boys).

[18]This definition allows for the fact that some children do not live with their mother or father, and so may not regularly interact with them.

[19]If we alternatively create two separate dummy variables for mother's schooling support and for father's schooling support, there are large drops for both: -.125 (s.e.=.076) for mothers and -.185 (s.e.=.078) for fathers.

Another way parents can push their child to be more traditional, and maintain the culture of their home country, is to speak their native tongue with their child instead of German. On our survey we asked "*What language do you speak with your mother?*" and *"What language do you speak with your father?"* We create a dummy variable which equals 1 if the child indicates they only speak a language other than German with either one or both parents interacted with whether the child lives with them. We view this measure as capturing an investment in traditional culture. A parent's refusal to speak German with their child transmits cultural priorities, and likely further isolates a child from natives (for example, if they have a German-only speaking friend over to their house).

As expected, natives rarely say they never speak German with their parents (less than .3 percent, regardless of gender). But for Muslim immigrant girls born pre-reform, 24% never speak German with one or both parents. This rises by 8 percentage points for Muslim immigrant girls exposed to the birthright citizenship reform.[20] Scaled by the first stage, this estimate indicates a 50% increase in the fraction where at least one parent does not speak German with their daughter. In contrast, there is no effect for non-Muslim girls born after the reform. Completing the picture, there is no significant effect for Muslim sons, while for non-Muslim immigrant sons we observe a significant increase. The latter finding might reflect an investment in sons' bilinguality, which would be consistent with the positive effect on parental support for non-Muslim immigrant boys.

These results, combined with those in Section 6.1, align well with our intergenerational identity model for traditional parents. They suggest that parents of immigrant Muslim girls sabotage their daughter's educational and professional ambitions by withdrawing support and instead pushing for the more traditional role of being a mother and homemaker. The language results likewise point towards a greater emphasis on traditional versus mainstream culture.

6.3 Social Integration, German Identity, and Assimilation Beliefs

Many policymakers believe that citizenship will spur immigrants to integrate into society with natives. Indeed, this is what a model with neoclassical or mainstream parental preferences predicts. However, this need not be the case in our model if traditional parents attempt to reinforce home-country values when their traditional culture is threatened by the granting of citizenship. In this section, we assess how birthright citizenship affects social integration using measures of social participation and support, German identity, and assimilation beliefs.

Social Participation and Social Support. Our first measure of integration is an index of social participation based on the number of extracurricular activities a child has ever participated in. The four activities include sports, band/orchestra, theater, and the school newspaper. Our index simply counts the number activity types a child has ever participated in, and therefore ranges from 0 to

[20] If we alternatively create two separate dummy variables for never speaking German with the mother or never speaking German with the father, the effect is roughly twice as large for mothers (estimate=.067, s.e.=.029) as for fathers (estimate=.034, s.e.=.027).

a maximum of 4. These voluntary activities create increased interactions with native children in settings not directly related to normal academic studies, and arguably increase a sense of social belonging.

Table 9 reveals that natives have participated in .90 of these activity types on average and that immigrant Muslim girls born in the pre-period participate in 0.18 more activities. This fraction falls by a statistically significant .30 activities for Muslim immigrant girls born after the reform. Scaled by the first stage, this is a drop of over one half of an activity. Muslim immigrant boys born after the reform, in contrast, increase their participation by a statistically significant .23 activities. We interpret these results as showing that when Muslim girls gain birthright citizenship, they participate in fewer extracurricular activities with natives, which is opposite of the goal of many policymakers.

To provide further insight, in columns 3 through 6 we probe how birthright citizenship affects feelings of loneliness and one's friendship network. On the survey, we listed a series of statements prefaced by *"These statements describe your relationship with friends and other people. Please tell us, on the following scale, how much the statements apply to you."* We then listed the following statements: (i) *It's easy for me to make new friends*, (ii) *I often feel lonely*, (iii) *I want to have more contact with others*, (iv) *My circle of friends and I do a lot together*, and (v) *I receive support from my circle of friends when I have worries and problems.* The left side of the scale, which started at 1, was labeled *"not at all accurate"* and the right side of the scale, which ended at 6, was labeled *"completely accurate"*.

As we did for the life satisfaction question, for ease of interpretation we normalize the responses to be mean 0 and standard deviation 1 relative to the population of all natives. We use the sum of the first of these three normalized variables (i-iii) divided by three to create a "loneliness index" and the last two normalized variables summed together and divided by two to create a "friendship support" index (iv-v).

Starting with the loneliness index, the thing that stands out is that both Muslim immigrant girls and boys are less lonely than natives and non-Muslim immigrants. But birthright citizenship does not increase loneliness for any of the groups enough to be detectable given our standard errors. Turning to the friendship index, we find that immigrant Muslim girls and boys have stronger friendship networks, with Muslim immigrant girls born before the reform scoring almost a quarter of a standard deviation higher on average compared to natives. But this friendship support index falls by 27 percent of a standard deviation for immigrant Muslim girls exposed to birthright citizenship; scaled by the first stage, this is a decrease of .43 standard deviations, making them even worse off than native girls.

German Identity. The remaining columns in Table 9 examine how birthright citizenship affects German identity and beliefs about the assimilation of immigrants. Columns 7 and 8 are based on a survey question which asks: *"Generally speaking, how much do you identify as a German?"*

Respondents could answer *"fully", "mostly", "in some ways", "barely",* or *"not at all"*. We create a dummy variable for German identity which equals one if the respondent answered fully or mostly.

Not surprisingly, a large fraction of natives self-identify as German (87%). In contrast, only 36% of Muslim immigrant girls born pre-reform think of themselves as German. This self-identification as German drops even further for the Muslim immigrant girls born after birthright citizenship became law. Fourteen percent fewer of these girls think of themselves as German, so that now only 22% identify as German.

This result is notable given that 83% of second-generation Muslims born after the reform were German citizens at birth, compared to only 29% born before the reform. Apparently, being granted German citizenship does not increase feelings of being German for this group of girls. This is an unintended consequence of the reform, and is not easily explained with a standard neoclassical model. But the result fits nicely with our identity model, where traditional parents of girls who are given extra opportunities for assimilation react by doubling down on the cultural norms they want their children to adopt. There is no corresponding shift in German self-identification for the other groups in the table.

Assimilation Beliefs. We end this section by looking at how birthright citizenship affects beliefs on how well foreigners can integrate into German society. On our survey, we asked students to indicate their agreement with the statement *"A foreigner can have a good life in Germany"*. Responses were recorded on a scale from 1 to 6, where the left side of the scale was labeled *"not at all accurate"* and the right side of the scale, which ended at 6, was labeled *"completely accurate"*. As we have done for other questions of this type, we normalized responses to be mean 0 and standard deviation 1 relative to the sample of all natives.

Muslim immigrant girls born before the reform have a more positive view compared to natives, with a quarter of a standard deviation higher agreement with the statement that a foreigner can have a good life in Germany. This positive effect is flipped for Muslim immigrant girls born after the reform, with a drop of .34 standard deviations. Scaled by the first stage, Muslim immigrant girls granted birthright citizenship are more than half a standard deviation less likely to agree with the statement. One possible reason for the increase in negativity could be the clash of cultures between parents and children initiated by the reform.

7 Discussion of Alternative Models

While our intergenerational identity model is consistent with the empirical facts we document, we also recognize that other mechanisms could simultaneously be at play. In this section, we discuss alternative models for the drop in well-being for Muslim immigrant girls, and whether these alternatives only work in isolation or can fit all of the findings jointly.

The first alternative is what we label the "unmet expectations" hypothesis, where Muslim girls granted citizenship expect to be able to accomplish more and fit into society more easily, but are disappointed when they realize society continues to discriminate against them. While this would readily explain the drop in well-being and self-esteem we observe in our data, it does not easily explain the drop in parental schooling investments, the increased likelihood of never speaking German with parents, or the higher probability of having to forgo a career for family.

To probe the plausibility of the unmet expectations hypothesis further, we turn to Table 10. We asked two survey questions related to perceptions of what it takes to be successful in Germany. The first presented students with the statement *"In Germany, foreigners have to do a great deal to gain recognition and acceptance"*. Responses were recorded on a scale from 1 (*not at all accurate)* to 6 (*completely accurate*), and normalized to be mean 0 and standard deviation 1 relative to the sample of all natives. For Muslim immigrant girls, exposure to the reform results in a small and insignificant reduction in the belief that foreigners have to do more to be accepted in Germany. This is not what would be predicted according to the unmet expectations hypothesis, which predicts an increase. For the other immigrant groups, a similar pattern emerges with negative, but insignificant, estimates.

Another survey question asked whether "*You need to be German*" in order to succeed in Germany. While this question is not as clean as the first one, since self-identification as German was affected by the reform (see Table 9), it reveals a similar pattern. Answers were measured on a scale from 1 (*completely disagree*) to 4 (*completely agree*), and normalized to be mean 0 and standard deviation 1 relative to natives. The estimate for immigrant Muslim girls born post-reform is close to zero, whereas the unmet expectations hypothesis would have predicted a positive coefficient. The estimate as likewise near zero for immigrant Muslim and non-Muslim boys, and a statistically significant negative for non-Muslim immigrant girls.

The second alternative we consider is what we label the "resource shifting" hypothesis, which says that after birthright citizenship becomes law, Muslim immigrant parents shift resources away from their daughters and towards their sons. This would occur because traditional parents favor their sons succeeding above their daughters, and with citizenship the returns to parental investments have gone up. This explanation is broadly consistent with Muslim immigrant daughters experiencing a drop in well-being after the reform, while immigrant sons report, if anything, increased well-being. But this explanation has a more targeted prediction: Muslim immigrant girls born after the reform should only be negatively affected if there is a younger brother in the household (who has been granted birthright citizenship) to whom resources could be shifted. If there are only older brothers in the household there is no reason for parents to shift resources. However, comparing columns 5 and 7, we see that the estimates for these two groups of Muslim immigrant girls are quite similar. This is evidence against the resource shifting hypothesis.

While other models can explain some of the results in isolation, they also have a hard time explaining the entirety of our findings. For example, the drop in parental schooling investments for Muslim immigrant girls could be due to parents thinking they do not need to invest as much now that

their daughters opportunities have increased (substitution), but this does not readily explain the drop in well-being, and moreover would have to be a gender-specific explanation.[21] As another example, the drop in well-being for immigrant girls could be due to convergence to the native German level of welfare, but this convergence does not happen for most other outcomes. In sum, while we think there are other interesting possibilities which can explain a portion of our findings in isolation, we conclude the entirety of our results for Muslim immigrant girls are best explained by the intergenerational identity model.

8 Conclusion

This paper studies what happens to the well-being of young immigrants, and related outcomes, when they are automatically given citizenship. We use a change in the law whereby those born in Germany after January 1, 2000 became roughly 50 percentage points more likely to be given automatic citizenship. This reduces life satisfaction of immigrant girls when they are 15-16 years old by 31% of a standard deviation, which translates to an effect of 1.34 on a 0-10 scale. These effects are larger than the usual effects of divorce or unemployment on life satisfaction and are similar in magnitude to the effect of a medium-level depression (Frijters et al. 2020). There are correspondingly large drops in self-esteem, which suggests the effect on well-being came largely via pressure on self-esteem.

The results turn out to be driven by the effect on Muslim immigrant girls. Summarizing the scaled estimates, those granted birthright citizenship experience a 38% drop in reporting a high chance of obtaining the training, education, and job they aspire to, and a 41% increase in the perception they will have to forgo a career for family. These dramatic changes are consistent with the behavior of their parents: there is a 24 percentage point drop in parental help with homework and learning and a 50% increase in one or both parents never speaking German to their daughter. This is indicative of a conscious attempt by parents to counteract the pull of German culture which increases with citizenship. The effect is that Muslim immigrant girls with birthright citizenship engage in half as many extracurricular activities, score 43% of a standard deviation lower in a measure of friendship support, and score half a standard deviation lower on a question about whether foreigners can have a good life in Germany. Moreover, Muslim immigrant girls granted birthright citizenship are paradoxically 22 percentage points less likely to self-identify as German.

None of these effects hold for immigrant boys, who experience no significant change or even slightly better outcomes. Similarly, the negative effects for Muslim girls do not generally hold for other immigrant girls. Taken together, our findings show Muslim parents reacted strongly against the citizenship reform in order to keep their daughters within a traditional culture, whereas boys were allowed to take advantage of the opportunities that come with citizenship.

[21] Our results are consistent with, and indeed supported by, prior work documenting better educational outcomes and cooperation with natives for second-generation male immigrants as a result of the reform, but no effect for females (Felfe et al. 2019).

In the paper, our main outcome variable was current life satisfaction, i.e., well-being at age 15 or 16. A valid question is what happens to the rest of life, and we can address this somewhat using our survey questions on life satisfaction in the future. In column 9 of Table 10, we report results for the expected change in life satisfaction 5 years out relative to current life satisfaction. While Muslim immigrant girls born pre-reform are more pessimistic about their future well-being compared to natives, this reverses for Muslim immigrant girls born post-reform. Indeed, their expected change in satisfaction five years in the future relative to today is almost two thirds of a standard deviation higher than those born just before the cutoff. This is consistent with the idea that immigrant Muslim girls granted birthright citizenship currently have large conflicts with their parents about traditional culture, but feel hopeful that these parental constraints will lessen in the future as they grow older and leave their parents' house.[22] The jury is thus still out on whether the citizenship reform is good for Muslim immigrant girls over their entire lifetime. While the indications are strong that their current well-being and human capital investments are reduced due to the reform, their higher hopes for changes in the future indicate it is possible there are longer-term gains yet to come.

The German birthright citizenship reform was enacted to lower the bars to cultural and economic assimilation. While a neoclassical model would predict that increased opportunities should increase well-being and assimilation, for immigrant girls it paradoxically made them worse off and less integrated. A simple model with intergenerational identity concerns can explain these otherwise unexpected and puzzling findings. Our results are a sobering illustration that increased opportunities are not offered to people in isolation of competing claims on the loyalty of a person. Family members (or other social groups) will consciously take countermeasures if they feel that assimilation will impose an identity externality. From a policy perspective, the fact that immigrant girls are made worse off and feel less integrated after receiving birthright citizenship suggests other actions are needed to promote second-generation assimilation of females.

[22] Results for the expected change in life satisfaction 1 year out relative to today go in the same direction, but are smaller and insignificant.

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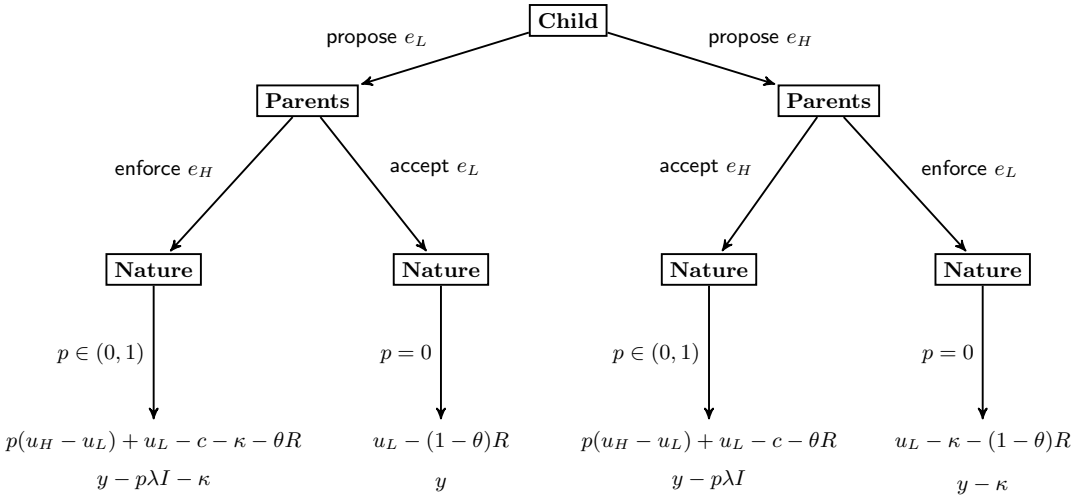
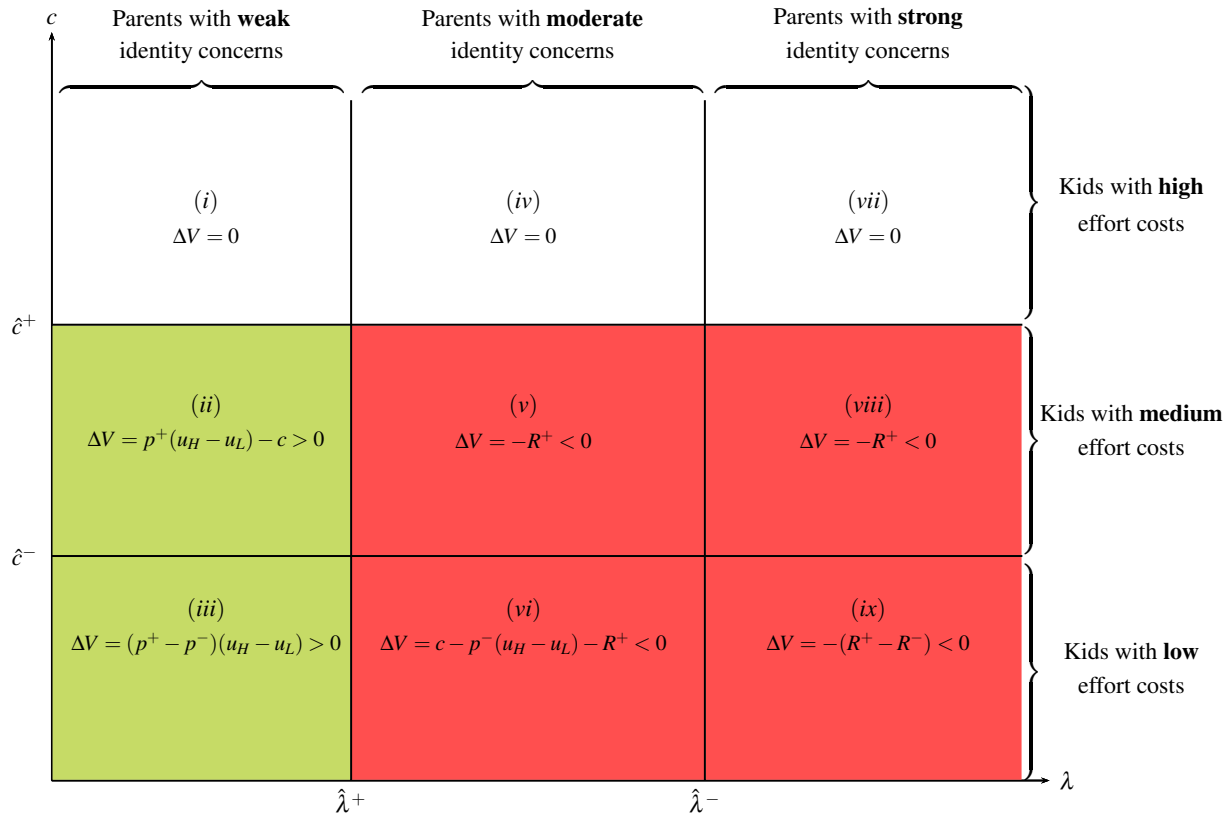


Interpretation of Parameters:
I ... identity externality
λ ... intensity of identity
κ ... cost of intra-family conflict
θ ... indicator for high effort cost ($= 1$ if $c > \hat{c}$) versus low effort cost ($= 0$ if $c \leq \hat{c}$)
R ... regret; increasing function of foregone career opportunities
y ... parents' exogenous income

Note: For simplicity, the figure suppresses the arguments of R (i.e., $p(u_H - u_L) - c$ if $\theta = 0$; $c - p(u_H - u_L)$ if $\theta = 1$).

Figure 1. Family Bargaining with Traditional Identity-Based Preferences



Notes: For simplicity, the figure uses the notation $R^+ = R(p^+(u_H - u_L) - c)$ and $R^- = R(p^-(u_H - u_L) - c)$. Red shaded areas represent parameter values where an increase in p results in a reduction in children's utlity. Green shaded areas represent parameter values where an increase in p results in an increase in children's utlity.

Figure 2. Changes in Well-Being when Economic Opportunities Increase: The Case of Traditional Identity-Based Preferences

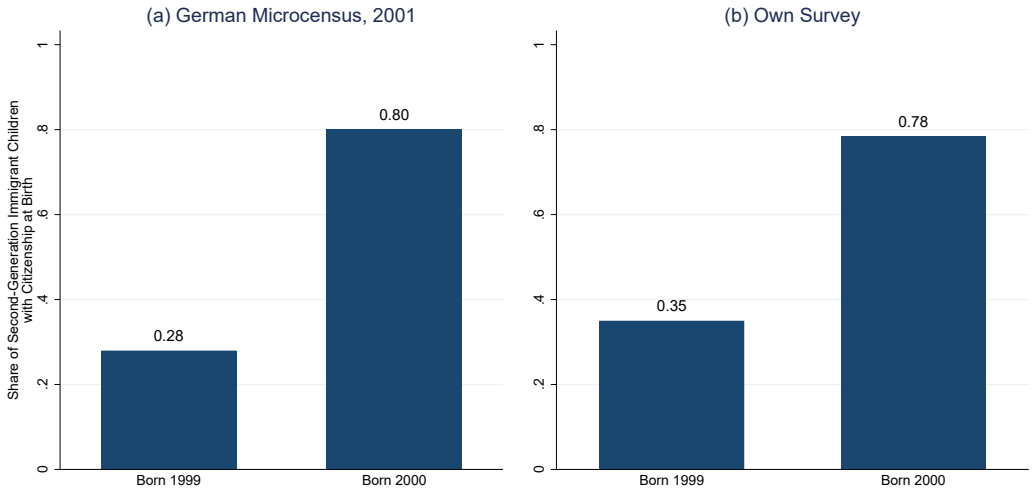
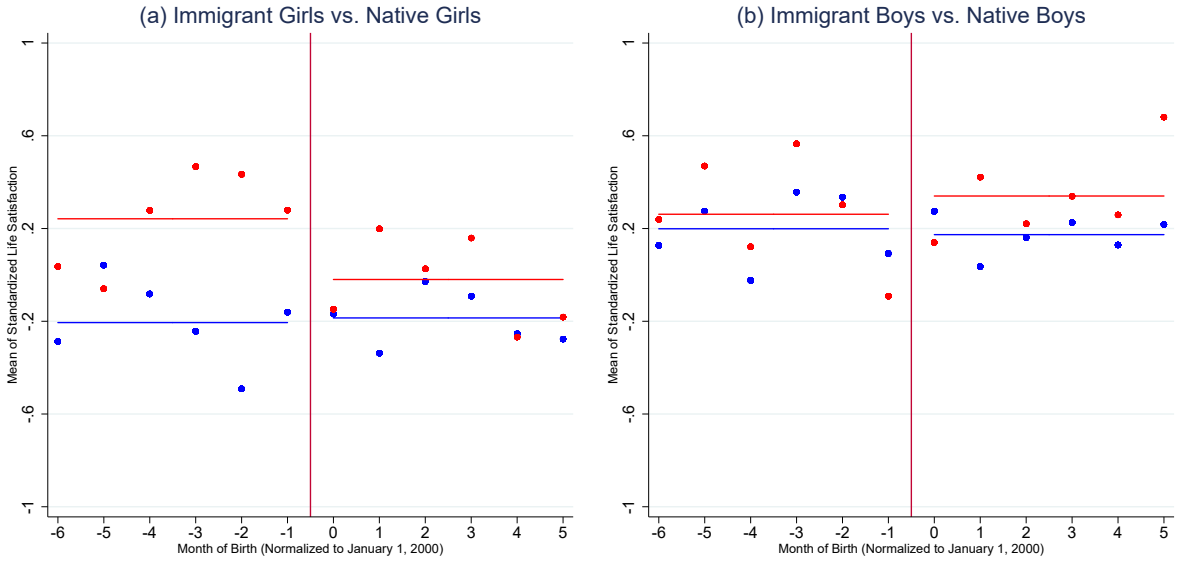


Figure 3. Citizenship at Birth: Second-Generation Immigrant Children Born Before versus After the Birthright Citizenship Reform (January 1, 2000)



Note: Red and blue dots show monthly means of standardized life satisfaction for immigrants and natives, respectively.

Figure 4. Life Satisfaction Among Immigrant and Native Youth Born Before versus After the Birthright Citizenship Reform (January 1, 2000)

Table 1. Descriptive Statistics

	Natives (1)	Immigrants (2)	Immigrants born pre-policy (3)	Immigrants born post-policy (4)	p-value (3)-(4)
Panel A: Girls					
Family Characteristics					
Education Mother: Low	.23	.37	.38	.36	.66
Education Mother: Medium	.44	.18	.18	.19	.87
Education Mother: High	.20	.15	.13	.18	.29
Education Mother: Unknown	.13	.29	.31	.28	.61
Mother's Age	45.24	43.51	44.03	42.96	.17
Education Father: Low	.26	.29	.27	.32	.29
Education Father: Medium	.33	.23	.24	.21	.54
Education Father: High	.24	.15	.15	.16	.65
Education Father: Unknown	.18	.33	.35	.31	.41
Father's Age	49.23	48.02	48.77	47.24	.16
City-Level Controls					
City Size>100,000	.25	.10	.08	.11	.39
Male Unemployment	11.12	11.24	11.31	11.17	.34
Female Unemployment	10.09	10.73	10.89	10.57	.23
Immigrant Unemployment	24.92	24.94	25.10	24.78	.29
Youth Unemployment	8.75	8.78	8.85	8.70	.29
Observations	756	326	166	160	
Panel B: Boys					
Family Characteristics					
Education Mother: Low	.22	.28	.31	.25	.31
Education Mother: Medium	.42	.22	.16	.27	.02
Education Mother: High	.24	.15	.16	.14	.72
Education Mother: Unknown	.13	.35	.37	.33	.46
Mother's Age	46.15	44.38	44.50	44.28	.85
Education Father: Low	.25	.25	.26	.24	.63
Education Father: Medium	.31	.23	.21	.25	.46
Education Father: High	.27	.17	.14	.19	.31
Education Father: Unknown	.17	.35	.39	.33	.31
Father's Age	50.04	48.71	48.84	48.61	.86
City-Level Controls					
City Size>100,000	.27	.12	.12	.12	1.00
Male Unemployment	10.98	11.07	11.26	10.93	.10
Female Unemployment	9.93	10.60	10.86	10.40	.14
Immigrant Unemployment	24.49	24.6	24.74	24.5	.54
Youth Unemployment	8.64	8.66	8.84	8.51	.06
Observations	779	272	119	153	

Notes: Sample restricted to a ±6-month window centered around the reform's cut-off date. Natives are children whose parents are both German-born. Immigrants are children who are German-born but whose parents are both foreign-born (second generation immigrants). Pre-policy and post-policy refer to immigrants who are either born before (in 1999) or after (in 2000) the reform's cut-off date. Parents with low, medium, and high education have completed, respectively, at most lower secondary school (Hauptschule), at most intermediate secondary school (Realschule), and upper secondary school (Gymnasium) or university. All unemployment measures are based on unemployment rates at the city level measured in 2015, the year of our survey.

Table 2. Impact of Birthright Citizenship on Subjective Well-Being

Dependent Variable:	*Standardized Life Satisfaction*			
	(1)	(2)	(3)	(4)
Panel A: Girls				
Immigrant	0.458**	0.453**	0.582**	0.559**
	(0.098)	(0.099)	(0.102)	(0.103)
Post-reform*Immigrant	-0.309**	-0.297**	-0.336**	-0.320**
	(0.139)	(0.140)	(0.139)	(0.139)
Observations	1,082	1,082	1,082	1,082
Panel B: Boys				
Immigrant	0.054	0.054	0.069	0.058
	(0.091)	(0.091)	(0.095)	(0.095)
Post-reform*Immigrant	0.109	0.109	0.119	0.123
	(0.123)	(0.123)	(0.124)	(0.124)
Observations	1,051	1,051	1,051	1,051
Birth Month FE	-	✓	✓	✓
Family Characteristics	-	-	✓	✓
City-Level Controls	-	-	-	✓

Notes: Estimates of equation (3) for an age window of ±6 months around January 1, 2000. The dependent variable is normalized to be mean 0 and standard deviation 1 relative to the population of all natives. Family characteristics include mother's and father's age, dummy variables for mother's and father's education (four groups each). City-level controls include male unemployment, female unemployment, youth unemployment, immigrant unemployment, and a dummy variable for city size larger than 100,000. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.

Table 3. Narrowing the Sample Window

Dependent Variable:	*Standardized Life Satisfaction*			
	(1)	(2)	(3)	(4)
	±5 months	±4 months	±3 months	±2 months
Panel A: Girls				
Immigrant	0.585**	0.766**	0.883**	0.827**
	(0.110)	(0.122)	(0.147)	(0.195)
Post-reform*Immigrant	-0.326**	-0.447**	-0.570**	-0.458*
	(0.149)	(0.162)	(0.186)	(0.244)
Observations	924	759	597	388
Panel B: Boys				
Immigrant	0.047	0.027	-0.018	-0.126
	(0.105)	(0.119)	(0.130)	(0.168)
Post-reform*Immigrant	0.084	0.088	0.112	0.242
	(0.137)	(0.155)	(0.171)	(0.218)
Observations	881	703	544	370
Birth Month FE	✓	✓	✓	✓
Family Characteristics	✓	✓	✓	✓
City-Level Controls	✓	✓	✓	✓

Notes: Estimates similar to those in Table 2, but with different sample windows. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.

Table 4. Additional Robustness Checks

Dependent Variable:	*Standardized Life Satisfaction*				
	(1)	(2)	(3)	(4)	(5)
	RD	Difference in RD's	Control for age in days	Donut hole	Clustered s.e.'s
Panel A: Girls					
Post-reform	-0.488*				
	(0.255)				
Immigrant		0.862**	0.562**	0.552**	0.559**
		(0.205)	(0.102)	(0.104)	(0.114)
Post-reform*Immigrant		-0.630**	-0.333**	-0.317**	-0.320**
		(0.303)	(0.138)	(0.141)	(0.145)
Observations	326	1,081	1,081	1,048	1,082
Panel B: Boys					
Post-reform	0.135				
	(0.212)				
Immigrant		-0.150	0.054	0.055	0.058
		(0.173)	(0.095)	(0.099)	(0.101)
Post-reform*Immigrant		0.077	0.130	0.138	0.123
		(0.257)	(0.124)	(0.127)	(0.122)
Observations	272	1,051	1,051	1,002	1,051
Birth Month FE	-	-	-	✓	✓
Family Characteristics	✓	✓	✓	✓	✓
City-Level Controls	✓	✓	✓	✓	✓

Notes: See notes to Table 2. Column 1 is a regression discontinuity using immigrants only, an age window of ±6 months around January 1, 2000, separate linear trends in child age (in days) to the left and right of the cutoff, and triangular weights. Column 2 is a difference in RDs for immigrants versus natives. Columns 3-5 mirror those in found in column 4 of Table 2, except that column 3 controls for child age in days, column 4 excludes children born ±1 week around January 1, 2000, and column 5 clusters standard errors at the school level. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.

Table 5. Self-Esteem as an Alternative Measure of Subjective Well-Being

Dependent Variable:	**Index of self-esteem**	Standardized components of the index				
		I am satisfied with myself	*I have many positive character traits*	*I am as capable as other people*	*I am a person with value and self-worth*	*I have a positive attitude towards myself*
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Girls						
Immigrant	0.445**	0.650**	0.374**	0.529**	0.223**	0.449**
	(0.080)	(0.107)	(0.103)	(0.102)	(0.107)	(0.105)
Post-reform*Immigrant	-0.252**	-0.420**	-0.098	-0.370**	-0.223	-0.147
	(0.108)	(0.145)	(0.140)	(0.137)	(0.145)	(0.142)
Observations	1,038	1,038	1,038	1,038	1,038	1,038
Panel B: Boys						
Immigrant	-0.073	0.0091	0.001	-0.103	-0.257**	-0.016
	(0.075)	(0.096)	(0.099)	(0.104)	(0.110)	(0.099)
Post-reform*Immigrant	0.167*	0.149	0.125	0.194	0.125	0.241*
	(0.098)	(0.125)	(0.129)	(0.135)	(0.142)	(0.129)
Observations	1,011	1,011	1,011	1,011	1,011	1,011
Birth Month FE	✓	✓	✓	✓	✓	✓
Family Characteristics	✓	✓	✓	✓	✓	✓
City-Level Controls	✓	✓	✓	✓	✓	✓

Notes: See notes to Table 2. Each component of the index is normalized to be mean 0 and standard deviation 1 relative to the population of all natives. The aggregate index of self-esteem sums across the 5 normalized variables, and divides by 5. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.

Table 6. Muslim vs. Non-Muslim Immigrants

Dependent Variable:	*Standardized Life Satisfaction*	
	(1)	(2)
	Muslim	**Non-Muslim**
Panel A: Girls		
Immigrant	0.822**	0.222
	(0.126)	(0.146)
Post-reform*Immigrant	-0.474**	-0.087
	(0.167)	(0.206)
Observations	953	881
Panel B: Boys		
Immigrant	0.165	-0.065
	(0.120)	(0.137)
Post-reform*Immigrant	0.052	0.191
	(0.153)	(0.183)
Observations	942	888
Birth Month FE	✓	✓
Family Characteristics	✓	✓
City-Level Controls	✓	✓

Notes: See notes to Table 2. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.

Table 7. Disillusionment and Forgoing a Career for Family

Dependent Variable:	*Aspires to pursue tertiary education*		*High vs. low odds of achieving educational aspirations*		*Interaction of high aspirations and low success odds*		*Odds of having to forgo career for family*	
	(1) **Muslim**	(2) **Non-Mus.**	(3) **Muslim**	(4) **Non-Mus.**	(5) **Muslim**	(6) **Non-Mus.**	(7) **Muslim**	(8) **Non-Mus.**
Panel A: Girls								
Immigrant	0.063	0.159**	0.134**	0.027	-0.066	0.078	-10.73**	0.971
	(0.059)	(0.067)	(0.057)	(0.066)	(0.045)	(0.053)	(3.561)	(3.992)
Post-reform*Immigrant	0.110	0.051	-0.210**	0.012	0.194**	-0.001	8.198*	-16.77**
	(0.078)	(0.094)	(0.076)	(0.093)	(0.060)	(0.074)	(4.759)	(5.671)
Observations	952	880	934	865	933	864	931	867
Panel B: Boys								
Immigrant	0.171**	0.190**	-0.033	-0.126*	0.059	0.118**	-4.912	-9.467**
	(0.065)	(0.074)	(0.059)	(0.068)	(0.040)	(0.047)	(3.713)	(4.198)
Post-reform*Immigrant	0.009	-0.050	0.073	0.034	-0.034	-0.040	4.822	6.902
	(0.084)	(0.099)	(0.076)	(0.091)	(0.051)	(0.062)	(4.744)	(5.639)
Observations	942	888	920	866	920	866	930	876
Month of Birth Fixed Effects	✓	✓	✓	✓	✓	✓	✓	✓
Family Characteristics	✓	✓	✓	✓	✓	✓	✓	✓
City-Level Controls	✓	✓	✓	✓	✓	✓	✓	✓

Notes: See notes to Table 2. Columns 1-6 report results for binary outcomes, while columns 7-8 report results for an outcome measured as a percent. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.

Table 8. Parental Schooling and Language Investments

Dependent Variable:	*Receives schooling support from one or both parents*		*Never speaks German with one or both parents*	
	(1)	(2)	(3)	(4)
	Muslim	**Non-Mus.**	**Muslim**	**Non-Mus.**
Panel A: Girls				
Immigrant	-0.129**	-0.217**	0.239**	0.232**
	(0.052)	(0.061)	(0.025)	(0.023)
Post-reform*Immigrant	-0.154**	0.066	0.079**	-0.031
	(0.074)	(0.087)	(0.034)	(0.032)
Observations	935	868	923	856
Panel B: Boys				
Immigrant	-0.262**	-0.363**	0.439**	0.127**
	(0.061)	(0.069)	(0.029)	(0.023)
Post-reform*Immigrant	0.060	0.232**	0.030	0.143**
	(0.081)	(0.095)	(0.038)	(0.031)
Observations	931	876	921	868
Month of Birth Fixed Effects	✓	✓	✓	✓
Family Characteristics	✓	✓	✓	✓
City-Level Controls	✓	✓	✓	✓

Notes: See notes to Table 2. Outcome variables are defined as whether one or both parents support their child in school or never speak German with their child interacted with whether the child lives with them. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.

Table 9. Social Integration, German Identity, and Assimilation Beliefs

Dependent Variable:	*Index of social participation*		*Index of loneliness*		*Index of friendship support*		*Self-identify as German*		*Believe a foreigner can have good life in Germany*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Muslim	**Non-Mus.**	**Muslim**	**Non-Mus.**	**Muslim**	**Non-Mus.**	**Muslim**	**Non-Mus.**	**Muslim**	**Non-Mus.**
Panel A: Girls										
Immigrant	0.183	0.004	-0.280**	-0.038	0.227**	0.028	-0.507**	-0.361**	0.251*	0.200
	(0.119)	(0.136)	(0.075)	(0.092)	(0.071)	(0.115)	(0.049)	(0.070)	(0.127)	(0.154)
Post-reform*Immigrant	-0.298*	-0.074	0.076	0.076	-0.268**	-0.224	-0.137*	-0.009	-0.343**	-0.112
	(0.158)	(0.192)	(0.108)	(0.109)	(0.106)	(0.175)	(0.069)	(0.010)	(0.150)	(0.195)
Observations	953	881	923	858	934	867	953	881	916	850
Panel B: Boys										
Immigrant	0.020	-0.215*	-0.170**	0.029	0.166	0.031	-0.619**	-0.391**	0.363**	0.354**
	(0.104)	(0.115)	(0.080)	(0.099)	(0.125)	(0.158)	(0.056)	(0.064)	(0.126)	(0.163)
Post-reform*Immigrant	0.233*	0.112	-0.040	-0.125	0.170	0.023	0.057	-0.039	-0.045	-0.010
	(0.133)	(0.153)	(0.117)	(0.137)	(0.159)	(0.154)	(0.055)	(0.086)	(0.160)	(0.183)
Observations	942	888	907	859	917	865	942	888	903	851
Birth Month FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Family Characteristics	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
City-Level Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes: See notes to Table 2. The social participation index ranges from 0 to 4, counting the number of extracurricular activities (sports, band/orchestra, theater, school newspaper) a child has ever participated in. The loneliness index is the equally weighted sum of three normalized variables (mean 0 and standard deviation 1 relative to the population of natives). The friendship support index is the equally weighted sum of two similarly normalized variables. Columns 7-10 are binary outcomes. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.

Table 10. Intergenerational Identity Model versus Alternatives

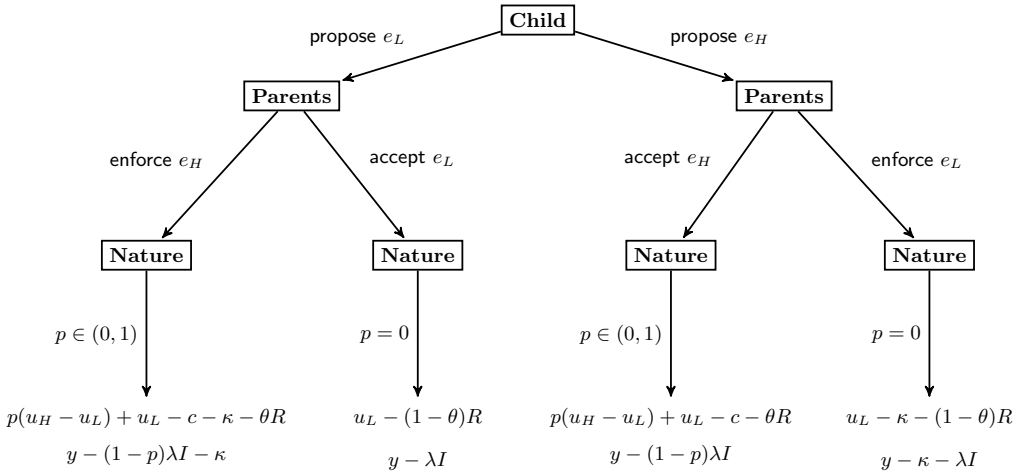
Dependent Variable:	*Foreigners have to do a great deal to be recognized*		*Need to be German to succeed*		*Life satisfaction with younger sibling of opposite sex*		*Life satisfaction with older sibling of opposite sex*		*Expected change in life satisfaction 5 years in the future*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Muslim	**Non-Mus.**	**Muslim**	**Non-Mus.**	**Muslim**	**Non-Mus.**	**Muslim**	**Non-Mus.**	**Muslim**	**Non-Mus.**
Panel A: Girls										
Immigrant	0.138	0.070	0.000	0.116**	0.771**	0.250	0.954**	0.295*	-0.679**	-0.115
	(0.135)	(0.141)	(0.024)	(0.041)	(0.142)	(0.210)	(0.215)	(0.163)	(0.131)	(0.148)
Post-reform*Immigrant	-0.045	-0.143	-0.006	-0.127**	-0.509**	-0.138	-0.573*	-0.138	0.646**	0.150
	(0.158)	(0.240)	(0.033)	(0.055)	(0.182)	(0.268)	(0.294)	(0.296)	(0.174)	(0.208)
Observations	913	845	942	869	517	464	436	417	938	867
Panel B: Boys										
Immigrant	0.443**	0.116	0.052	0.051	0.029	-0.057	0.327**	-0.019	0.088	0.075
	(0.161)	(0.163)	(0.045)	(0.057)	(0.189)	(0.161)	(0.149)	(0.190)	(0.130)	(0.145)
Post-reform*Immigrant	-0.198	-0.334	0.053	-0.023	0.195	0.235	-0.111	0.008	-0.118	-0.344*
	(0.214)	(0.230)	(0.063)	(0.070)	(0.207)	(0.220)	(0.201)	(0.246)	(0.167)	(0.193)
Observations	899	846	928	874	488	457	454	431	932	881
Birth Month FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Family Characteristics	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
City-Level Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes: See notes to Table 2. Columns 1-4 are binary outcomes, columns 5-8 is standardized life satisfaction, and columns 9-10 is the standardized difference (mean 0 and standard deviation 1 relative to the population of natives) between life satisfaction five years in the future and life satisfaction now. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.

Appendix Figures and Tables

"Caught between Cultures: Unintended Consequences of Improving Opportunity for Immigrant Girls"

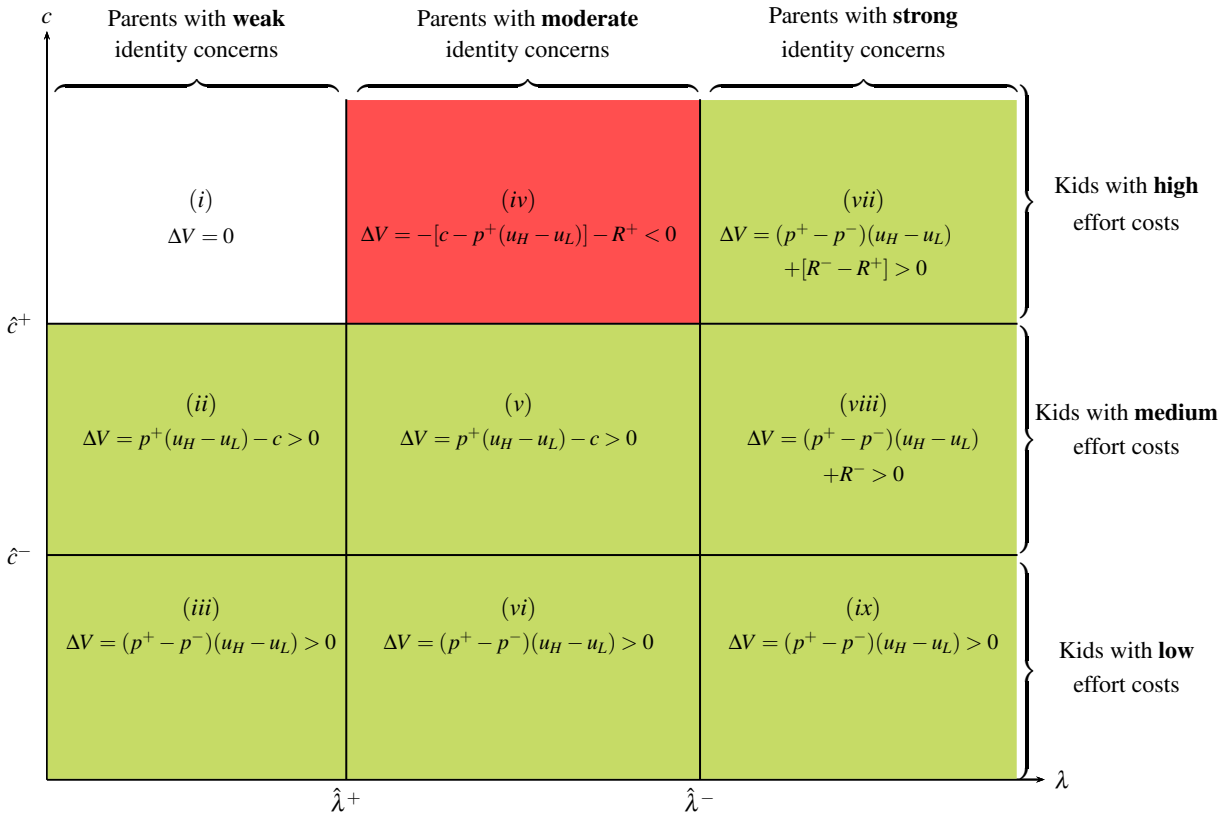
by Gordon B. Dahl, Christina Felfe, Paul Frijters, and Helmut Rainer



Interpretation of Parameters:
I ... identity externality
λ ... intensity of identity
κ ... cost of intra-family conflict
θ ... indicator for high effort cost (= 1 if $c > \hat{c}$) versus low effort cost (= 0 if $c \leq \hat{c}$)
R ... regret; increasing function of foregone career opportunities
y ... parents' exogenous income

Note: For simplicity, the figure suppresses the arguments of R (i.e., $p(u_H - u_L) - c$ if $\theta = 0$; $c - p(u_H - u_L)$ if $\theta = 1$).

Figure A1. Family Bargaining with Mainstream Identity-Based Preferences



Notes: For simplicity, the figure uses the notation $R^+ = R(c - p^+(u_H - u_L))$ and $R^- = R(c - p^-(u_H - u_L))$. Red shaded areas represent parameter values where an increase in p results in a reduction in children's utlity. Green shaded areas represent parameter values where an increase in p results in an increase in children's utlity.

Figure A2. Changes in Well-Being when Economic Opportunities Increase: The Case of Mainstream Identity-Based Preferences

Table A1. Descriptive Statistics for Religious Affiliation and Country of Origin

	Natives		Immigrants	
	Girls	Boys	Girls	Boys
	(1)	(2)	(3)	(4)
Religion				
Catholic	0.14	0.15	0.19	0.15
Protestant	0.61	0.49	0.08	0.09
Muslim	0.03	0.01	0.60	0.60
None	0.19	0.30	0.03	0.07
Other, Missing	0.04	0.06	0.10	0.09
Mother's Country of Origin				
Germany	1.00	1.00	-	-
Turkey	-	-	0.42	0.43
Balkan	-	-	0.11	0.11
Eastern Europe	-	-	0.12	0.12
Post-Soviet	-	-	0.11	0.12
Southern Europe	-	-	0.05	0.02
Central and Northern Europe	-	-	0.01	0.01
Middle East	-	-	0.05	0.07
Asia	-	-	0.03	0.05
Africa	-	-	0.08	0.06
Rest of World	-	-	0.01	0.01
Unidentified	-	-	0.02	0.01
Observations	756	779	326	272

Notes: Sample restricted to a ±6-month window centered around the reform's cutoff date. "Natives" are children whose parents are both German born. "Immigrants" are children who are German born but whose parents are both foreign born (second generation immigrants).

Table A2. Descriptive Statistics for Dependent Variables

	Girls and Boys		*Girls*		*Boys*	
	Mean	SD	Mean	SD	Mean	SD
	(1)	(2)	(3)	(4)	(5)	(6)
Standardized Variables						
Life satisfaction	7.46	2.27				
I am satisfied with myself	4.41	1.29				
I have positive character traits	4.46	1.12				
I am as capable as other people	4.35	1.14				
I am person with value and self-worth	4.47	1.43				
I have a positive attitude towards myself	4.41	1.45				
Foreigners can have good life in Germany	4.39	1.24				
Foreigners have to do a great deal to be recognized	3.23	1.47				
Change in future life satisfaction	0.71	1.89				
Non-Standardized Variables						
Wants to pursue tertiary education (1/0)			0.56	0.50	0.44	0.50
High vs. low odds of achieving aspirations (1/0)			0.67	0.47	0.76	0.43
Interaction of high aspirations/low predicted odds (1/0)			0.15	0.36	0.084	0.28
Odds of having to forgo career for family (0-100%, 10% increments)			47.73	29.21	35.85	26.90
Receives schooling support from one or both parents (1/0)			0.74	0.44	0.71	0.45
Never speaks German with one or both parents (1/0)			0.00	0.05	0.00	0.05
Social Participation (count of no. of extracurricular activities, 0-4)			0.90	1.00	0.59	0.76
Strong vs. weak identification with Germany (1/0)			0.87	0.34	0.87	0.34
Beliefs that one needs to German to succeed (1/0)			0.07	0.26	0.08	0.27

Notes: For standardized variables, we report the mean and standard deviation for all native children (born pre- and post-policy). For non-standardized variables, we report the mean and standard deviation for native children born pre-policy.

Table A3. Gender Norms

	WEF Gender Gap Index	Economic Participation	Political Empowerment	Educational Attainment	Health & Survival
Natives	0.752	0.669	0.366	0.995	0.979
Immigrants:					
Non-Muslim	0.674	0.635	0.104	0.979	0.976
Muslim	0.589	0.442	0.056	0.887	0.969

Notes: Source data come from the 2018 Global Gender Gap report provided by the World Economic Forum. Each subindex measures the gap between men and women, where the highest possible score is 1 (full equality) and the lowest is 0 (full inequality). The WEF Gender Gap Index is the average of the four subindices. We assign each child in our sample the gender indices associated with his or her mother's birth country. The numbers reported above correspond to the respective means for the subgroup of native, muslim immigrant, and non-muslim immigrant children.

Table A4. Alternatives Measures of Traditionality

Dependent Variable:	*Standardized Life Satisfaction*	
	(1)	(2)
	Prob. Muslim≥.75	**Turkey & Middle East**
Panel A: Girls		
Immigrant	0.777***	0.738***
	(0.125)	(0.143)
Post-reform*Immigrant	-0.412**	-0.362*
	(0.168)	(0.190)
Observations	952	903
Panel B: Boys		
Immigrant	0.143	0.179
	(0.119)	(0.131)
Post-reform*Immigrant	0.046	0.001
	(0.153)	(0.168)
Observations	944	911
Birth Month FE	✓	✓
Family Characteristics	✓	✓
City-Level Controls	✓	✓

Notes: See notes to Table 2. Column 1 shows results for the sample of children whose predicted probability of being Muslim is over 75%. To predict the probability children are Muslim, we regress the self-reported Muslim variable on dummy variables for the countries of origin for both mothers and fathers. Column 2 shows results for the sample of children whose mother comes from either Turkey or the Middle East, regions which are predominantly Muslim. Standard errors reported in parentheses. **,* indicate significance at the 5% and 10% level, respectively.