

# The Character Skills of Immigrants

Moiz Bhai\*  
University of Arkansas at Little Rock

Pavel Dramski  
New American Economy

## Abstract

We use novel data on a representative sample of the U.S. population in midlife to examine how immigrants and second-generation immigrants compare to natives on non-cognitive character skills as measured by a commonly used taxonomy of personality. Our findings reveal that immigrants and second-generation immigrants tend to score higher on openness to experience and agency compared to natives. Additionally, second-generation immigrants tend to score higher on conscientiousness than natives. The findings are especially salient since character skills have been shown to influence labor market outcomes. Next, we examine the role that character skills differences have on earnings by immigrant generation. Our earnings estimates reveal that character skills have approximately as much explanatory power as schooling, but overall non-cognitive skills have a modest impact on the earnings differences of immigrants and second-generation immigrants vis-a-vis natives.

**JEL Codes:** J61, J24, J48

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\*University of Arkansas-Little Rock, Department of Economics and Finance, 2801 S. University Ave, Little Rock, AR, 72204. Email: [mxbhai@ualr.edu](mailto:mxbhai@ualr.edu). Tandie Kenser and Dylan Wright provided excellent research assistance. We thank Liam Clegg, Janus Feld, Michaelangelo Landgrave, Matt McMahon and Sarah Quintanar along with conference participants at the Annual meeting of the Western Economic Association and APEE for helpful comments. Bhai thanks the Mercatus Center for financial support for this project. All remaining errors are our own.

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## 1. Introduction

Economic evaluations of ability and skills in the labor markets have historically been unidimensional focusing primarily on cognitive skills. The last decade has seen an evolution in the measurement of ability with an increased focus on non-cognitive skills. Despite the increased focus on non-cognitive skills, their inclusion has been limited by data availability<sup>1</sup>, and consists primarily of variables that attempt to proxy for behavior embedded in personality traits. Increasingly, emerging research has recognized that non-cognitive skills such as personality traits<sup>2</sup> can encompass motivation, persistence, and other behavioral attributes which relate to economic concepts of risk, time preferences, and tastes among others. More importantly, these studies show the strong predictive power of non-cognitive skills on outcomes such as wages, schooling, health status, health behaviors, and mortality (Almlund et. al, 2011; Duckworth, 2016; Heckman, 2010; Heckman, Stixrud, Urzua, 2006; Lundberg, 2013). Notably, in certain situations non-cognitive skills can outperform cognitive skills in explaining these labor market and non-labor market outcomes.

Economic analyses of immigration, like the canonical models of human capital, have also focused primarily on measures of observable skills such as completed school, English ability, and test scores that skew towards cognitive skills. Although earlier work has empirically investigated skills and abilities readily available to the researcher, non-cognitive skills are implicitly imbedded in theories of migration. Character skills matter in the migration decision because they influence psychic costs and psychic benefits that permeate economic life. Beginning with the traditional models of immigration, the decision to immigrate is motivated as a rational choice based on costs and benefits (Sjaastad, 1962; Becker, 1964). These costs and benefits are a function of one's own skill and the respective wage distributions in the country of origin and country of arrival (Borjas, 1985; Borjas, 1991; Chiswick, 1999). Consequently, immigrants are "self-selected" based on an economic decision calculus in which the highest incentive to immigrate exists for individuals who are either above or below the average skill distribution in the country of origin<sup>3</sup>. Besides wage

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<sup>1</sup> More recent work by Humphries and Kosse (2017) finds the proxy variables for non-cognitive skills serve as a very strong predictor of the five-factor model of personality. Therefore, other approaches that use proxy variables ultimately end up serving as incomplete proxies for this taxonomy. Other attempts have used the limited availability to proxy for non-cognitive skills and earnings such as the Rotter scale of self-control and the Rosenberg scale of self-worth.

<sup>2</sup> Personality skills have often been referred to as traits, character traits or skills, socioemotional or soft skills, and we use them interchangeably.

<sup>3</sup> These human capital models provide pathways where immigrants would be both positively and negatively selected from their country of origin distributions. The analysis for selection has only been conducted for

differentials, other proposed contributory explanations include social and family networks and access to financial or social capital.

More specifically for immigrants, both high and low skilled, character skills such as motivation, perseverance, and grit can influence psychic and economic costs of migration. On one hand, character skills can lower the cost of migration through shaping perseverance, work ethic, and affecting access to family and social networks. On the other hand, character skills can also affect the benefits of migration, since these skills are valued in the labor market and influence immigrants' anticipated wages. Therefore, the same factors that contribute to potential immigrants' choice to migrate might also influence and shape labor market outcomes for first- and second-generation immigrants in their country of arrival vis-a-vis natives. We hypothesize that these differences can influence the equilibrium skill distribution in the immigrants' country of arrival and reveal a fuller picture of immigrants and their skills. Although we do not observe the country of origin skill distribution, we hypothesize that since immigrants are distinctly self-selected, they might have similar differences in soft-skills relative to the distribution of natives in their country of arrival. Consequently, we expect that immigrants are likely different than natives on non-cognitive character skills; moreover, we suspect that character skill differences are a causal pathway that influence immigrants and their children's outcomes in the labor and education markets in their country of arrival.

For our analysis we use a rich source of data, the National Survey of Midlife Development (MIDUS), to compare the non-cognitive character skills of immigrants and second-generation immigrants to natives using the Big Five model of personality plus agency. Since MIDUS is based on a national representative probability sample for individuals in midlife (for individuals between 25 and 75 in 1993), we can construct meaningful comparisons between immigrants, second-generation immigrants, and natives. We find that immigrants are statistically different than natives on two key personality attributes most notably openness to experience and agency. We notice the persistence of these non-cognitive skills in the success of second-generation immigrants as we see openness to experience and agency continues to remain statistically and economically significant in the second-

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Mexico and the U.S. because of data limitation in the difficulty of observing potential immigrants in their country of origin. Ibarra and Lubotsky (2007) find negative/neutral selection whereas Chiquar and Hanson (2005) show positive selection. Both focus on easily available measures of "hard" skills such as schooling but are unable to observe soft skills which can also influence the decision to migrate.

generation. Unlike immigrants, second-generation immigrants show higher scores for conscientiousness with mixed evidence for extraversion compared to natives. Finally, in the comparison of earnings by immigrant generation, we see suggestive evidence that in the absence of these character differences that the gap in earnings between immigrants and natives would be larger, but our analysis for earnings is limited by our modest sample size.

Since immigration has been a salient and contentious topic in social and labor policy, our findings have potential policy implications. Our study's strength is the sampling design of MIDUS which allows us to identify and measure non-cognitive character skills for the U.S. as a whole. While, theory and empirics show that immigrants are differentially selected from within their country of origin, one might consider our findings to be obvious in that immigrants differ from natives because of this self-selection. It is important to consider that while it is known that immigrants are positive and/or negatively self-selected from their country of origin, it is unknown (at least for character skills) where they are in their country of arrival skill distribution. A notable contribution of this paper is to show that immigrants are positively "selected" in the United States. Thus, the main contribution of this paper is that we examine the non-cognitive character skills of immigrants, second-generation immigrants, and natives which helps us gain a deeper understanding of the skill distribution of immigrants, second-generation immigrants, and natives in equilibrium for the United States. This finding is important because it shows the role of immigration influencing the distribution of soft skills and provides a snapshot of the adaptation and assimilation by immigrants and second-generation. As far as we are aware, this is the first study to examine the differences between immigrants, second-generation immigrants, and natives on these measures of character skills.

While comparisons focusing only on immigrants and natives are useful, such comparisons do not fully capture the effect of immigration. The children of immigrants or second-generation immigrants provide evidence on the long run effects of immigration. In this study, we demonstrate the existence of intergenerational persistence as some character skills converge to natives in declining form whereas for other character skills we observe differences emerge. Consequently, this success of second-generation immigrants helps policymakers and stakeholders understand the fuller impact of immigration.<sup>4</sup> A failure to account for the outcomes of second-generation immigrants would understate the economic benefits (or costs) of immigration on their country of arrival.

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<sup>4</sup> Second-generation immigrants have a high degree of educational attainment (Chiswick and Deb Burman, 2004; Card, 2005) which also translates into higher earnings.

In addition to contributing to the economics of immigration, the findings from this paper have broader implications for economic and social policy. The non-cognitive character skills we use in this paper are associated with creativity, innovation, grit, and persistence which are direct correlates of success in the labor market (Mueller and Plug, 2006; Heineck and Anger, 2010; Heineck, 2011). Unlike cognitive skills such as IQ, character skills such as personality traits have been observed to be malleable at different points in the life cycle. Understanding the dynamics of non-cognitive skill illuminates a pathway on the causes and consequences of inequality. In fact, Bowles and Gintis (2002) suggest that these non-cognitive skills have long lasting implications through intergenerational mobility and might be one important mechanism in contributing to intergenerational transmission of success.

## **2. Conceptual Framework**

### *2A. Measuring Character Skills*

Psychologists generally define personality as the “the set of psychological traits and mechanisms within the individual that is organized and relatively enduring and that influences his or her interactions with, and adaptations to, the environment (including the intrapsychic, physical, and social environment [Larsen and Buss, 2008]).” The origin of personality psychology is embedded in the desire to understand individuals as “whole persons” instead of on one dimension of ability such as IQ. Conceptually non-cognitive character skills have been understood as a multidimensional vector of ability that provide explanations for human behavior in general. These character skills encompass behavior in a much broader sense of individuals experiences. The measurement of non-cognitive character skills such as personality is a challenge because they are unobserved and represent situation specific actions. Measuring and assessing personality skills based on directly observing how individuals respond to a multitude of experiences and situations is difficult. Therefore, psychologists have relied upon surveys to elicit responses using adjective lists and situation specific questions to measure character skills<sup>5</sup>. Because these character skills require a battery of questions for reliability, there has been limited opportunity to observe and measure these skills for large samples of Americans. In fact, the battery in MIDUS for personality traits contains a longer and more thorough questionnaire than other commonly used sources of data such as the Wisconsin Longitudinal Study and the National Longitudinal Study of Youth 1979.

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<sup>5</sup> While this raises a concern that people might provide socially desirable answers (i.e. lie) the fact these traits have predictive power suggests that actually estimates of these skills are downward biased.

In addition to the challenges of measuring behavior, identifying a parsimonious representation of traits from survey data has been an area of dispute. Despite disagreements on the exact number of traits that influence and form personality, the consensus within personality psychology appears to be around five to seven master traits. These character traits can be interpreted as higher order traits that subsume a multitude of lower level traits. The skills given by the most common taxonomy, or the Big Five, are often referred to by the acronym OCEAN which consists of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. The five-factor model of personality is a frequently used taxonomy and validated approach to describing character traits<sup>6</sup>. In our analysis, we use the Big Five personality traits plus agency. Descriptions of each of these skills is presented in Table 1.

The production of these noncognitive and other cognitive skills takes place in childhood as people are born with genetic endowments that create the initial stock of skills (Cunha and Heckman 1997, and Cunha and Heckman, 2007; Cunha, Heckman, Schennach, 2010). Environmental stimuli such as parents, peers, teachers, and neighborhoods can subsequently shape the production of both cognitive and non-cognitive skills. Unlike cognitive skills which appear to be sensitive towards earlier investments, non-cognitive skills are malleable and subsequent investments by any of the abovementioned actors can influence personality. Furthermore, character skills such as personality are also posited as one of the many dimensions through which education may affect human behavior. Education, for example, may have a causal impact on personality by encouraging people to invest in certain skills such as conscientiousness and work ethic. Other conditions in childhood such as maltreatment can also shape adult personality and well-being (Fletcher, 2017).

Decomposing behavioral outcomes by cognitive or non-cognitive component of skill poses an identification challenge (Borghans et. al, 2011). Success in many activities of economic life are jointly determined by both cognitive and non-cognitive skills. For example, schooling and academic achievement are outputs that depend on innate cognitive attributes and also on character skills such as motivation. Conversely, a similar point has been made about separating cognitive skills from measures of personality and other non-cognitive skills. Higher cognitive ability can assist individuals in their performance on tests of personality traits. Although it is difficult to separate cognitive and non-cognitive skills in the performance of a task, certain tasks can be loaded towards a type of skill.

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<sup>6</sup> The early work narrowing down traits to the Big Five is Costa and McCrae (1987) but the full historical emergence and gradual consensus towards Big Five traits in psychology is provided in Digman (1990) and McCrae and Costa (1999). The inclusion of additional “higher order traits” comes from Digman (1997).

IQ tests are examples of tasks that are skewed towards cognitive skills, whereas personality questionnaires are skewed towards non-cognitive skills.

Furthermore, these traits have a strong mapping to economic concepts and can encompass broad measures such as time preferences, risk aversion, personality skills and other emotional skills. Almlund et. al (2008) presents a framework for incorporating these skills into economic analysis. Personality measures can be interpreted as endowments that influence economic decisions by changing preferences and altering calculations for psychic costs and benefits. Economic actors are exposed to environmental situations and the actions taken by economic actors can be interpreted as behaviors influenced by personality. Therefore, accounting for previously unobserved non-cognitive character skills can illuminate the determinants of human behavior.

### *2B. Character Skills and the Labor Market*

In a pioneering study, Bowles, Gintis, and Osborne (2001a) note that even with the inclusion of traditional covariates such as schooling, experience, and accounting for plausible factors such as transitory shocks to income or measurement error in the reporting of income, a significant portion of the variance in earnings remains unexplained. More specifically, even for individuals with the same years of schooling and experience, there is considerable variation in earnings. The authors emphasize as puzzles the role of what appear to be irrelevant factors, such as household cleanliness or beauty, strongly predicting earnings. They hypothesize that these irrelevant covariates are indirectly capturing the effects of behaviors as manifested by non-cognitive skills like personality traits. Furthermore, employer surveys provide auxiliary evidence on the value of non-cognitive skills because employers rank attitude and behavior as important worker characteristics in addition to other qualifications. Lastly, they point out that typical covariates in earnings regressions are outperformed in measures of explanatory power by non-cognitive skills and argue that non-cognitive character skills as represented by personality play an important role in the labor market.

Subsequently Bowles, Gintis, and Osborne (2001b) propose a theoretical model in which personality variables or non-cognitive character skills can augment cognitive skills and influence wages in different types of occupations. Given the broad range of behaviors embedded in the major traits, certain types of behaviors – for example working hard, represented by conscientiousness – are rewarded at work for both high and low skilled labor. Imagination or conscientiousness can be valued in high skilled occupations but might have a low valuation in low skilled occupations, whereas other personality traits like neuroticism are likely to be less responsive or favored. These

character skills can augment cognitive skills, thereby influencing the earnings of workers. In sum, they establish that non-cognitive character skills are wage affecting characteristics.

Empirical evidence from Mincerian wage regressions examining personality traits confirm the importance of character skills as important correlates of earnings. Early work by Nidus and Pons (2001) using data from the Dutch Panel Study explores the relationships between the five-factor model of personality and income. They find weak positive statistically significant correlations between extraversion and openness to experience on wages, and small insignificant effects between other personality traits and wages. Another notable study by Mueller and Plug (2006), using a sample of high school and above individuals from the Wisconsin Longitudinal Study, finds positive and significant effects for openness to experience coupled with negative effects for neuroticism and agreeableness for men, as well as positive effects openness to experience and conscientiousness coupled with negative effects for extraversion in women. Additionally, they demonstrate that personality has considerable predictive power in explaining earnings and can contribute to explaining the gender gap between men's and women's earnings. Lastly, Fletcher (2013) uses within-family variation to causally estimate the effect of personality on earnings. Fletcher gets a positive effect for extraversion and a negative effect for neuroticism, with effects that are statistically indistinguishable from zero for the other traits<sup>7</sup>. Generally, these studies show that non-cognitive character skills can contribute to explaining labor market outcomes.

### **3. Empirical Strategy**

#### *3.A. National Survey of Midlife Development*

We use data from the first three waves of the National Survey of Midlife Development (MIDUS) conducted in the U.S. between 1996 (Grimm et. al, 2005), 2006 (Ryff et al, 2009), and 2014 (Ryff et al, 2014) respectively. The survey is a panel design containing a nationally representative sample of Americans based on a random probability sample along with a non-random oversample of twins, siblings, and minority respondents from certain cities. The sampling frame for MIDUS is individuals that were aged between 25 and 75 years of age. We restrict our analysis to the nationally representative sample of Americans and the two longitudinal follow-ups. Attrition in the longitudinal follow-up reaches about 16% in the first follow-up and approximately 33% in the

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<sup>7</sup> Fletcher (2007) uses data from the National Survey of Adolescent Health (ADD Health). In the full sample he gets positive effects for conscientiousness but negative effects for openness to experience. The sibling analysis in the study is underpowered to detect modest effect sizes because of limited sample size.

second follow-up. Approximately half of the attrition occurs because of mortality and the other half arises from non-response. Since we are concerned about the possibility of differential mortality and non-response by immigrant generation, in certain specifications we use sampling weights and restrict our models to only data from the first wave of the survey.

MIDUS contains the traditional set of demographic and economic variables such as race, gender, earnings, and schooling, but also includes a rich battery of character skills from personality questionnaires that we use to obtain our measures of the Big Five plus agency and family background. The self-administered personality tests are based on a battery of 30 questions that map onto six personality traits.<sup>8</sup> Unlike other research studies which rely on a handful of questions to observe personality traits, the MIDUS battery is rigorous and tested for reliability. Cronbach's alphas<sup>9</sup> for each measure of character traits exceeds the acceptable threshold of .7 for all traits except conscientiousness. More specifically, the survey instrument has the following Cronbach's alpha values for each character trait: Neuroticism = .74, Extraversion = .78, Openness = .77, Conscientiousness = .58, Agreeableness = .80, and Agency = .79.

We use questions based on country of birth and country of parents' birth to define immigrants, second-generation immigrants, and natives. First, we exclude anyone who did not answer the question on place of birth. We define immigrants as individuals that are born outside of the United States (or first-generation immigrants), and second-generation immigrants as individuals that are U.S. born with at least one foreign-born parent. All remaining individuals who are born in the USA are considered natives. We pool individual observations at the person-year level. Overall, after excluding observations for non-response, we end up with an approximate sample of 5,005 native person-years, 308 person-years for immigrants, and 479 person-years second-generation immigrants. While the sample size is limited compared to typical studies in labor economics, the existence of statistically significant differences between natives and immigrants of different generations suggest that these difference is large and thereby economically significant.

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<sup>8</sup> The survey designers of MIDUS also conducted a pilot study with 1000 respondents to assess the accuracy of the survey questionnaire to the mapping of the personality variables and they found six personality traits (OCEAN plus agency). MIDUS employs an additive index across the battery of the questionnaires to create the final personality scores. The detailed questionnaire is available at ICPSR. (<https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/203>) for MIDUS.

<sup>9</sup> The statistic provides a measure of reliability of the trait being measured and is given by the following equation where there are N components and  $\bar{c}$  represents the average covariance between those components and  $\bar{v}$  represents the average variance across those components:

$$\alpha = \frac{N\bar{c}}{(\bar{v} + (N - 1)\bar{c})}$$

To prepare our earnings variable, we remove individuals with missing earnings and transform the wage data from a categorical scale to a continuous measure of income by using the midpoint values of the respective category. We restrict maximum earnings to two hundred thousand dollars. A strength of MIDUS is that income categories are spaced unevenly with more categories for lower levels of income, thereby improving precision of income estimates<sup>10</sup>. We use the consumer price index (CPI) from the Bureau of Labor Statistics (BLS) to deflate earnings from all three of the waves of MIDUS to constant 2006 dollars. We then transform the earnings into log earnings. We also create four indicator variables that measure the respondent's own level of schooling and maternal schooling.

Another notable attribute from Table 2 is the composition of the immigrant generation. As expected, second-generation immigrants are different than first-generation immigrants since the compositional shift in immigration to the U.S. over time is captured. Likewise, the survey occurs during a transition period for U.S. immigration. The 1990s were a low point for foreign-born individuals in the U.S., with about eight percent of the population being foreign-born. By 2000, a sharp increase in immigration led to a significant portion of foreign-born individuals in the U.S., and immigrants were exceeding thirteen percent of the population. Since our study's first wave is conducted during the earlier part of the 1990s, approximately five percent of our pooled full sample is immigrants, but in the first survey approximately six percent of our sample is immigrants. By pooling immigrants, we estimate the net difference between immigrants and natives.

In Figure 1 we examine each personality trait by age and we see a relatively stable pattern for personality scores by age, which is generally consistent with earlier work (Cobb-Clark and Schurer, 2012). In subsequent Appendix Figures 1 through 7 we show the levels of skills and distributional differences by immigrant generation for the six personality traits and log income. The bar graphs show the adjusted and unadjusted differences in the average level of non-cognitive skills by immigrant generation. Notable differences are seen for immigrants and second-generation immigrants for openness to experience in Appendix Figure 1, agency in Appendix Figure 6, and for log income in Appendix Figure 7. Similarly, second-generation immigrants have higher mean scores of conscientiousness and extraversion compared to natives, as shown in Appendix Figure 2 and 3. No notable differences are observed by immigrant generation for neuroticism and agreeableness in Appendix Figures 4 and 5.

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<sup>10</sup> MIDUS contains 34 bins to measure incomes with bins that are unevenly spaced at the lower end of the income distribution.

### 3B. Estimation Strategy

We begin by estimating reduced form models given by equation 1 which serve as means comparisons of non-cognitive character skills by immigrant generation. The dependent variable denoted by  $\theta$  represents normalized non-cognitive character skills such as openness to experience, conscientiousness, extraversion, agreeableness, neuroticism, and agency for individual  $i$ . Our baseline regression model includes covariates ( $\delta$ ) indexed by  $j$  for race, gender, age, age squared, and survey year fixed effects. In alternate specifications, we include other family background characteristics such as multiple indicator variables for maternal education, marital status, and the number of children to examine the role of family dynamics in explaining non-cognitive skills. Our key parameters of interest are given by the coefficients on the immigrant and second-generation immigrant variables  $\beta_1$  and  $\beta_2$ , which compare the difference in non-cognitive skills by immigrant generation to natives (the omitted category). To account for heteroscedasticity and autocorrelation across the pooled sample we estimate Huber-White clustered standard errors at the individual level.

$$(1) \quad \theta_i = \alpha + \beta_1 \text{Immigrant}_i + \beta_2 \text{Second Generation}_i + \delta_j X_i + \varepsilon_i$$

After estimating differences in non-cognitive character skills, we then examine the role of character skills on the earnings differences between immigrants, second-generation immigrants, and natives. Equation 2 is our earnings regression where the outcome variable is earnings measured in log real 2006 dollars. Again, we include covariates for gender, age, age squared, survey year fixed effects in the baseline regression. In different specifications of the model, we also include maternal schooling, marital status, number of children, as well as the respondent's own completed schooling. The inclusion of non-cognitive character skills in this regression helps examine how the differences in level of skills by immigrant generation influence earnings by immigrant generation. For all regressions involving log earnings as a dependent variable with our binary independent variable as a regressor, we use Kennedy's approach (1981) to approximate the effect of immigrant generation on log earnings.

$$(2) \quad Y_i = \alpha + \beta_1 \text{Immigrant}_i + \beta_2 \text{Second Generation}_i + \theta_j \gamma_i + \delta_j X_i + \varepsilon_i$$

Since the crux of our research design exploits exogenous differences across immigrant generations to examine the level of skills between immigrant generations and natives in the United States, the threats to our estimation strategy emerge primarily from issues of selection and measurement. One threat to our estimation strategy involves the intergenerational persistence of non-cognitive skills which might bias the coefficients on our first and second-generation parameters in a downward manner. For example, if immigration differences persist beyond second-generation,

then our estimates would be biased down since we cannot separate additional affected generations in the analysis. Additional concerns include the composition of the immigrant sample. Lubotsky (2007) finds selective out migration of low skilled immigrants from the U.S. to their country of origin is frequent and such migration in our case would influence the coefficient upwards for skills of both immigrants, because the analysis is restricted to the subset of successful immigrants who are unaffected by return migration. Other known measurement issues in such studies on immigration assumes a basic level of English ability to engender immigrant participation in surveys. Likewise, even for individuals that participate, cultural differences in the interpretation of survey questions are embedded in the language differences and soft skills. Alternatively, some types of immigrants might systematically avoid such surveys (i.e. undocumented immigrants). Such attributes might influence levels of participation in the survey between immigrants and natives and subsequently our estimates of character skill differences.

Because MIDUS examines Americans in middle age and given the age distribution of the study's participants, attrition due to mortality is a concern. Attrition by mortality would be especially troublesome if it is correlated with immigrant generation. A more problematic form of bias that can exist in longitudinal studies such as this one is non-response. Differential non-response by immigrant generation can adversely affect our estimates. The concern of selective out-migration, lower rates of participation, and language issues, however, are well known and common problems that tend to afflict studies on immigration and can bias estimates in different directions. Therefore, to attempt to ameliorate some of these well-known concerns, we also present the results with different sets of sampling weights to examine the sensitivity of our results to sample selection. Additionally, we estimate models where we restrict the data to the first survey wave to address concerns of mortality and non-response in subsequent waves<sup>11</sup>. The inclusion of the second-generation should also alleviate some concerns since challenges with languages and documentation is abated in the second-generation. The existence of statistically distinguishable effects for the second-generation provides auxiliary evidence that sample selection of immigrants does not fully drive our results.

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<sup>11</sup> We attempt our analysis with multiple sampling weights provided by MIDUS, other provided weights some of which are based on ex-post sampling adjustments, however the general pattern of results for our analysis remains consistent.

In terms of inference and generalizability, the older cohorts analyzed in this study are from an era that was the nadir of migration to the U.S.<sup>12</sup>, whereas the younger cohorts are from the uptick period in migration that began in 1990. During this time the composition of migration to the U.S. is also changing. Consequently, the immigrant sample in this study captures the older cohorts who are more likely to be of European background and the younger cohorts who have a non-European background. Nevertheless, our results provide a snapshot on immigrants, second-generation immigrants, and natives from the 1990s.

## 4. Results

### 4A. *Main Results*

In Table 3 we examine differences in openness to experience by immigrant generation. Beginning with the baseline specification in column 1, we observe that immigrants have higher levels of openness to experience compared to natives, by .30 standard deviations, whereas second-generation immigrants also have a higher level, but only by approximately .14 standard deviations. We then proceed by including covariates for race in column 2 and see the coefficients on openness to experience for immigrants and second-generation immigrants remain at a similar magnitude of .28 and .14 of a standard deviation. Next, in column 3, we include maternal education and see minor differences, as the effect sizes fluctuate for both immigrants and second-generation immigrants; however, the differences are statistically indistinguishable between earlier columns. The inclusion of maternal education allows us to examine how maternal education and family background influences the production of non-cognitive skills. To check for robustness, we re-estimate our preferred model while restricting our sample to the first survey wave, and we see the differences for openness to experience is diminished, at a .22 standard deviation difference between immigrants and natives, but similar for second-generation immigrants at .18 standard deviations. For further robustness, we also estimate our preferred specification with different sets of weights based on the two different sampling criteria of age and gender. For our weighted results, we find similar magnitudes and direction for differences in openness to experience by immigrant generation. Overall, comparison across generations reveals that non-cognitive skills of second-generation immigrants converge to the skill level of natives.

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<sup>12</sup> During 1990, 7.9% of the U.S. was foreign born (Gibson and Jung, 2006) and reflects an uptick in immigration from a trough for migration between 1940 and 1990 where the average proportion of foreign-born individuals was 6.4%.

Next, in Table 4, we examine conscientiousness by immigrant generation. For immigrants, we find small positive differences, with coefficients ranging between .06 and .14 standard deviations, which are statistically indistinguishable from the level of conscientiousness in natives across all specifications. The pronounced differences notably occur in the first sample wave and weighted outcomes shown in columns 4 to 6. Interestingly, second-generation immigrants tend to outperform natives on conscientiousness. In the baseline specification in column 1, we observe that their level of conscientiousness is higher than natives by .16 standard deviations. We then proceed to control for differences in family background and race across immigrant generations in columns 2 and 3 and see minor fluctuations in the magnitude of differences. The large differences for second-generation immigrants persist across the first wave in column 4 and weighted regressions in columns 5-6. A notable exception for second-generation immigrants is column 6, where the coefficient is marginally significant, but remains statistically similar to the differences in columns 1-5. These findings for conscientiousness are important because the character trait grit is represented by conscientiousness and is an important predictor of success in economic and non-economic situations (Duckworth, 2016).

We then proceed to examine differences by immigrant generation for extraversion in Table 5. Despite modestly large effect sizes between .08 and .14 of a standard deviation for both immigrants and second-generation immigrants across columns 1-5, we find sporadic statistically distinguishable effects between immigrants, second-generation immigrants, and natives on measures of extraversion. We see marginal and weakly significant effects for second-generation immigrants, but the effects are sensitive to the specifications. Given our sample size and the constructs that we are measuring, it is very likely that our study is underpowered to detect modest to small effect sizes, and the results in this section suggest possible differences between second-generation immigrants and natives exist for extraversion.

In Tables 6 and 7, we evaluate differences by immigrant generation for agreeableness and neuroticism. First in Table 6, we notice that differences between immigrants and second-generation immigrants compared to natives are all economically and statistically insignificant across all specifications, with differences ranging between .01 and .04 of a standard deviation. In Table 7, we examine neuroticism, the last trait from the traditional Big Five model of personality. Likewise, we observe statistically indistinguishable differences for immigrants; however, the effects are all positive but small and imprecisely estimated. Notably, the coefficients are negative for second-generation immigrants and they are again statistically indistinguishable from zero. The negative association is of

possible economic value due to the fact that neuroticism is one attribute where higher ratings are negatively associated with labor market outcomes. Nevertheless, the standard errors are very large to impose a stronger interpretation on this observed outcome.

Finally, Table 8 shows the results for agency. The baseline specification in column 1 reveals that immigrants have higher levels of agency by about .26 standard deviations, and second-generation immigrants also have higher levels than natives by nearly half of that at .14 standard deviations. These large significant differences are consistently observed between immigrants and second-generation immigrants relative to natives, even with inclusion of maternal education and race in columns 2 and 3. Similar to earlier results, the general direction of results for immigrants is positive, and for second-generation immigrants the effects are consistent across all specifications and weighting. Although weights appear to influence the magnitude of the effects for second-generation immigrants in column 6, which is notable for being insignificant, that coefficient is statistically similar to all preceding coefficients and is of a large magnitude at .12 of a standard deviation.

Additionally, for all personality traits, we also run separate auxiliary specifications where we include area of origin fixed effect.<sup>13</sup> Despite a considerable loss in sample size, we see the same pattern of results in the magnitude of the results. In these specifications, we allow for country-of-origin differences between immigrants, second-generation immigrants, and the native generation. If differences in country of origin (through culture, ethnicity, or other attributes) matter, then we can exclude the possibility that differences in character skills are driven by those specific cultures. This serves as a robustness check on whether unobserved differences in ethnicity and country of origin influences the differences between immigrants and natives.

Although we are unable to separately estimate regressions for each country of origin to evaluate heterogeneity within immigrant, the results from this section have two main points. First, the regression estimates from this section provides a snapshot on the average or net effect of immigrants and second-generation immigrants on the character skill distribution in their country of arrival (the U.S.). Given the paucity of research on topic, we feel understanding the average effect of immigrants makes a scientific contribution to policy discussions. Second, the existence of statistically

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<sup>13</sup> We separately estimate the regression with more detailed indicators for best guess of country/ethnic origin. The results with indicators for country/ethnic origin are substantively similar in coefficients but the standard errors are larger due to considerable loss in sample size and an increase in the number of parameters estimated.

significant effects with the limited sample size in this analysis suggests that the differences between immigrants, second-generation immigrants, and natives are large and economically important.

#### 4B. *Earnings and Education*

Since previous research (Heckman, Stixrud, and Urzua, 2006) has found character traits to be positive predictors of earnings and key determinants of labor market outcomes on both intensive and extensive margins, we examine the role of character skills on earnings differences by immigrant generation. The comparison is notable because our earlier analysis reveals significant differences in character skills by immigrant generation which implies that earnings gap by immigrant generation would be altered in the absence of those character skill differences. Therefore, the goal of the earnings comparison in the next section is twofold: first, what is the explanatory power of non-cognitive character skills? Second, can non-cognitive character skills explain the earnings differences between immigrants, second-generation immigrants, and natives?

We investigate the relationship between character skill and earnings by immigrant generation in Table 9. Column one of Panel A contains the basic specification which shows that immigrants earn significantly less than natives by approximately fifteen percent, whereas second generation immigrants earn more by approximately fourteen percent. The earnings comparison by immigrant generation is consistent with the general findings on earnings differences by immigrant generation. The inclusion of maternal education in column 2 changes the significance levels but the effect sizes are essentially the same. The adjusted R squared here reveals that these traditional earnings regressions explain fourteen to sixteen percent of the variation. Next in column 3 we include the respondent's own level of education. Despite an apparently large change in the effect sizes in the earnings of immigrants to natives and a small difference between second generation immigrants and natives, the coefficients are statistically indistinguishable from earlier specifications. Nevertheless column 3 shows that conditioning for education influences both the gap between immigrants and natives and second-generation immigrants and natives. The adjusted R squared increases to .21 to reflect the explanatory power of schooling. In column 4 we remove the respondent's own education and include non-cognitive skills. We notice a similar pattern of results compared to column 3, except the effect sizes are less pronounced and the explained variation is about nineteen percent. Such findings are reassuring because they show how character skills have approximately as much explanatory power as education. Likewise, character skills influence earnings differences by immigrant generation in a similar manner to education.

Subsequently in column 5 we jointly include education and non-cognitive character skills and this is our key set of regression specifications that examine the role of five factor personality traits on earnings differences by immigrant generation. We observe that immigrant differences in earnings is significant and large at twenty four percent of the wage and the earnings differences for second-generation immigrants remains positive but it is statistically indistinguishable at the conventional levels of significance. Overall, we explain approximately twenty three percent of the variation in earnings, and we see that non-cognitive character skills contribute as much as schooling in explaining the variation in earnings.

Lastly, to examine the sensitivity of our results, we estimate models using data from the first survey, and all waves including multiple sampling weights. The general findings between these last three columns and our final specification in column 5 appear to be statistically similar. The range of these effects suggest that our estimates are not driven by possibilities in language differences that influences participation in these surveys or possible non-random attrition in the longitudinal follow-ups. Such a finding is a concern because the sample is advanced in age, the possibility of a change in composition when we pool all three waves of the survey. The proportion of the explained variance is higher for our measure of cognitive ability (education), but the Big Five plus agency have as much explanatory power as the inclusion of education. Jointly estimating models shows that inclusion of education and the Big Five plus agency can explain about twenty-five percent of the total variation. The Big Five plus agency variables are jointly significant at the one percent of significance.

We also re-run the analysis for dollars in levels in Panel B of Table 9 and we generally observe a similar pattern of results in the relative magnitude and significance of the relationship between immigrants, second-generation immigrants and natives. The earnings in dollars are approximately equal to the corresponding relative effect size as given by the specifications in the log linear specifications. Additionally, the explanatory power of schooling and personality as given by the adjusted R squared follow a similar pattern with both education and measures of personality having significant explanatory power

Although the empirical analysis of earnings is limited by the sample size, the general pattern of evidence suggests that character skills can influence and explain earnings. The large standard errors preclude testing for significant changes in our coefficients on immigrant and second-generation differences across our specifications but also for limit our ability to examine how gaps by immigrant generation change across specifications. Nevertheless, a suggestive finding from this analysis is that the difference in earnings between immigrants and natives would be higher if not for

non-cognitive character skills and the difference between second-generation and natives would be smaller in the absence of these non-cognitive character skill differences. Consequently, those suggestive findings indicate that character skills influence the earnings dynamics of immigrants and second-generation immigrants with respect to natives.

## 5. Conclusion

Using data from the National Study of Midlife Development, we compare the character skills of immigrants and second-generation immigrants to natives using the traditional Big Five model of personality traits with the addition of agency. Overall, we observe an average equilibrium level of soft skills for immigrants, second-generation immigrants, and natives in the United States. Our main findings show that for many personality traits such as openness to experience and agency, immigrants and second-generation immigrants have a level of non-cognitive character skill that exceeds the level of natives. Second-generation immigrants also score higher on conscientiousness than natives with suggestive evidence of higher scores for extraversion than natives. We show that character skills have considerable explanatory power in earnings regressions, but due to our limited sample size we lack the statistical power to make broad inferences on earnings differences by immigrant generation.

Our observed differences between immigrants and natives also have an important implication for economic analyses of immigrants and the labor market. First, they imply that immigration can shift the skill distribution in the country of arrival on important, previously unobserved measures of character skills. Second, the differences in character skills by immigrant generation help validate the common assumption of imperfect substitutability between immigrants and natives by level of schooling, even with identical English proficiency. A primary motivation behind imperfect substitutability arises due to lower levels of English ability and potentially lower quality of education among immigrants. On the other hand, this study supports the assumption of imperfect substitutability as a result of differences in levels of character skills between immigrants and natives. Ignoring character skill differences would therefore result in the absence of an important skill component of earnings.

Finally, differences in non-cognitive skills by immigrant generation have implications for the discussion on immigrant assimilation and adaptation. On character skills like openness to experience and agency, where immigrants exceed natives, we see a convergence of skills of second-generation immigrants to natives, indicating positive assimilation. We also see beneficial divergence on the

performance of second-generation immigrants from natives and immigrants on conscientiousness. Such differences can open the black box on the success of second-generation immigrants and illuminate mechanisms. Taken as a whole, the continued success of second-generation immigrants indicates that in order to conduct economic evaluations of immigration policy, it is important to understand the outcomes for subsequent generations.

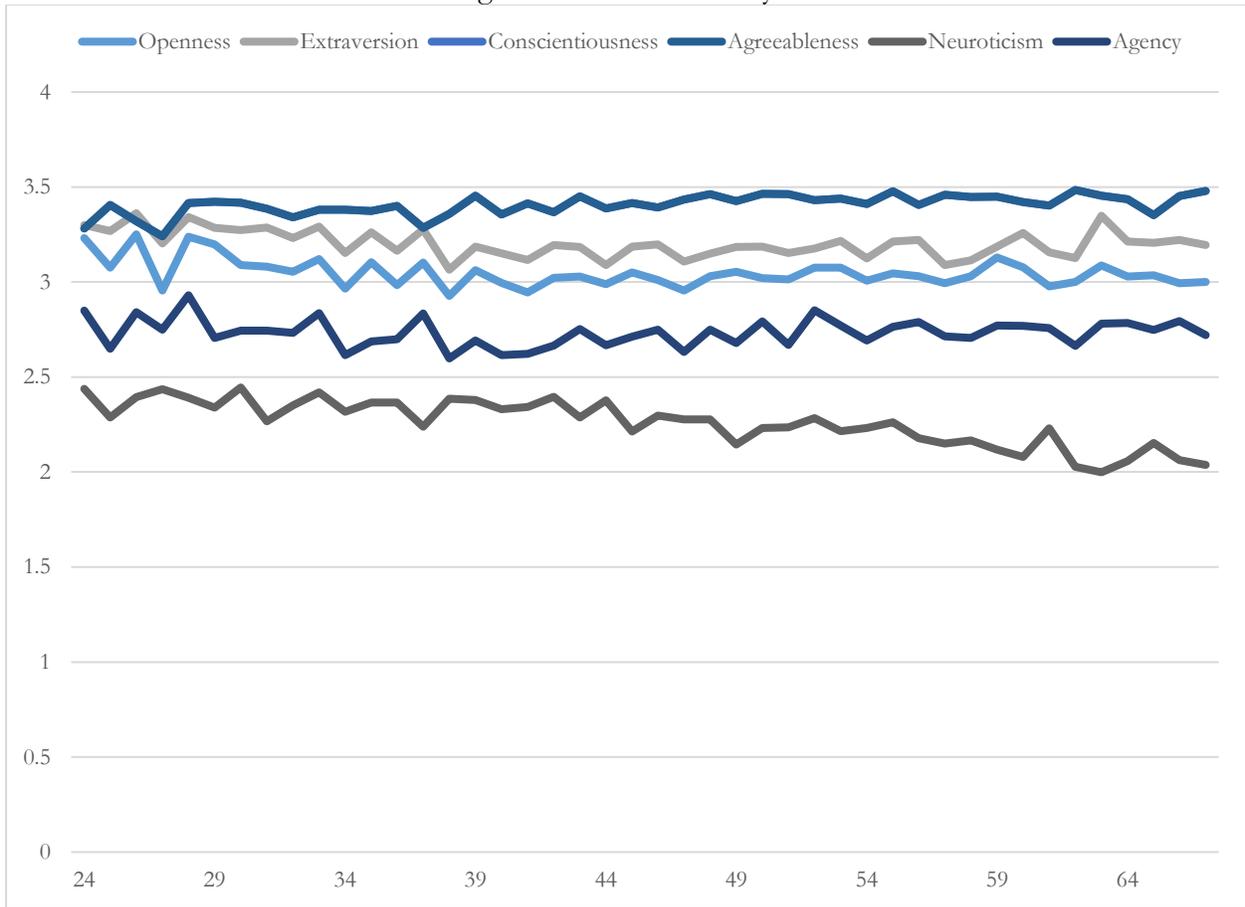
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Figure 1  
The Age Profile of Personality Traits



Source: National Survey of Midlife Development (1996, 2006, 2014). Notes: Personality trait scores are measured by the MIDUS personality inventory.

Table 1  
The Five-Factor Model of Personality plus Agency

<b>Openness to experience</b>	The tendency to be open to new aesthetic, cultural, or intellectual experiences.  Adjectives: Commonplace, Narrow-interest, Simple- vs. Wide-interest, Imaginative, Intelligent
<b>Conscientiousness</b>	The tendency to be organized, responsible, and hardworking.  Adjectives: Careless, Disorderly, Frivolous vs. Organized, Thorough, Precise
<b>Extraversion</b>	An orientation of one's interests and energies toward the outer world of people and things rather than the inner world of subjective experience; characterized by positive affect and sociability.  Adjectives: Quiet, Reserved, Shy vs. Talkative, Assertive, Active
<b>Agreeableness</b>	The tendency to act in a cooperative, unselfish manner.  Adjectives: Fault-finding, Cold, Unfriendly vs. Sympathetic, Kind, Friendly
<b>Neuroticism</b>	Neuroticism is a chronic level of emotional instability and proneness to psychological distress. Emotional stability is predictability and consistency in emotional reactions, with absence of rapid mood changes.  Adjectives: Tense, Anxious, Nervous vs. Stable, Calm, Contented
<b>Agency</b>	The tendency to strive for mastery, power, self-assertion, and self-expansion.  Adjectives: Self-confident, Forceful, Assertive, Outspoken, Dominant

Partially adapted from American Psychological Association (2007). The adjectives are from Gough and Heilbrun (1983). The definition and adjectives for agency are from the MIDUS technical report on Personality Scales (MIDUS, 2018).

Table 2  
Descriptive Statistics by Immigrant Generation

	Immigrant	Second-Generation	Natives	All
Male	0.522 (0.501)	0.555 (0.498)	0.496 (0.500)	0.502 (0.500)
Age	46.33 (13.89)	54.52 (14.49)	48.70 (13.12)	49.00 (13.36)
White	0.556 (0.498)	0.891 (0.313)	0.925 (0.263)	0.904 (0.294)
Less than H.S.	0.0449 (0.208)	0.0508 (0.220)	0.0592 (0.236)	0.0579 (0.234)
H.S. or Equivalent	0.174 (0.380)	0.219 (0.414)	0.278 (0.448)	0.268 (0.443)
Some College	0.275 (0.448)	0.309 (0.463)	0.305 (0.460)	0.304 (0.460)
College or More	0.506 (0.501)	0.422 (0.495)	0.358 (0.480)	0.370 (0.483)
<b>Maternal Schooling</b>				
Less than H.S.	0.444 (0.498)	0.449 (0.498)	0.307 (0.461)	0.324 (0.468)
H.S. or Equivalent	0.320 (0.468)	0.332 (0.472)	0.430 (0.495)	0.418 (0.493)
Some College	0.0787 (0.270)	0.121 (0.327)	0.140 (0.347)	0.136 (0.343)
College or More	0.157 (0.365)	0.0977 (0.297)	0.123 (0.328)	0.123 (0.328)
<b>Outcomes</b>				
Openness to Experience	3.180 (0.517)	3.090 (0.518)	3.001 (0.528)	3.016 (0.529)
Conscientiousness	3.513 (0.436)	3.485 (0.437)	3.423 (0.454)	3.432 (0.453)
Extraversion	3.297 (0.543)	3.219 (0.609)	3.157 (0.573)	3.168 (0.575)
Agreeableness	3.512 (0.463)	3.494 (0.517)	3.442 (0.507)	3.449 (0.506)
Neuroticism	2.212 (0.660)	2.065 (0.642)	2.179 (0.650)	2.172 (0.650)
Agency	2.841 (0.643)	2.773 (0.663)	2.665 (0.665)	2.683 (0.663)
Log Earnings	10.14 (1.054)	10.36 (1.069)	10.24 (1.067)	10.24 (1.067)

Earnings	38674.8 (34293.4)	47999.6 (40581.7)	42182.3 (36251.9)	42425.3 (36516.0)
<i>n</i>	451	677	6911	8039

Notes: National Survey of Midlife Development (1996, 2006, 2014). Standard deviations in parentheses are below the means of the variables.

Table 3  
Openness to Experience by Immigrant Generation

	1	2	3	4	5	6
Immigrant	0.298*** (0.077)	0.279*** (0.088)	0.229** (0.096)	0.217** (0.089)	0.222** (0.098)	0.281*** (0.090)
Second Generation	0.135** (0.065)	0.142** (0.066)	0.185*** (0.068)	0.178*** (0.068)	0.175*** (0.068)	0.166** (0.072)
<i>n</i>	5777	5675	5358	2703	5352	5352
<i>Covariates</i>						
Demographics	No	Yes	Yes	Yes	Yes	Yes
Education	No	No	Yes	Yes	Yes	Yes

*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* The dependent variable is normalized. All regressions include controls for survey year fixed effects, age, and gender. Column 4 restricts the sample to the first survey year. Column 5 is a weighted regression based on probability of inclusion based on phone sampling and column 6 weights for participation by age and gender category. Huber-White clustered standard errors are in parenthesis. Statistical significance denoted by the following \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 4  
Conscientiousness by Immigrant Generation

	1	2	3	4	5	6
Immigrant	0.059 (0.076)	0.050 (0.087)	0.094 (0.093)	0.115 (0.096)	0.098 (0.092)	0.133 (0.099)
Second Generation	0.159*** (0.060)	0.175*** (0.062)	0.152** (0.065)	0.145** (0.068)	0.151** (0.065)	0.116 (0.073)
<i>n</i>	5801	5698	5381	2706	5375	5375
<i>Covariates</i>						
Demographics	No	Yes	Yes	Yes	Yes	Yes
Education	No	No	Yes	Yes	Yes	Yes

*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* The dependent variable is normalized. All regressions include controls for survey year fixed effects, age, and gender. Column 4 restricts the sample to the first survey year. Column 5 is a weighted regression based on probability of inclusion based on phone sampling and column 6 weights for participation by age and gender category. Huber-White clustered standard errors are in parenthesis. Statistical significance denoted by the following \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 5  
Extraversion by Immigrant Generation

	1	2	3	4	5	6
Immigrant	0.147* (0.078)	0.087 (0.088)	0.130 (0.095)	0.082 (0.092)	0.137 (0.094)	0.144 (0.096)
Second Generation	0.105 (0.069)	0.107 (0.071)	0.134* (0.075)	0.100 (0.077)	0.129* (0.074)	0.090 (0.086)
<i>n</i>	5802	5700	5380	2706	5374	5374
<i>Covariates</i>						
Demographics	No	Yes	Yes	Yes	Yes	Yes
Education	No	No	Yes	Yes	Yes	Yes

*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* The dependent variable is normalized. All regressions include controls for survey year fixed effects, age, and gender. Column 4 restricts the sample to the first survey year. Column 5 is a weighted regression based on probability of inclusion based on phone sampling and column 6 weights for participation by age and gender category. Huber-White clustered standard errors are in parenthesis. Statistical significance denoted by the following \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 6  
 Agreeableness by Immigrant Generation

	1	2	3	4	5	6
Immigrant	0.075 (0.072)	0.058 (0.080)	0.048 (0.086)	0.032 (0.088)	0.053 (0.085)	0.034 (0.088)
Second Generation	0.052 (0.063)	0.052 (0.065)	0.077 (0.067)	0.010 (0.075)	0.095 (0.067)	0.078 (0.072)
<i>n</i>	5801	5699	5381	2707	5375	5375
<i>Covariates</i>						
Demographics	No	Yes	Yes	Yes	Yes	Yes
Education	No	No	Yes	Yes	Yes	Yes

*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* The dependent variable is normalized. All regressions include controls for survey year fixed effects, age, and gender. Column 4 restricts the sample to the first survey year. Column 5 is a weighted regression based on probability of inclusion based on phone sampling and column 6 weights for participation by age and gender category. Huber-White clustered standard errors are in parenthesis. Statistical significance denoted by the following \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 7  
Neuroticism by Immigrant Generation

	1	2	3	4	5	6
Immigrant	0.057 (0.077)	0.102 (0.089)	0.080 (0.091)	0.036 (0.097)	0.084 (0.091)	0.131 (0.104)
Second Generation	-0.054 (0.064)	-0.054 (0.066)	-0.043 (0.070)	-0.026 (0.074)	-0.032 (0.070)	-0.075 (0.074)
<i>n</i>	5792	5691	5376	2703	5370	5370
<i>Covariates</i>						
Demographics	No	Yes	Yes	Yes	Yes	Yes
Education	No	No	Yes	Yes	Yes	Yes

*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* The dependent variable is normalized. All regressions include controls for survey year fixed effects, age, and gender. Column 4 restricts the sample to the first survey year. Column 5 is a weighted regression based on probability of inclusion based on phone sampling and column 6 weights for participation by age and gender category. Huber-White clustered standard errors are in parenthesis. Statistical significance denoted by the following \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 8  
Agency by Immigrant Generation

	1	2	3	4	5	6
Immigrant	0.261*** (0.078)	0.228** (0.091)	0.278*** (0.094)	0.239*** (0.087)	0.279*** (0.094)	0.310*** (0.101)
Second Generation	0.147** (0.065)	0.141** (0.066)	0.153** (0.069)	0.149** (0.072)	0.146** (0.068)	0.118 (0.072)
<i>n</i>	5783	5783	5783	2949	5777	5777
<i>Covariates</i>						
Demographics	No	Yes	Yes	Yes	Yes	Yes
Education	No	No	Yes	Yes	Yes	Yes

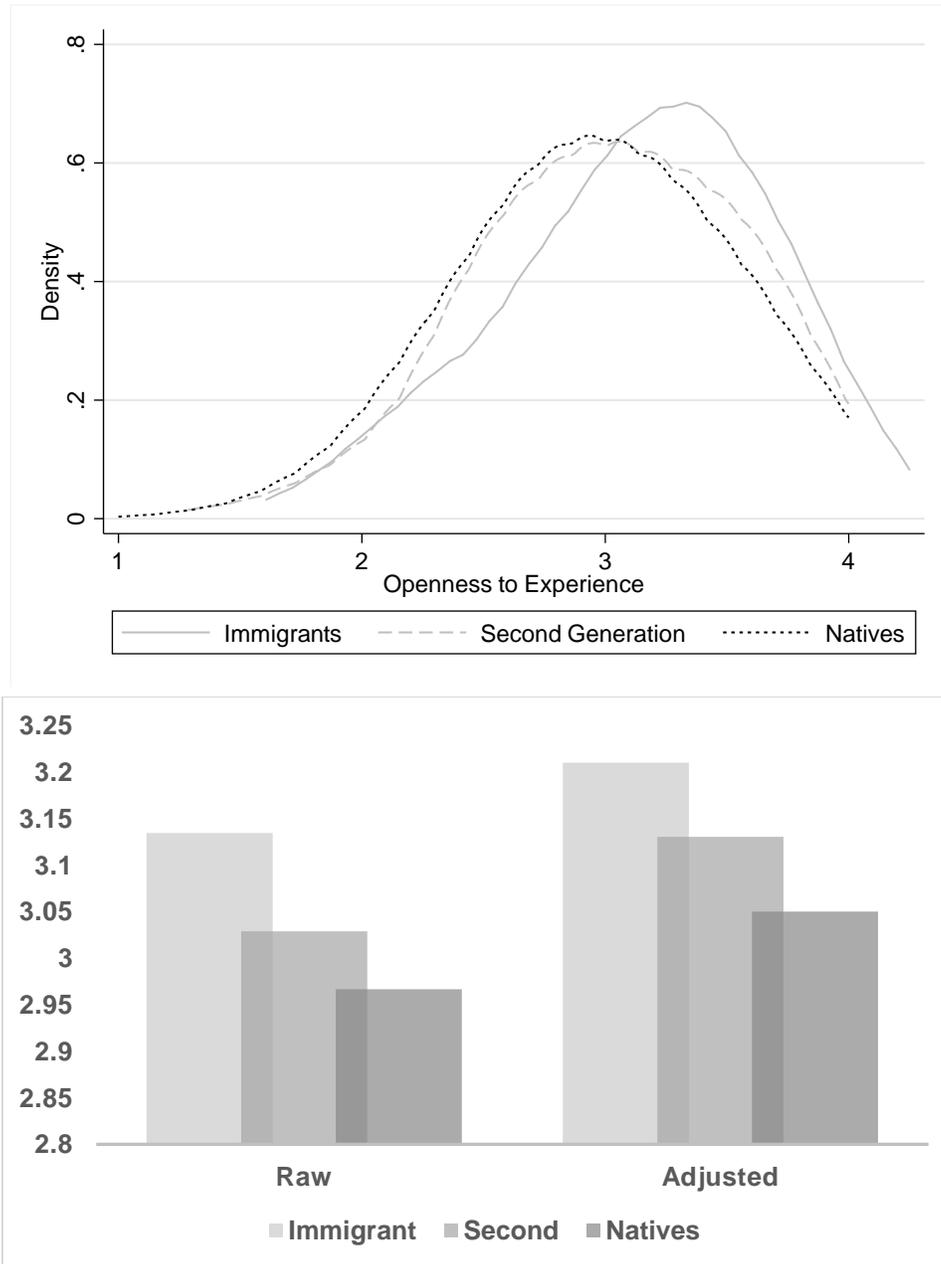
*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* The dependent variable is normalized. All regressions include controls for survey year fixed effects, age, and gender. Column 4 restricts the sample to the first survey year. Column 5 is a weighted regression based on probability of inclusion based on phone sampling and column 6 weights for participation by age and gender category. Huber-White clustered standard errors are in parenthesis. Statistical significance denoted by the following \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 9  
The Influence of Character Skills on Earnings by Immigrant Generation

	1	2	3	4	5	6	7	8
<i>Panel A: Log Earnings</i>								
Immigrant	-0.194** (0.087)	-0.140 (0.089)	-0.265*** (0.075)	-0.223*** (0.079)	-0.245*** (0.072)	-0.213*** (0.083)	-0.247*** (0.071)	-0.216*** (0.079)
Second Generation	0.152 (0.099)	0.167* (0.101)	0.057 (0.087)	0.112 (0.093)	0.056 (0.090)	0.153* (0.092)	0.063 (0.090)	0.024 (0.101)
<i>n</i>	3632	3449	3581	3336	3335	2023	3328	3328
Adj. R Squared	0.14	0.16	0.21	0.19	0.23	0.24	0.24	0.24
<i>Panel B: Earnings</i>								
Immigrant	-3970 (3502)	-3061 (3576)	-6795* (3528)	-5215 (3498)	-8493** (3467)	-7164*** (2707)	-8640** (3406)	-7788** (3785)
Second Generation	5521* (3283)	5715* (3298)	2093 (3115)	4160 (3242)	1206 (3138)	3483 (2856)	1541 (3221)	919 (3435)
<i>n</i>	4023	3805	3804	3683	3682	2261	3677	3677
Adj. R Squared	0.15	0.18	0.25	0.22	0.28	0.31	0.28	0.28
<i>Covariates</i>								
Maternal Education	No	Yes	No	No	Yes	Yes	Yes	Yes
Own Education	No	No	Yes	No	Yes	Yes	Yes	Yes
Character Skills	No	No	No	Yes	Yes	Yes	Yes	Yes

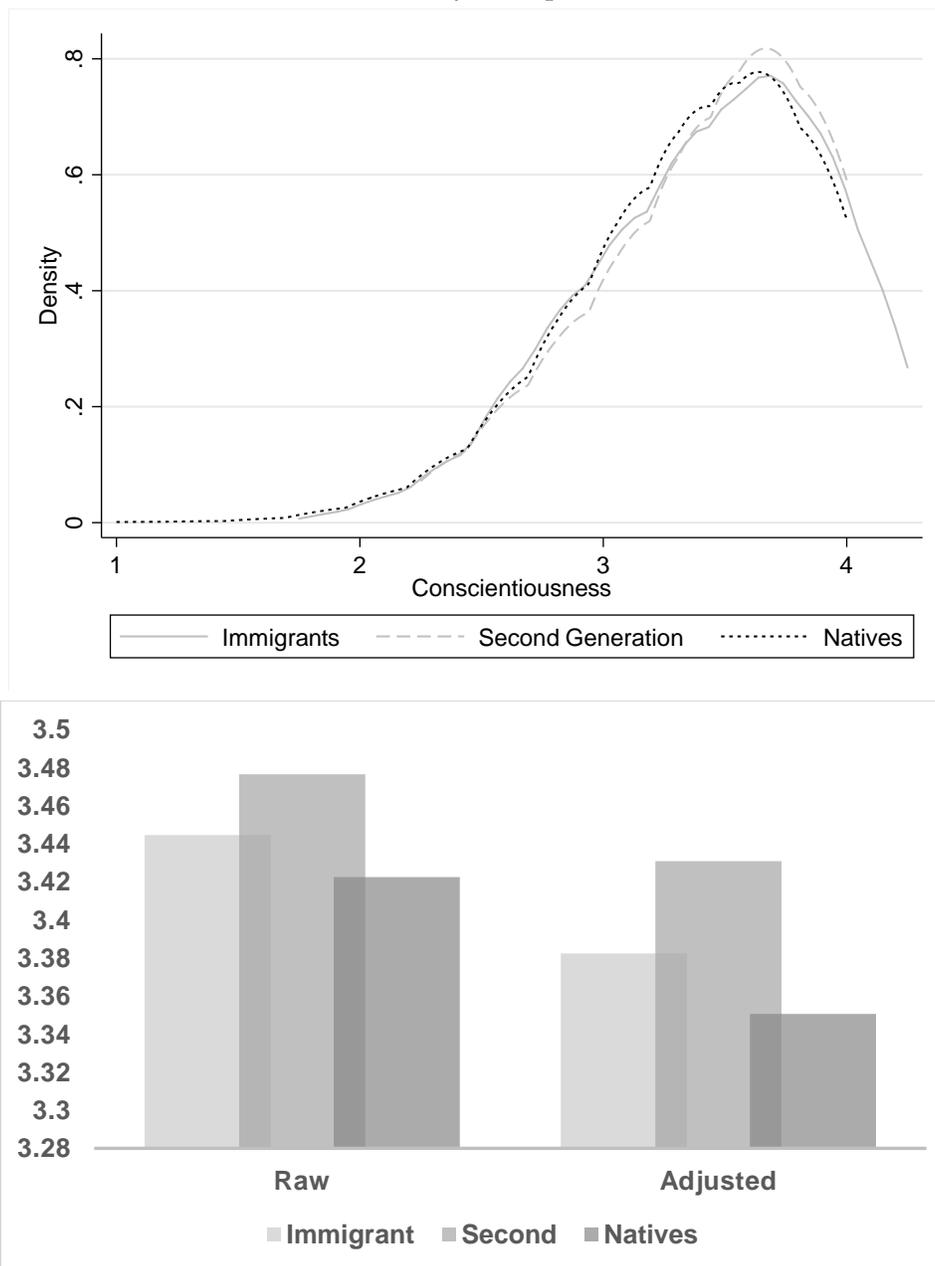
*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* Huber-White clustered standard errors are in parenthesis below the coefficients. All regressions include controls for survey year fixed effects, gender, and age. All regressions are restricted to individuals older than 24 years old and younger than 63 years. Column 5 is the full baseline specification containing the full pooled sample. Column 6 contains coefficient estimates using responses from only the first wave. Column 7 uses sampling weights for inclusion on the full pooled sample and column 8 uses weights based on probability of participation by age and gender category for the full pooled sample. Statistical significance is denoted by the following \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Appendix A: Figure 1  
 Openness to Experience by Immigrant Generation



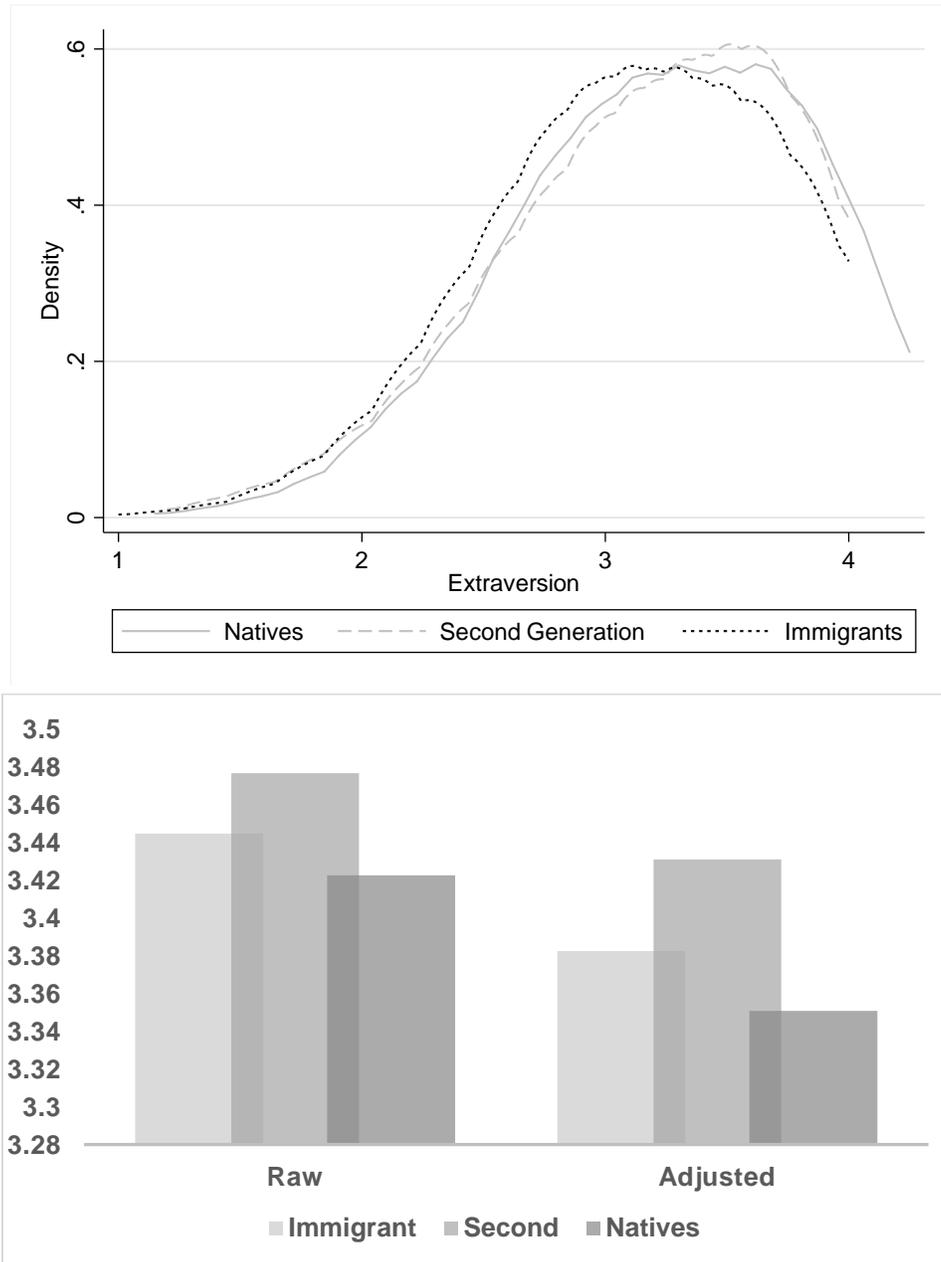
*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* On top the distribution of skill by immigrant generation. The bottom contains the raw means on the left and regression adjusted means for age, survey year, and gender on the right.

Appendix A: Figure 2  
 Conscientiousness by Immigrant Generation



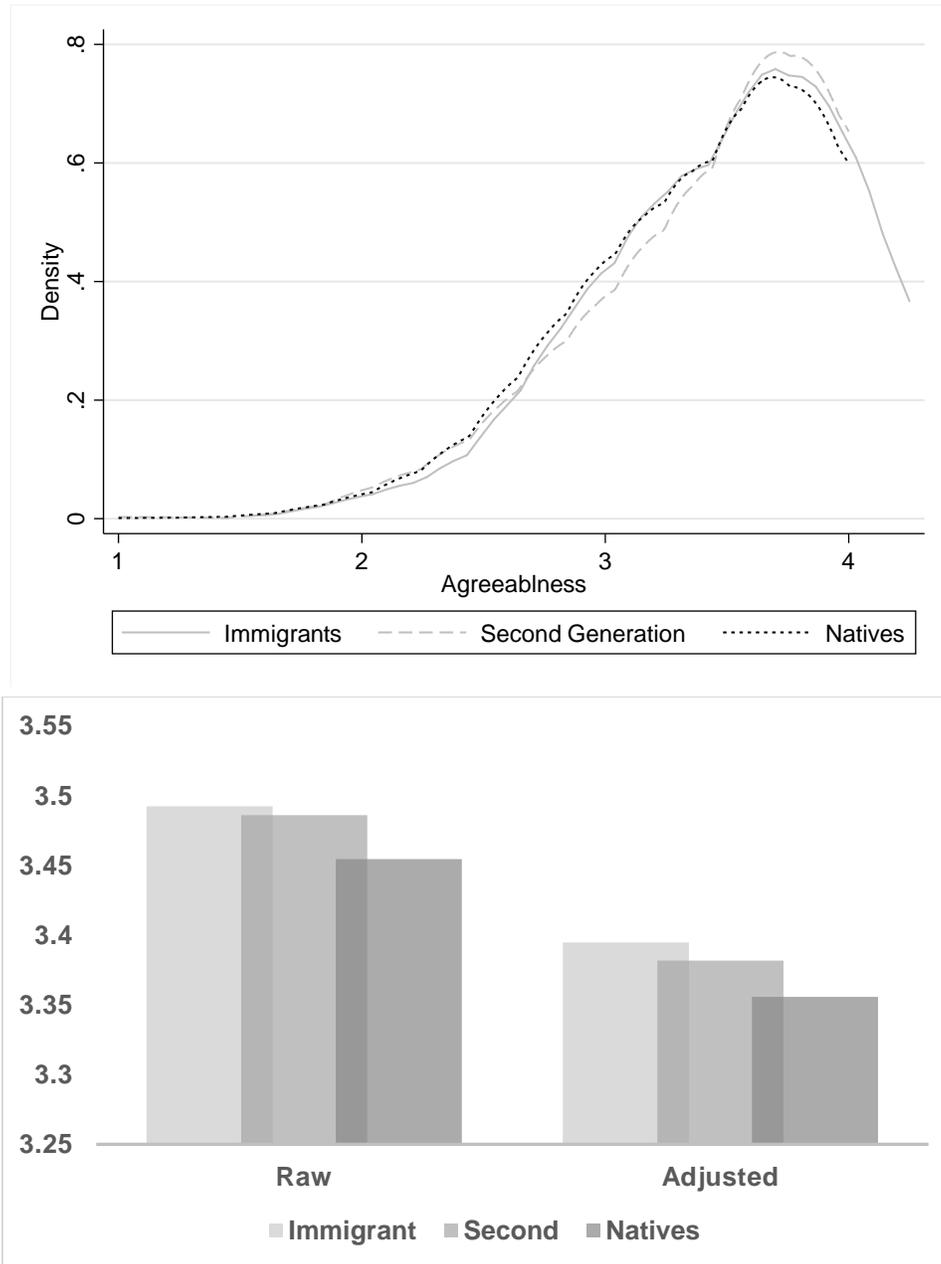
Source: National Survey of Midlife Development (1996, 2006, 2014). Notes: On top the distribution of skill by immigrant generation. The bottom contains the raw means on the left and regression adjusted means for age, survey year, and gender on the right.

Appendix A: Figure 3  
 Extraversion by Immigrant Generation



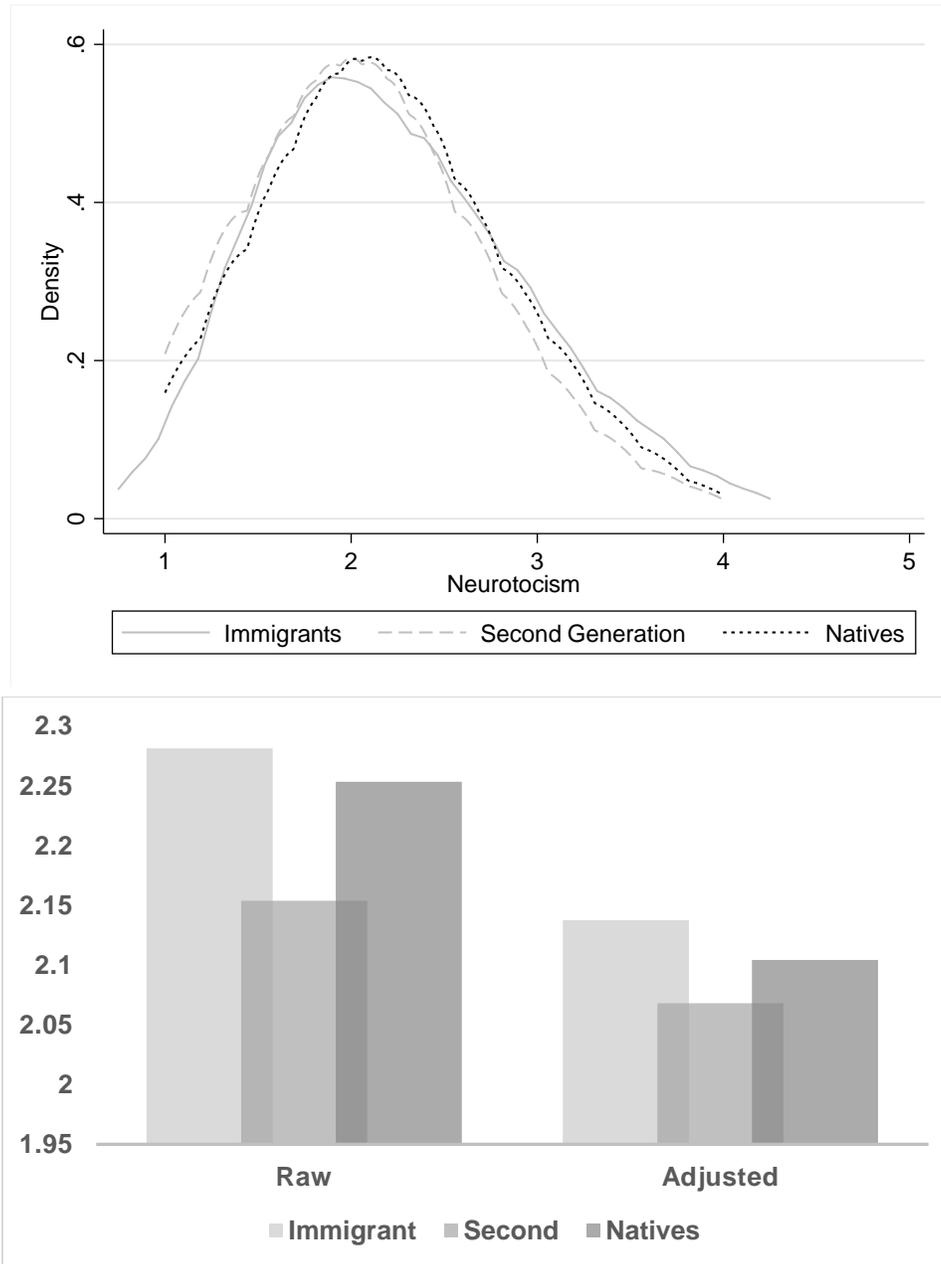
*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* On top the distribution of skill by immigrant generation. The bottom contains the raw means on the left and regression adjusted means for age, survey year, and gender on the right.

Appendix A: Figure 4  
 Agreeableness by Immigrant Generation



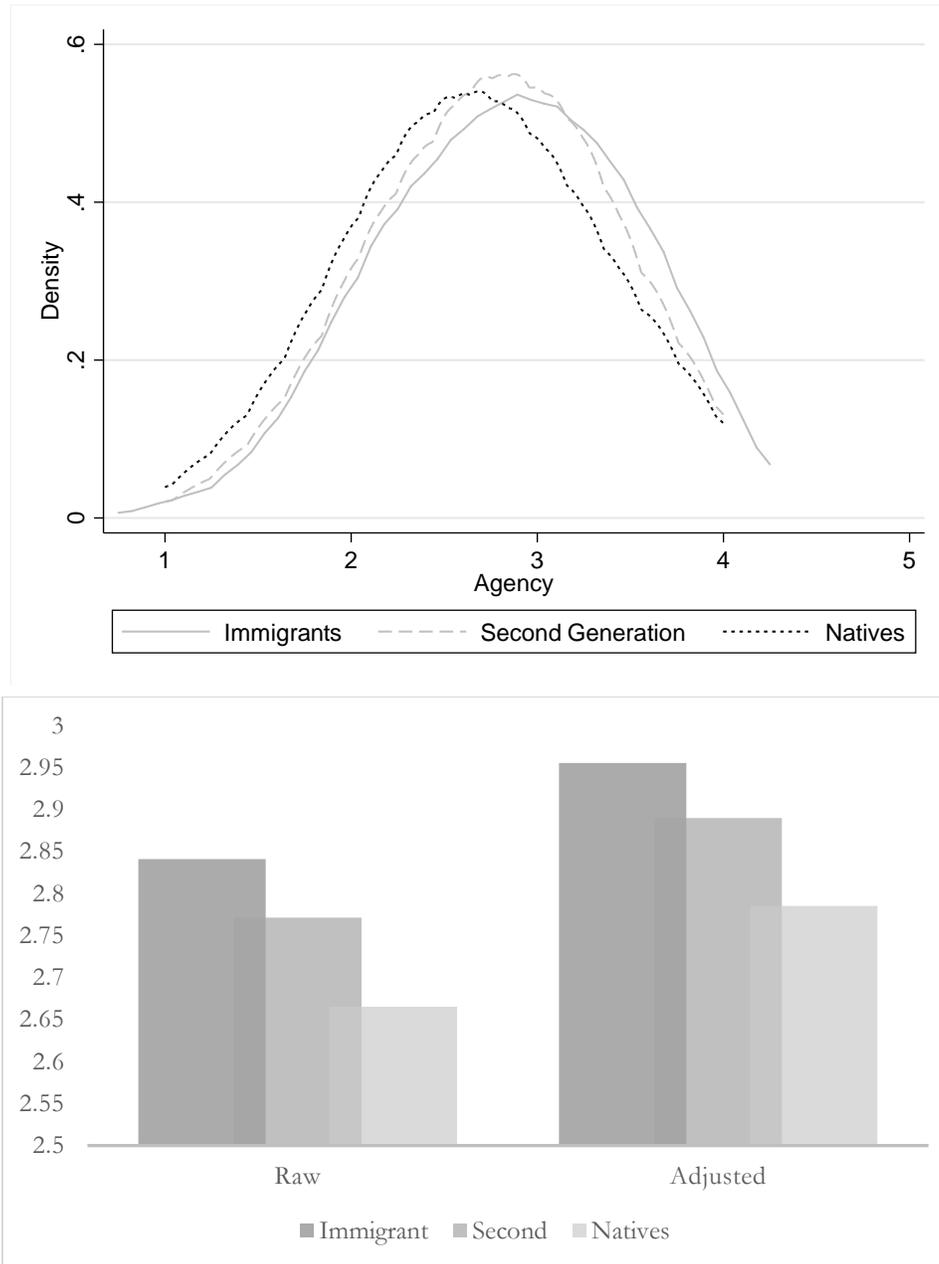
*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* On top the distribution of skill by immigrant generation. The bottom contains the raw means on the left and regression adjusted means for age, survey year, and gender on the right.

Appendix A: Figure 5  
Neuroticism by Immigrant Generation



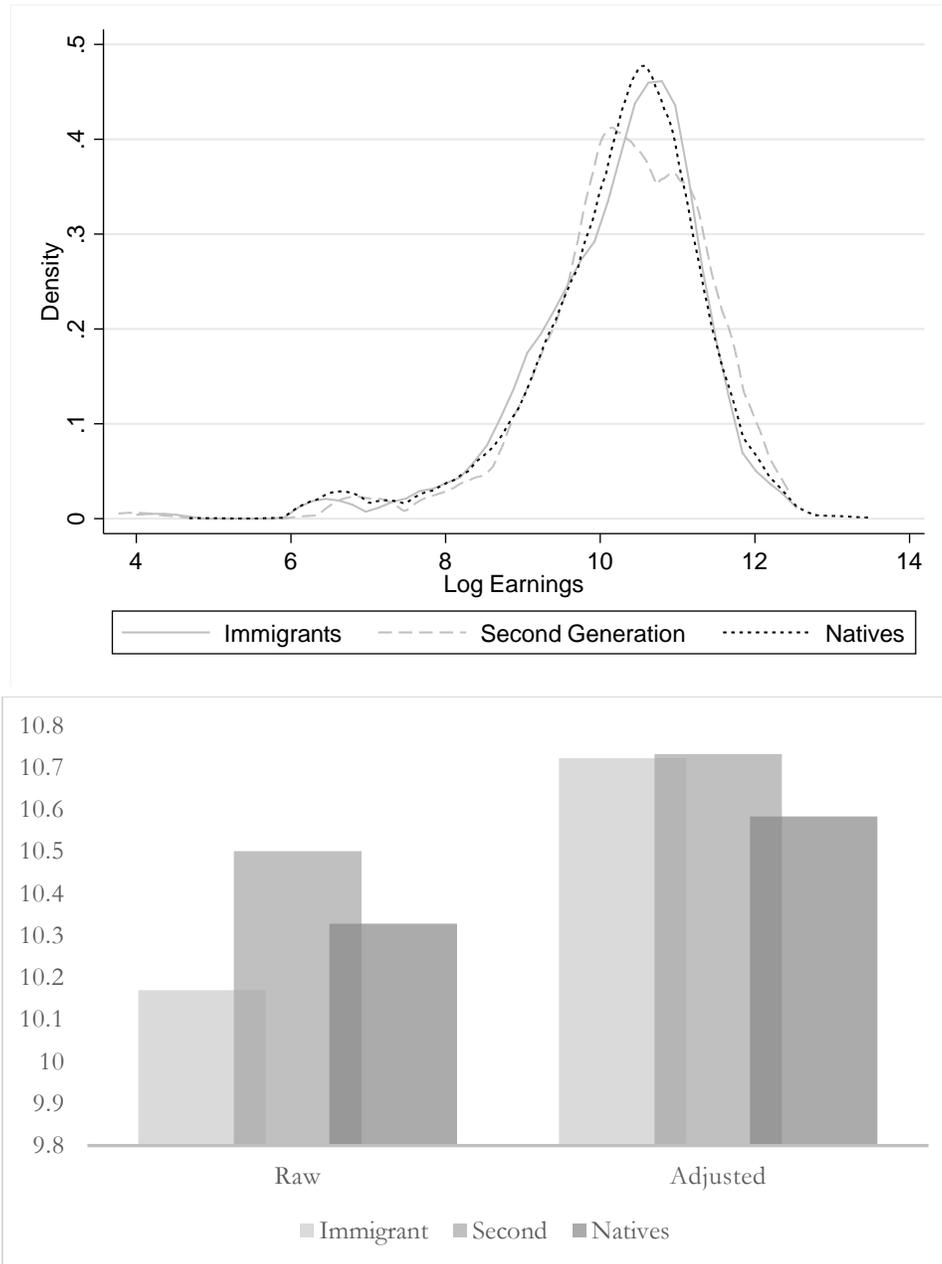
Source: National Survey of Midlife Development (1996, 2006, 2014). Notes: On top the distribution of skill by immigrant generation. The bottom contains the raw means on the left and regression adjusted means for age, survey year, and gender on the right.

Appendix A: Figure 6  
Agency by Immigrant Generation



*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* On top the distribution of skill by immigrant generation. The bottom contains the raw means on the left and regression adjusted means for age, survey year, and gender on the right.

Appendix A: Figure 7  
 Log Earnings by Immigrant Generation



*Source:* National Survey of Midlife Development (1996, 2006, 2014). *Notes:* On top the distribution of skill by immigrant generation. The bottom contains the raw means on the left and regression adjusted means for age, survey year, and gender on the right.