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The Healthy Immigrant (Migrant) Effect: In Search of a Better Native-Born Comparison Group*

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Abstract

This paper evaluates whether immigrants' initial health advantage over their U.S.-born counterparts results primarily from characteristics correlated with their birth countries (e.g., immigrant culture) or from selective migration (e.g., unobserved characteristics such as motivation and ambition) by comparing recent immigrants' health to that of recent U.S.-born interstate migrants ("U.S.-born movers"). Using data from the 1999–2013 waves of the March Current Population Survey, I find that, relative to U.S.-born adults (collectively), recent immigrants have a 6.1 percentage point lower probability of reporting their health as fair or poor. Changing the reference group to U.S.-born movers, however, reduces the recent immigrant health advantage by 28%. Similar reductions in the immigrant health advantage occurs in models estimated separately by either race/ethnicity or education level. Models that examine health differences between recent immigrants and U.S.-born movers who both moved for a new job—a primary motivation behind moving for both immigrants and the U.S.-born—show that such immigrants have only a 1.9 percentage point lower probability of reporting their health as fair or poor. Together, the findings suggest that changing the reference group from U.S.-born adults collectively to U.S.-born movers reduces the identified immigrant health advantage, indicating that selective migration plays a significant role in explaining the initial health advantage of immigrants in the United States.

Keywords

Immigrant Health; Selectivity; Reference Group; Native Migrants; USA

I. Introduction

Census data show that the number of immigrants residing in the United States grew from roughly 19 million to 40 million between 1990 and 2010, a 110% increase in the immigrant population. Over this 20-year period, the share of foreign-born residents rose from 8% to 13% of the country's population. If these trends continue, immigrants and their descendants

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will play a significant role in determining the health and welfare of the entire U.S. population in the coming decades.

Scholars have found that immigrants arrive in the United States with an initial health advantage over their U.S.-born counterparts (Antecol and Bedard 2006; Biddle, Kennedy and McDonald 2007; Cho et al. 2004; Cobas et al. 1996; Hummer et al. 1999; McDonald and Kennedy 2005). With a few exceptions (Elo, Mehta and Huang 2011; Landale, Gorman and Oropesa 2006; Landale, Oropesa and Gorman 2000), this finding is typically documented by comparing recent immigrants' health to that of representative samples of U.S.-born adults (Antecol and Bedard 2006; Biddle et al. 2007; Cho et al. 2004; Cobas et al. 1996; Feliciano 2005; Hummer et al. 1999; McDonald and Kennedy 2005). Because immigrants are unrepresentative samples of their birth countries, however, this analytic strategy could conflate the relative importance of the two primary mechanisms argued to produce nativity health differences: characteristics unique to immigrants' birth countries (e.g., cultural and dietary practices) and selective migration (e.g., observed and unobserved characteristics correlated with the decision to move).

Using data on immigrants in the United States and nonmigrants in immigrants' birth countries, researchers have shown that some immigrant subgroups are positively selected on good health (Elo et al. 2011; Kennedy et al. 2014; Landale et al. 2006; Landale et al. 2000). While such studies likely provide the best estimates of the degree of health selection among immigrants, health data are often unavailable for many origin countries, particularly for less developed countries in Africa and Central America. To address this data limitation, I argue that U.S.-born individuals who have made a migration decision—domestic interstate migrants (“U.S.-born movers”)—are a more appropriate comparison group to evaluate nativity differences in health than representative samples of the entire U.S.-born adult population.^{1,2} That is, if the underlying unobserved characteristics associated with selective migration are similar for both immigrants and the U.S.-born, then changing the reference group to U.S.-born movers should produce more accurate estimates of the immigrant health advantage. In turn, this methodological change would diminish the unexplained gap that researchers often attribute to characteristics unique to immigrants' origin countries (e.g., immigrant culture).

Consistent with prior studies (Antecol and Bedard 2006; Cho et al. 2004), using data from the 1999–2013 March Current Population Surveys, I find that relative to U.S.-born adults collectively, immigrants who have been in the United States for less than one year (“immigrants”) have a 6.1 percentage point lower probability of reporting their health as fair or poor. I then rerun the analysis using recent U.S.-born movers as the reference group and document a 28% smaller nativity health gap than when using models with U.S.-born adults collectively as the referent. I find similar reductions in the immigrant health advantage associated with reference group choice in models estimated separately by either race/ethnicity or education level. Analyses using data on immigrants and U.S.-born adults who

¹Butcher (1994) first used this analytic approach to study nativity differences in earnings among blacks.

²These health models are usually estimated using data on immigrants and natives of the same race or ethnicity. See Antecol and Bedard (2006) and Hamilton and Hummer (2011).

both recently moved for the same reason show that immigrants consistently report more favorable health than U.S.-born movers. The smallest immigrant health advantage exists among new job movers (-1.9 percentage points) and the largest immigrant health advantage is among individuals who moved in search of a job (-6.1 percentage points). Together, my findings suggest that changing the reference group from U.S.-born adults collectively to U.S.-born movers reduces the identified immigrant health advantage, indicating that birth-country characteristics (e.g., culture) may play a smaller role in explaining nativity health differences than has been documented in previous literature.

II. Background

Compared to their U.S.-born counterparts, upon arrival in the United States, many immigrants have lower incomes, are less likely to have health insurance, and live in relatively disadvantaged neighborhoods (Borjas 1987; Durden and Hummer 2006; Portes and Rumbaut 2007). Despite these characteristics, which are typically associated with poor health, a large literature has documented that recent immigrants assess their health more favorably than their U.S.-born adult counterparts. Indeed, researchers have documented this pattern of initial good health for all the racial/ethnic immigrant subgroups (Antecol and Bedard 2006).

Immigrants' health advantage over natives, however, erodes with increased tenure of U.S. residence (Antecol and Bedard 2006; Parker Frisbie, Cho and Hummer 2001; Read and Emerson 2005). The extant literature has offered several noncompeting explanations for immigrants' initial health profiles and subsequent health trajectories, including characteristics unique to immigrants' countries of origin (e.g., cultural practices) and selective migration.

Cultural Buffering

Research has argued that immigrants, particularly Mexican immigrants, have cultural practices that buffer their initial health against a range of social and economic disadvantages faced by many immigrants upon arrival in the United States (Cho et al. 2004; Hummer et al. 1999; Landale, Oropesa and Gorman 1999; Scribner and Dwyer 1989). This argument has often been used to explain the favorable birth outcomes of children born to socially and economically disadvantaged Mexican women (Cobas et al. 1996; Collins Jr and Shay 1994; Scribner 1996). For example, Scribner and Dwyer (1989) used data from the Hispanic Health and Nutrition Examination Survey to create an index of acculturation measuring the degree to which Mexican immigrants had a more Mexican orientation (less acculturated) or American orientation (more acculturated) on variables such as language preference and ethnic identification. They found that more acculturated Mexican immigrants faced a higher risk of having a low birth weight baby than their less acculturated counterparts.

Selective Migration

Health Selection—In addition to the cultural buffering argument, researchers have also documented a strong correlation between characteristics associated with both international migration and good health (Marmot, Adelstein and Bulusu 1984; Palloni and Ewbank 2004;

Sharma, Michalowski and Verma 1990). For example, immigrants who move for economic reasons are selected on relative youth, labor market skills (e.g., education), and motivation (Borjas 1994; Elo et al. 2011; Feliciano 2005; Jasso et al. 2004; Model 2008). Moreover, Feliciano (2005) found that relative to their compatriots in their countries of origin, on average, immigrants have more years of education—a characteristic that is highly predictive of good health among the U.S.-born. Within the United States, however, research has shown that the health advantage associated with immigrant status is most pronounced among the least educated (Goldman et al. 2006; Kimbro et al. 2008; Turra and Goldman 2007). For example, using data from three data sets on white and Mexican origin adults, Goldman et al. (2006) find a weaker association between education and health among Mexican-origin individuals than among whites.

Studies have also found more direct evidence of positive health selection among immigrants. Using data from the 2003 New Immigrant Survey, which asks immigrants to evaluate their current health relative to citizens in their countries of origin, Akresh and Frank (2008) examine the degree of health selection among new legal immigrants. They find evidence of positive health selection among immigrants, although the degree of health selection varies by the socioeconomic profiles of immigrant streams.

Moreover, using data from the United States, the United Kingdom, Canada, and Australia, Kennedy et al. (2014) document that immigrants who reside in each of these countries are less likely to smoke or be obese than native-born adults in their destination countries and nonmigrants in their countries of origin. These results provide strong evidence of positive selection on both health and health behaviors among immigrants.

Other researchers have argued, however, that immigrants' favorable health patterns stem, at least partly, from poor data on the return migration patterns of less healthy immigrants back to their origin countries, which could upwardly bias immigrants' average health profiles (Abraido-Lanza et al. 1999; Turra and Elo 2008). While some evidence supports this argument (Palloni and Elizabeth 2004), other studies have shown that selective return migration cannot completely explain the favorable health profiles of immigrants, particularly Mexican immigrants (Hummer et al. 2007).

Reason for Moving—Research also suggests that health varies systematically among immigrants depending on the reason for migration, information often captured by the type of visa held by immigrants. Jasso et al. (2004) show that,

Visa status also captures some aspects of immigrant selection. All effects are estimates compared to the left-out group those who obtained principal employment visas. While spouses of US citizens and spouses of those who got principal employment visas appear to be negatively selected on their labor market skills, there does not seem to be any selectivity on their health status. In contrast, spouses of permanent resident aliens are in significantly poorer health than immigrants on employment visas (p.23).

Akresh and Frank (2008) also examine variation in self-rated health among new immigrants by class of admission and find no statistically significant difference in self-rated health

between immigrants who entered the United States on employment preferences and those who entered on family preferences or on diversity visas. In contrast, the authors document that relative to immigrants who arrived on employment preferences, those admitted as refugees were significantly less likely to report their health as very good or excellent, which suggests that health may vary among immigrants depending on their reason for moving.

U.S.-born Reference Group Choice—While numerous studies have produced evidence suggesting that immigrants are favorably selected on good health, fewer studies have examined whether the health of immigrants should be compared to the health of representative samples of U.S.-born adults. That is, immigrants who reside in the United States from any particular country are not a representative sample of their birth countries. Consequently, comparing the health of immigrants to representative samples of natives could conflate the relative importance of the factors argued to produce health differences between native and immigrant populations in the United States. In the absence of data on individuals in immigrants' birth countries, which would likely provide more precise estimates of the degree of health selection among immigrants, prior studies have suggested that comparing immigrants' health to the health of U.S.-born interstate migrants could help disentangle the relative importance of culture and selective migration in producing nativity differences in health within the United States.

Using data from the 1980 U.S. Census, Butcher (1994) finds that the labor market outcomes of black immigrants were more similar to U.S.-born black interstate migrants than to those of U.S.-born individuals residing in their state of birth. Based on these results, she concludes that labor market differences between black immigrants and native blacks resulted from selective migration rather than from cultural differences between the two groups. Model (2008) and Hamilton (2014) arrive at a similar conclusion using more recent data on black immigrants. Several studies have employed a similar strategy to study variation in birth outcomes between immigrant and U.S.-born populations.

Using data from the 1995–1999 National Center for Health Statistics live birth/infant death cohort files of singleton infants delivered in the United States to white women of Mexican origin, Wingate and Alexander (2006) examine whether women who moved from their state of birth had more favorable pregnancy outcomes than women who delivered in the same state in which they were born. Similar to the extant literature on immigrants, the authors find that, relative women who resided in their state of birth, those who moved across state lines, particularly women who moved across U.S. geographic regions, had a lower risk of giving birth to a low birth weight infant or an infant who was small for gestational age. Foreign-born women, however, had more favorable birth outcomes than domestic migrants. Wingate, Swaminathan, and Alexander (2009) produce similar findings using data on non-Hispanic blacks. To my knowledge, no prior study has employed this strategy to study variation in general health between domestic migrants and immigrants. Moreover, no study has examined whether domestic migrants and immigrants who share migration intentions have similar health profiles—analysis that could provide insights into the relative importance of selective migration in explaining the favorable health profiles of immigrants.

Current Study

Using data from the 1999–2013 waves of the March Current Population Survey, I examine the extent to which U.S.-born reference group choice shapes our understanding of nativity health differences in the United States. Specifically, I compare the health of immigrants who migrated to the United States within the last year to three subgroups of natives: (1) all U.S.-born adults, (2) U.S.-born adults who have moved across state lines in the last year, (3) and U.S.-born adults who currently reside in their state of birth. I also examine nativity health differences between U.S.-born movers and immigrants with the same motivation for moving.

To better contextualize these comparisons, consider the following general form models of health, which serve as the conceptual framework for this study:

Recent Immigrants' Health

$$H_I = f(X, Y, Z, C, R) \quad (1)$$

Recent U.S.-born Movers' Health

$$H_M = g(X, Y, Z, R) \quad (2)$$

U.S.-born Nonmovers' Health

$$H_{NM} = h(X, Y) \quad (3)$$

All U.S.-born Adults' Health

$$H_{US} = \alpha H_M + (1 - \alpha) H_{NM} \quad (4)$$

Let us assume Equations 1, 2, 3, and 4 represent the true models of health for recent immigrants and U.S.-born adults. Each equation includes two vectors: (1) X , a vector of observable characteristics researchers typically associate with health, including education, environmental factors, and age, and (2) Y , a vector of characteristics that are typically unobserved by the researcher, such as family background and genetic endowments (Jasso et al. 2005).

In addition to these factors, Equation 1 shows that the health of immigrants is also a function of three additional vectors Z , C , and R . Z represents unobserved characteristics correlated with both international and domestic migration. This vector might include variables that are positively correlated with health such as ambition and motivation as well as factors that are detrimental to health, including family/social network disruptions and acculturative stress. R represents characteristics correlated with the reason for moving, such as taking a new job or reunifying with family. C is a vector of unobserved variables correlated with immigrants' countries of origin; these might include characteristics such as cultural and dietary practices unique to a particular nation.

Equation 2 models health for U.S.-born recent movers. This equation includes all the variables in Equation 1 except C . Given that international migration involves significantly higher economic and psychic costs, uncertainty, loss of support (social, financial, government), and labor market barriers such as credential recognition, the marginal impact of the variables in vectors R and Z could vary depending on whether a person were born in the United States and by country of birth.

Equations 3 and 4 represent the models of health for U.S.-born nonmovers and all U.S.-born adults, respectively. Equation 3 excludes Z , C , and R . Equation 4 models the health for all U.S. born adults as the weighted average of H_M and H_{Nm} , where α represents the proportion of U.S.-born adults who moved across states in the last year. Consequently, if both U.S.-born movers and recent immigrants are favorably and similarly selected on unobserved characteristics correlated with good health (e.g., motivation and ambition), then comparing the health of immigrants to U.S.-born movers rather than all U.S.-born individuals, a group comprised largely of U.S.-born nonmovers, should narrow the health advantage associated with immigrant status.

Given these assumptions, the conceptual framework offers two unique testable hypotheses:

- Hypothesis 1: Changing the reference group from U.S.-born adults collectively to U.S.-born movers narrows the nativity health gap.
- Hypothesis 2: Health varies for both international and domestic migrants depending on the motivations behind moving.

III. Data, Measures, and Methods

Data

The analytic sample for this study comes from the 1999–2013 waves of the U.S. March Current Population Survey (CPS) for individuals between the ages of 18 and 64.³ The sample excludes those born abroad to American parents, U.S.-born individuals with foreign-born parents, and individuals born in U.S. outlying areas. “Immigrant” is defined as an individual born outside of the United States. Because the primary purpose of this study is to evaluate the initial health advantage of immigrants, I restrict the immigrant sample to individuals who reported foreign residence in the previous calendar year.

The March CPS is unique for three reasons. First, it contains a significantly larger sample of immigrants than other data sets commonly used to study immigrants’ health, such as the National Health Interview Survey (NHIS). Second, the data allow for the identification of U.S.-born adults who moved across state lines in the calendar year prior to the survey year (“U.S.-born movers”).⁴ Third, the March CPS includes a measure that captures the self-reported reason for migration for both domestic (interstate) and international migrants who moved in the last year. Using data from this CPS question, I identify five categories of migrants: individuals who migrated for a “new job or job transfer” (new job migrants), “to

³Note that for many 18–24 year olds, educational attainment may not be complete.

⁴I also conduct sensitivity checks in which U.S.-born movers are defined as individuals who had moved across regions since birth. The substantive results of the current study are the same when this variable is used.

look for work or lost job” (job search migrants), because of a “change in marital status” or “other family reason” (family migrants), or to “attend/leave college” (education migrants). A residual category (other migrants) captures the remaining motivations for migration. The merged data set contains information on 30,881 U.S.-born movers, 1,276,682 U.S. born nonmovers (i.e., individuals who currently reside in their state of birth), and 4,184 immigrants who migrated in the last year.

Measures

Dependent Variable—Self-assessed health, the outcome measure of interest, is generated from the March CPS question asking respondents to rate their “current health on a five-point scale, as excellent, very good, good, fair, or poor.” This information is used to create a dichotomous variable that equals one for persons who identify their health as either fair or poor, and zero otherwise.

While self-rated health is an independent predictor of mortality (Idler and Benyamini 1997), studies have shown that it is less predictive of mortality among less acculturated immigrants, particularly Hispanic immigrants (Finch et al. 2002). However, given the paucity of data sets that include the reason for migration among both international and domestic migrants, this limitation cannot be addressed in the current study.

Independent Variables—The regression models used in this study include a range of demographic, social, and economic characteristics correlated with health. The demographic variables include age, age-squared, sex, race/ethnicity, marital status, and family size. Health care and exposure to environmental factors that impact health varies by U.S. region of residence and urban/rural status. Therefore, the regression models include dichotomous variables for these characteristics. To account for the impact of socioeconomic status on health, the regression models control for education, whether an individual owns his or her current residence, and whether an individual receives investment income. The regression models also include the survey year of each observation to adjust for any period effect on health. Tables 1 and 2 provide detailed descriptive statistics for the immigrant and U.S.-born samples.

IV. Results

Descriptive Results

Consistent with prior studies, Columns 1 and 4 of Table 1 show that recent immigrants have an 8.1 percentage point lower probability of reporting fair or poor health status than U.S.-born adults collectively. Columns 2 and 3 of Table 1 show, however, that a smaller proportion of U.S.-born movers (0.092) report their health as fair or poor relative to U.S.-born nonmovers (0.112). U.S.-born movers also differ from U.S.-born nonmovers along several demographic and social characteristics. For example, relative to U.S.-born nonmovers, on average, U.S.-born movers are younger, less likely to be married, and more likely to have at least a bachelor’s degree.

Table 2 shows summary statistics for U.S.-born movers and immigrants stratified by their reason for moving. Columns 1 and 2 of Table 2 show that U.S.-born movers (collectively)

have a 6.1 percentage point higher probability of reporting fair/poor health than recent immigrants. However, among new job migrants (Columns 3 and 4), U.S.-born movers have only a 2.7 percentage point higher probability of reporting fair or poor health. Among migrants who moved *in search of* a new job (Columns 5 and 6), U.S.-born movers have an 8.5 percentage point higher probability of reporting fair/poor health. Table 2 also shows that family migrants (Columns 9 and 10) are the most likely to report their health as fair or poor, with immigrants having a significantly lower probability of reporting fair or poor health than U.S.-born movers in this category. The nativity health gap, however, is smallest among education migrants, with U.S.-born movers having only a 1.2 percentage point higher probability of reporting their health as fair or poor.

Regression Results

This section shows estimates from probit regression models of fair/poor health status for U.S.-born and immigrant adults. Results are shown as marginal effects. Robust standard errors are calculated to determine the significance of the estimates. Confidence intervals are shown below the marginal effects.

Nativity Differences in Health—Table 3 shows the marginal effect of immigrant status in models in which the reference group is either all U.S.-born adults, U.S.-born movers, or U.S.-born nonmovers. For each set of comparisons, Table 3 presents two models: an unadjusted model that only controls for survey year (Columns 1, 3, and 5) and a fully adjusted model (Columns 2, 4, and 6). Column 1, which uses all U.S.-born adults as the reference group, and Column 3, which uses U.S.-born nonmovers, produce similar estimates of the marginal effect of immigrant status (approximately -0.080). By comparison, Column 5 shows that the absolute value of the marginal effect of immigrant status is 2 percentage points (-0.061) lower when U.S.-born movers are used as the reference group.

Similar to the unadjusted models, the fully adjusted models show that the marginal effect of immigrant status is similar (-0.060) when either all U.S.-born adults or U.S.-born nonmovers are used as the references group. The magnitude of the marginal effect on immigrant status, however, is smallest (-0.044) when using U.S.-born movers as the reference group.

Nativity Health Differences by Race/Ethnicity—Table 4 examines whether the patterns shown in Table 3 holds for immigrant and U.S.-born adults of the same race/ethnicity.⁵ Panel 1 shows results for immigrants and the full U.S.-born sample; Panel 2 shows results for U.S.-born nonmovers and immigrants; and Panel 3 shows health differences between U.S.-born movers and immigrants. I include Panel 1 to permit comparisons with previous studies; however, I focus the discussion on Panels 2 and 3. The results in Panel 2 show that every immigrant subgroup is less likely to report fair or poor health status compared to U.S.-born nonmovers of the same race/ethnicity, with Hispanic (Column 3: marginal effect -0.077) and black (Column 2: marginal effect -0.067)

⁵Hispanics with a masters degree were excluded from the Hispanic model in Panel 3 of Table 4. This measure perfectly predicted the outcome in this model.

immigrants having the largest health advantage, followed by white immigrants (Column 1: marginal effect -0.055) and then Asian immigrants (Column 4: marginal effect -0.028).

Similar to the results in Table 3, Panel 3 of Table 4 shows that when immigrants are compared to U.S.-born movers of the same race/ethnicity, the absolute value of the marginal effect of immigrant status is reduced for every immigrant subgroup. In fact, Columns 2 and 4 of Panel 3 shows no statistically significant difference in self-reported health between recent U.S.-born movers and recent immigrants among blacks and Asians.

Nativity Health Differences by Education Level—A large literature documents that the immigrant health advantage over U.S.-born individuals varies considerably by education level. Table 5 presents probit regression models of nativity differences in fair/poor health status by education level for immigrants and U.S.-born adults by migration status: all U.S.-born adults, U.S.-born movers, and U.S.-born nonmovers. Again, Panel 1, which uses all U.S.-born adults as the reference group, is included for comparison purposes. Results from Panels 2 and 3 of Table 5 are summarized in Figure 1, which shows the marginal effect of immigrant status when either U.S.-born nonmovers (Panel 2) or U.S.-born movers (Panel 3) are used as the reference group.

The results show that the probability of reporting fair/poor health is lower for immigrants across the education distribution, irrespective of the U.S.-born comparison group. Similar to previous research, Figure 1 also shows that the immigrant health advantage is more pronounced at lower levels of education. For example, among individuals with less than a high school education, immigrants have a 15.2 percentage point lower probability of reporting fair/poor health when the reference group is U.S.-born nonmovers and an 9.9 percentage point lower probability of reporting fair/poor health when U.S.-born movers are the referent.

Figure 1 also shows that reference group matters most among individuals with less than a high school education. The first two bars of the figure show that the absolute value of the marginal effect of immigrant status drops by approximately 5 percentage points when the reference group changes from U.S.-born nonmovers to U.S.-born movers. Although this figure provides suggestive evidence that choice of reference group matters among individuals with at least a high school education, the marginal effects of immigrant status are less robust for these specifications.

Health Differences by Migration Intentions—Table 6 shows differences in reported health between immigrants and U.S.-born movers who report the same motivation for moving.⁶ Model 1 of this table shows the unadjusted results, and Model 2 presents the full model. Figure 2 summarizes the results found in Table 6. The figure shows that the marginal effect of immigrant status is smallest for new job migrants and education migrants, suggesting that health selection is similar between immigrants and the U.S.-born in these migration categories. In contrast, relative to U.S.-born movers, immigrants are more

⁶Asians and individuals surveyed in 2013 were excluded from the job search and education models, respectively, in Table 6. These measures perfectly predicted the outcome.

positively selected on good health in the remaining migration categories. For example, the absolute value of the marginal effect of immigrant status is largest among migrants who moved in search of a job, followed by family migrants.

IV. Discussion

Several key findings emerge from this study. Consistent with prior studies (Antecol and Bedard 2006; Cho et al. 2004), I find that recent immigrants to the United States are less likely to report their health as fair or poor than individuals who were born in the United States. When recent immigrants' health is compared to that of recent U.S.-born movers, the absolute magnitude of the immigrant health advantage decreases significantly. Health also varies for immigrants and domestic migrants by migration intentions. These findings raise several important questions for the study of nativity differences in health.

1. Why does the immigrant health advantage narrow when U.S.-born movers are used as the reference group?

The study's conceptual model argues that if both U.S.-born movers and recent immigrants are favorably selected on unobserved characteristics correlated with good health (e.g., motivation and ambition), then comparing the health of immigrants to U.S.-born movers rather than to all U.S.-born individuals—a group comprised largely of U.S.-born nonmovers—should narrow the health advantage associated with immigrant status. The results support this claim. The findings show that in terms of self-rated health, recent immigrants are more similar to U.S.-born movers than they are to U.S.-born nonmovers, suggesting that selective migration plays an important role in explaining nativity health differences in the United States. This general pattern holds when I partition the immigrant and U.S.-born mover samples by race/ethnicity. Because of smaller sample sizes, however, the race-specific estimates are less robust.

I also examine whether the relatively favorable health profiles of immigrants over U.S.-born movers holds across the education distribution. Consistent with prior work (Kimbrow et al. 2008), I find that the immigrant health advantage is most pronounced among individuals with less than a high school education. While this general result holds when either U.S.-born nonmovers or U.S.-born movers are used as the reference group, reference group choice seems to matter most among individuals with less than a high school education. That is, using U.S.-born movers rather than U.S.-born nonmovers as the reference group reduces immigrants' health advantage by 35%. This result suggests that similar to less educated immigrants, less educated U.S.-born movers seem to be more positively selected on good health than their more educated counterparts.

2. Why do recent immigrants have a health advantage over U.S.-born movers?

The favorable health profiles of recent immigrants relative to U.S.-born movers that I document are consistent with theories of selective migration. That is, the economic, social, and psychological costs of migration are likely greater for immigrants than they are for U.S.-born movers (Jasso et al. 2004), which may produce more favorable patterns of selection on unobserved characteristics correlated with good health for immigrants relative to U.S.-born

movers. Indeed, the findings in Table 6 show that regardless of migration intentions, relative to U.S.-born movers, the probability of reporting fair/poor health status is lower for recent immigrants. The degree of the immigrant health advantage, however, varies significantly by reason for migration.

For example, among those who move for a new job, the probability of reporting fair/poor health is approximately 2 percentage points lower for immigrants. This result implies that both U.S.-born and immigrant new job migrants are similarly selected on unobserved characteristics correlated with good health. In contrast, relative to U.S.-born movers with the same migration motivation, the probability of reporting fair/poor health is 6.1 percentage points lower for immigrants moving in *search* of a new job and 4.4 percentage points lower for immigrants moving for family reasons. Given that moving to find a job or for family reasons likely entails greater uncertainty and risk for international migrants than for domestic migrants, these results seem reasonable. I cannot rule out, however, that the immigrant health advantage over U.S.-born movers among some categories of migrants stems from differences in health behaviors, dietary practices, social support networks, and other factors unique to immigrants from a particular country (Cobas et al. 1996; Landale and Oropesa 2001). These cultural differences could be especially important among those categories of migrants in which immigrants have a sizable health advantage.

3. What are the implications for future studies on immigrants' health?

Ideally, representative data from immigrants' birth countries in conjunction with data on immigrants in their receiving countries would provide the best estimates of the mechanisms producing initial health differences between immigrant and native populations. Such data, however, are not readily available for immigrants from many sending countries, particularly for those from less developed countries in Latin America and Africa. Consequently, in addition to conventional referents used in the literature (i.e., native-born individuals collectively), researchers should consider using subgroups of native movers, as a means of disentangling the components of immigrant health associated with selective migration from those resulting from characteristics unique to immigrants' origin countries.

Limitations

Several studies have documented that self-rated health is significantly correlated with morbidity and mortality (DeSalvo et al. 2006; Goldman, Gleib and Chang 2004; Idler, Russell and Davis 2000). There are several limitations, however, to the use of this measure of health among immigrant populations. For example, Finch, Kolody, and Vego (2000) show that the predictive strength of poor self-rated health on mortality strengthens as Hispanic immigrants' tenure of U.S. residence increases. The March CPS only asks the question regarding migration motivation to immigrant and domestic migrants who moved in the last year. Consequently, I am not able to examine nativity health differences for migrants with longer tenures in their destinations, which might produce more accurate estimates of immigrants' health advantage.

Moreover, the March CPS is administered in English or Spanish. Viruell-Fuentes et al. (2011) suggest that estimates of fair/poor health among Hispanics who only speak Spanish

might be biased due to the translation of the word “fair” as “*regular*” in Spanish, which has a more positive connotation and might result in heightened use of the fair/poor health category. Consequently, more specific health outcomes such as obesity or chronic conditions would likely provide greater insight into the relative importance of selective migration on the health of movers. No existing data sets that include migration motivation, however, contain such health measures for both U.S.-born movers and immigrants.

Another limitation to note is that I do not evaluate the health trajectories of immigrants but rather their initial health profiles. Data from the March CPS do not allow for an evaluation of whether the health trajectories of U.S.-born movers and immigrants follow similar patterns as their tenure in the destination state and country, respectively, increases. Therefore, future work in this area should examine whether immigrants and U.S.-born movers have similar health trajectories. Such findings could further disentangle the relative importance of the mechanisms argued to produce nativity differences in health.

V. Conclusion

The findings show that recent immigrants are less likely than U.S.-born natives to report their health as fair or poor. The magnitude of the impact of immigrant status decreases, however, when recent immigrants are compared to recent U.S.-born movers. This general pattern holds in models estimated by race/ethnicity and education level. These findings suggest that comparing the health of immigrants to traditional reference groups (i.e., representative samples of natives) as well as samples of U.S.-born domestic migrants could help researchers better understand the relative importance of selective migration and immigrant culture in explaining nativity health differences in the United States.

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Highlights

- Changing the reference group from U.S.-born adults collectively to U.S.-born movers narrows the nativity health gap.
- Health varies for both international and domestic migrants depending on the motivations behind moving.
- Selective migration plays a significant role in explaining nativity health differences.

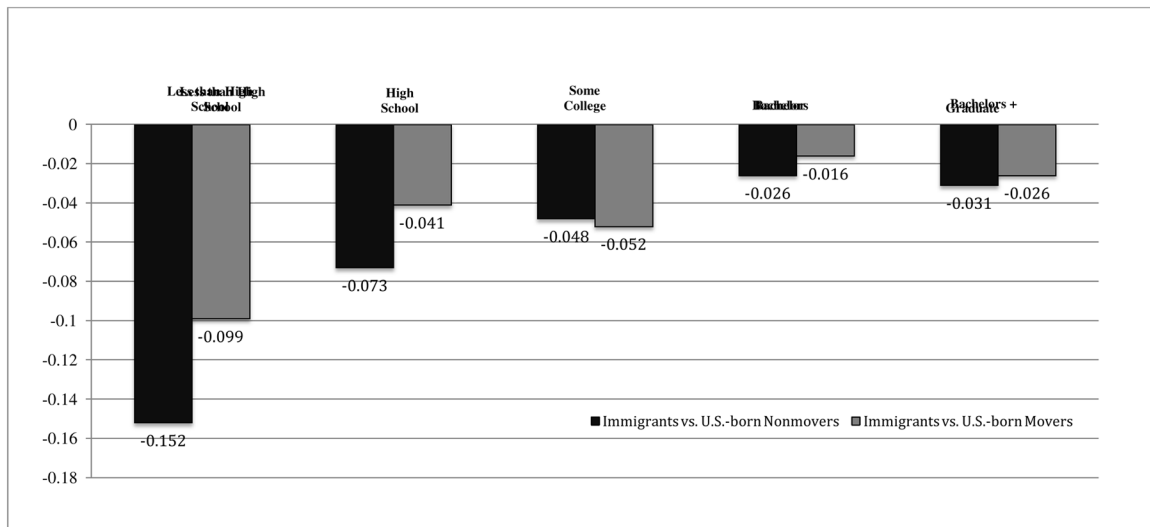


Figure 1. Marginal Effects of Immigrant Status by Educational Attainment

Source: Data are taken from the 1999–2013 March Current Population Survey. The samples include adults between the ages of 18 and 64.

Notes: Marginal effects are from Probit regression models. Sampling weights are used in all calculations.

Model Adjustments: Age, sex, race/ethnicity, marital status, family size, region of residence, metropolitan area status, owns home, receives investment income, and survey year.

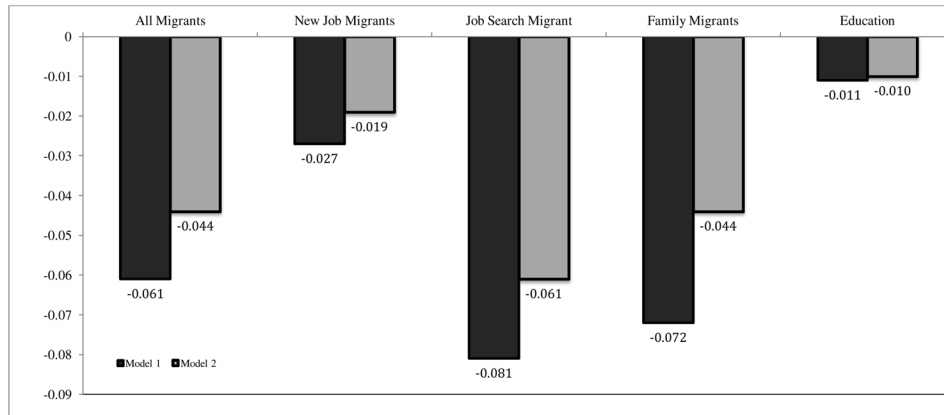


Figure 2. Marginal Effects of Immigrant Status by Reason for Migration

Source: Data are taken from the 1999–2013 March Current Population Survey. Samples include adults between the ages of 18 and 64.

Note: Marginal effects are from probit regression models. Sampling weights are used in all calculations.

Model Adjustments:

Model 1: Survey Year

Model 2: Age, sex, race/ethnicity, marital status, family size, region of residence, metropolitan area status, education, owns home, receives investment income, and survey year.

Table 1

Descriptive Statistics for U.S.-Born and Immigrant Adults

	(1)	(2)	(3)	(4)
Variables	All U.S.-Born Adults	U.S.-Born Movers	U.S.-Born Nonmover	Recent Immigrants
<i>Health Measure</i>				
Fair/Poor Health	0.112	0.092	0.112	0.031
<i>Demographic Characteristics:</i>				
Age	40.630	34.594	40.780	31.173
Female	0.511	0.507	0.511	0.464
White	0.815	0.822	0.815	0.231
Black	0.140	0.139	0.140	0.063
Hispanic	0.041	0.035	0.041	0.347
Asian	0.004	0.003	0.004	0.359
Married	0.541	0.433	0.544	0.423
Family Size	2.811	2.453	2.820	2.718
Metropolitan Area	0.801	0.825	0.801	0.938
North East	0.172	0.127	0.173	0.171
Midwest	0.256	0.204	0.258	0.150
West	0.187	0.237	0.186	0.315
South	0.384	0.432	0.383	0.363
<i>Social and Economic Characteristics:</i>				
Less than High School	0.097	0.085	0.097	0.260
High School	0.319	0.284	0.320	0.182
Some College	0.217	0.213	0.217	0.100
Associates	0.094	0.080	0.095	0.038
Bachelors	0.187	0.239	0.186	0.266
Masters	0.064	0.072	0.064	0.107
Graduate Degree	0.023	0.028	0.022	0.048
Owns Home	0.728	0.371	0.737	0.169
Receives Interest Income	0.471	0.435	0.472	0.143
Observations	1,307,563	30,881	1,276,682	4,184

Source: Data are taken from the 1999–2013 March Current Population Surveys. Samples include adults between the ages of 18 and 64.

Notes: Sampling weights are used in all calculations.

Table 2
Descriptive Statistics for U.S.-Born Movers and Immigrant Adults by Reason for Migration

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(9)	(10)	(11)	(12)	(13)	(14)
	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants	U.S.-born Immigrants
Subgroups of Immigrants and U.S.-Born Movers												
All												
<i>Health Measure</i>												
Fair/Poor Health	0.092	0.031	0.044	0.017	0.104	0.019	0.128	0.056	0.027	0.015	0.119	0.036
<i>Demographic Characteristics:</i>												
Age	34.594	31.173	33.638	31.413	33.808	29.748	35.744	32.879	24.682	26.058	36.258	32.492
Female	0.507	0.464	0.476	0.436	0.444	0.219	0.568	0.647	0.501	0.452	0.507	0.467
White	0.822	0.231	0.882	0.328	0.817	0.091	0.784	0.193	0.878	0.223	0.788	0.250
Black	0.139	0.063	0.082	0.021	0.129	0.065	0.170	0.083	0.091	0.091	0.176	0.071
Hispanic	0.035	0.347	0.033	0.185	0.049	0.813	0.043	0.355	0.024	0.077	0.033	0.367
Asian	0.003	0.359	0.003	0.466	0.004	0.031	0.003	0.369	0.006	0.610	0.003	0.312
Married	0.433	0.423	0.596	0.527	0.331	0.197	0.398	0.580	0.155	0.175	0.374	0.424
Family Size	2.453	2.718	2.650	2.296	2.581	2.592	2.562	3.643	1.695	1.534	2.333	2.910
Metropolitan Area	0.825	0.938	0.854	0.926	0.817	0.908	0.772	0.946	0.890	0.942	0.822	0.955
North East	0.127	0.171	0.108	0.185	0.112	0.092	0.119	0.147	0.147	0.236	0.144	0.190
Midwest	0.204	0.150	0.197	0.162	0.163	0.116	0.217	0.151	0.239	0.197	0.203	0.135
West	0.237	0.315	0.253	0.286	0.277	0.342	0.221	0.357	0.270	0.319	0.224	0.293
South	0.432	0.363	0.441	0.366	0.448	0.450	0.444	0.345	0.343	0.248	0.429	0.383
<i>Socioeconomic Characteristics:</i>												
Less than High School	0.085	0.260	0.036	0.110	0.135	0.679	0.123	0.244	0.015	0.013	0.107	0.303
High School	0.284	0.182	0.206	0.098	0.325	0.183	0.342	0.268	0.144	0.082	0.331	0.227
Some College	0.213	0.100	0.181	0.053	0.209	0.040	0.226	0.089	0.307	0.285	0.218	0.099
Associates	0.080	0.038	0.077	0.034	0.084	0.013	0.085	0.060	0.071	0.018	0.080	0.046
Bachelors	0.239	0.266	0.335	0.424	0.188	0.068	0.163	0.228	0.376	0.391	0.189	0.203
Masters	0.072	0.107	0.115	0.190	0.043	0.012	0.046	0.085	0.068	0.151	0.056	0.079
Graduate	0.028	0.048	0.050	0.091	0.015	0.005	0.015	0.026	0.020	0.060	0.019	0.044
Owens Home	0.371	0.169	0.354	0.116	0.327	0.091	0.406	0.287	0.206	0.111	0.395	0.183

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Variables	(1)	(2)	(3)	(4)	(5)	(6)	(9)	(10)	(11)	(12)	(13)	(14)
	U.S.-born	Immigrants	U.S.-born	Immigrants	U.S.-born	Immigrants	U.S.-born	Immigrants	U.S.-born	Immigrants	U.S.-born	Immigrants
Receives Investment Income	0.435	0.143	0.578	0.274	0.248	0.037	0.342	0.103	0.425	0.180	0.394	0.099
Observations	30,881	4,184	9,627	1,018	1,326	511	6,445	997	1,654	509	11,829	1,149

Subgroups of Immigrants and U.S.-Born Movers

Source: Data are taken from the 1999–2013 March Current Population Surveys. Samples include adults between the ages of 18 and 64.

Notes: Sampling weights are used in all calculations.

Table 3

Marginal Effects of Immigrant Status

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcome: Fair/Poor Health Status					
	Subsamples:					
	Immigrants & All U.S.-Born		Immigrants & U.S.-born Nonmovers		Immigrants & U.S.-born Movers	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Immigrant	-0.080*** [-0.090, -0.070]	-0.061*** [-0.070, -0.052]	-0.081*** [-0.091, -0.070]	-0.062*** [-0.071, -0.053]	-0.061*** [-0.071, -0.051]	-0.044*** [-0.054, -0.033]
Observations	1,311,747	1,311,747	1,280,866	1,280,866	35,065	35,065

Source: Data are taken from the 1999–2013 March Current Population Surveys. Samples include adults between the ages of 18 and 64.

Notes: Marginal effects are from probit regression models. Sampling weights are used in all calculations.

Model Adjustments:

Model 1: Survey Year

Model 2: Age, sex, race/ethnicity, marital status, family size, region of residence, metropolitan area status, education, owns home, receives investment income, and survey year.

Robust standard errors in parentheses

*** p<0.001,

** p<0.01,

* p<0.05

Table 4

Marginal Effects of Immigrant Status by Race/Ethnicity

		Outcome: Fair/Poor Health Status		
	(1)	(2)	(3)	(4)
Race/Ethnicity				
White				Asian
Panel 1. Subsample: Immigrants and All U.S.-born				
<i>Nativity: (Reference Group: All U.S.-born)</i>				
Immigrant	-0.055 *** [-0.073, -0.037]	-0.066* [-0.123, -0.009]	-0.076 *** [-0.090, -0.061]	-0.027 *** [-0.041, -0.013]
Observations	1,065,145	170,514	64,850	11,238
Panel 2. Subsample: Immigrants and U.S.-born Nonmovers				
<i>Nativity: (Reference Group: U.S.-born Nonmovers)</i>				
Immigrant	-0.055 *** [-0.073, -0.037]	-0.067* [-0.124, -0.010]	-0.077 *** [-0.092, -0.062]	-0.028 *** [-0.042, -0.013]
Observations	1,039,501	166,773	63,498	11,094
Panel 3. Subsample: Immigrants and U.S.-born Movers				
<i>Nativity: (Reference Group: U.S.-born Movers)</i>				
Immigrant	-0.044 *** [-0.059, -0.029]	-0.039 [-0.088, 0.010]	-0.042 *** [-0.061, -0.023]	-0.004 [-0.020, 0.011]
Observations	26,545	3,997	2,751	1,690

Source: Data are taken from the 1999–2013 March Current Population Surveys. Samples include adults between the ages of 18 and 64.

Notes: Marginal effects are from probit regression models. Sampling weights are used in all calculations.

Model Adjustments: Age, sex, marital status, family size, region of residence, metropolitan area status, education, owns home, receives investment income, and survey year.

Robust standard errors in parentheses

*** p<0.001,

** p<0.01,

* p<0.05

Table 5

Marginal Effects of Immigrant Status by Educational Attainment

	(1)	(2)	(3)	(4)	(5)
Outcome: Fair/Poor Health Status					
Subsample: Immigrants and All U.S.-born					
Panel 1.					
	Less than High School	High School	Some College	Bachelors	Bachelors +
<i>Nativity:(Reference Group: All U.S.-Born)</i>					
Immigrant	-0.151 *** [-0.181, -0.121]	-0.075 *** [-0.101, -0.044]	-0.048 *** [-0.072, -0.024]	-0.025 *** [-0.038, -0.013]	-0.030 *** [-0.044, -0.017]
Observations	124,643	414,024	409,677	247,476	115,927
Subsample: Immigrants and U.S.-born Nonmovers					
<i>Nativity:(Reference Group: U.S.-Born Nonmovers)</i>					
Immigrant	-0.152 *** [-0.182, -0.123]	-0.073 *** [-0.102, -0.045]	-0.048 *** [-0.072, -0.024]	-0.026 *** [-0.039, -0.013]	-0.031 *** [-0.044, -0.017]
Observations	122,085	405,287	400,428	240,325	112,741
Panel 3.					
Subsample: Immigrants and U.S.-born Movers					
<i>Nativity:(Reference Group: U.S.-Born Movers)</i>					
Immigrant	-0.099 *** [-0.138, -0.061]	-0.041* [-0.073, -0.010]	-0.052 *** [-0.079, -0.025]	-0.016 *** [-0.028, -0.004]	-0.026 *** [-0.042, -0.011]
Observations	3,607	9,513	9,834	8,270	3,841

Source: Data are taken from the 1999-2013 March Current Population Surveys. Samples include adults between the ages of 18 and 64.

Notes: Marginal effects are from probit regression models. Sampling weights are used in all calculations.

Model Adjustments: Age, sex, race/ethnicity, marital status, family size, region of residence, metropolitan area status, owns home, receives investment income, and survey year.

Robust standard errors in parentheses

*** p<0.001,

** p<0.01,

* p<0.05

Table 6

Marginal Effects of Immigrant Status by Reason for Moving

		Outcome: Fair/Poor Health Status																	
		U.S.-born Movers and Immigrants						Subsamples: Immigrants and U.S.-Born Movers by Reason for Migration											
		New Job		Job Search		Family		Education											
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2						
Immigrant	*** [-0.071, -0.051]	-0.044	*** [-0.054, -0.033]	-0.027	*** [-0.041, -0.012]	-0.019	*** [-0.032, -0.006]	-0.081	*** [-0.112, -0.050]	-0.061	* [-0.113, -0.008]	-0.072	*** [-0.094, -0.049]	-0.044	** [-0.072, -0.016]	-0.011	[-0.025, 0.002]	-0.010	[-0.019, 0.000]
Observations	35065	35065		10,645	10,645	1,811	1,811	7,442	7,442	1,811	1,811	7,442	7,442	7,442	7,442	2,124	2,124	2,124	2,124

Source: Data are taken from the 1999–2013 March Current Population Survey. Samples include adults between the ages of 18 and 64.

Note: Marginal effects are from probit regression models. Sampling weights are used in all calculations.

Model Adjustments:

Model 1: Survey Year

Model 2: Age, sex, race/ethnicity, marital status, family size, region of residence, metropolitan area status, education, owns home, receives investment income, and survey year.

Robust standard errors in parentheses

*** p<0.001,

** p<0.01,

* p<0.05