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# Nativity and the Exposure to Poverty in Later Life

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## Abstract

While foreign-born Americans live longer than the native-born, some immigrant groups live in unfavorable socioeconomic conditions. What are the implications of immigrants' mortality advantage and economic disadvantage for their financial security in later life? In this paper, I explore life course patterns of immigrants' risks of being in poverty after age 50 and calculate nativity- and race/ethnicity-specific poverty life expectancy at age 65. I use data from the Current Population Survey, US vital life tables, and the National Health Interview Survey-Linked Mortality Files. I find that while the risks of being in poverty remains relatively stable for the US-born after age 50, it increases for the foreign-born. I examine a few mechanisms that may drive this pattern, including mortality selection, the inflow of later-life immigrants, and nativity differences in access to salary/wage income and welfare. Regarding poverty life expectancy, I find that some immigrant groups have longer life expectancy compared with white, US-born adults but shorter poverty-free life expectancy.

Keywords: immigrants, poverty, life expectancy

The US foreign-born population aged 65 and above is expected to triple in the next four decades (Colby & Ortman, 2015; Mizoguchi et al., 2019). By 2060, one in four adults aged 65 and older will be foreign-born, making it the age group with the highest proportion of individuals born outside the country (Colby & Ortman, 2017). Consequently, the social conditions of aging immigrants will become crucial to our understanding of retirement-age well-being in the United States.

In this report, I explore life course patterns of immigrants' risks of being in poverty after age 50 and calculate nativity- and race/ethnicity-specific poverty life expectancy at age 65. The goal of this paper is motivated by a large literature that documented immigrants' survival advantage and a small but growing literature that documented their socioeconomic disadvantages in later life.

## **Background and Contribution**

### **1. Immigrants' Survival Advantage**

Much scholarly attention on immigrants has been devoted to their mortality and health advantages. On average, life expectancy at birth is about 3.5 years longer among foreign-born adults than among the US-born (Singh & Hiatt, 2006; Singh & Miller, 2004), shrinks to about 2.4 years at age 65 (Mehta et al., 2016), and approaches about 2 years at age 80 (Palloni & Arias, 2004); it is also greater when immigrants are compared with their native-born co-ethnics, especially among Hispanic and Black adults (Singh & Siahpush, 2001).

Studies have revealed that longer lives are not necessarily healthier lives. While the evidence on immigrants' longevity advantage is strong and clear, the evidence for immigrants' health advantage over the US-born population depends very much on the reference group and on the outcome (Engelman & Ye, 2019; Jasso et al., 2004). Importantly, researchers have calculated disability-free life expectancies and life expectancies without cognitive impairment and have found that some immigrant groups, while living longer than non-Hispanic white US-born adults, spend a significant proportion of their extra years in chronic conditions and dementia (Garcia et al., 2019; Garcia & Chiu, 2016). These findings call for further investigations into the quality of life for immigrants as they retire and the resources that they may need. While a few studies have

made conclusions about older immigrants' quality of life from the perspective of physical health, there has not been a systematic study of their material well-being.

## **2. Immigrants' Socioeconomic Disadvantage**

It is well-documented that US immigrants are socioeconomically disadvantaged compared with the native-born. On average, foreign-born individuals hold occupations that require lower skills (Akresh, 2008; Bean et al., 2004), earn less during their working years (Lubotsky, 2007; Villarreal & Tamborini, 2018), and have less wealth (Cobb-Clark & Hildebrand, 2006; Hao, 2004) despite experiencing substantial upward mobility. Relatively little is known about the economic profiles of older immigrants, but the few studies on the topic have documented notable nativity gaps in income and wealth after retirement (Bean et al., 1997; Hao, 2003; Love & Schmidt, 2015).

When it comes to retirement, two competing forces may determine whether immigrants are more likely to experience material deprivation. On the one hand, immigrants are less likely to receive Social Security Benefits (O'Neil & Tienda, 2015; Whitman et al., 2011) and Supplemental Security Income (SSI) (Gerst, 2009) than do the native-born. The 1996 Welfare Reform also significantly reduced the uptake of welfare and healthcare benefits even among immigrants who are eligible (Gerst, 2009; Kandula et al., 2004). On the other hand, immigrants are more likely than the native-born to work well into retirement (Borjas, 1985), which means they may receive more income from salary and wages.

What further complicates the matter is the fact that immigrants often have different living arrangements than do the US-born. Foreign-born older adults are more likely than their US-born counterparts to co-reside with their children (Angel et al., 2010; Gubernskaya & Tang, 2017), and they are an importance resource when it comes to childcare in immigrant families (Treas & Mazumdar, 2004). As a result, it can be difficult to track certain aspects of immigrants' economic well-being in later life. The official poverty measure takes into account family size and the age of individuals in the family, which is potentially ideal for understanding nativity disparities in economic well-being in later life.

### 3. Contribution

Combined together, the fact that immigrant populations live longer despite having lower socioeconomic status on average has received much attention in the literature (Abraido-Lanza et al., 1999; Lariscy et al., 2015; Markides & Eschbach, 2005). Little is known, however, about how exactly immigrants' economic disadvantage projects onto their longevity advantage. How do immigrants' risks of being in poverty change over the life course? Do immigrants live longer than the native-born but spend most of these "advantageous" extra years in poverty? What are the disparities like at the intersections of migration status and race/ethnicity? The current study provides answers to these questions.

This paper contributes to the discussion of the foreign-born mortality paradox by directly examining the economic well-being of immigrants in later life. From a more applied perspective, its results will shed light on the potential disparities in retirement preparedness by race/ethnicity and nativity, pointing to intersectional vulnerabilities in the aging process. Policymakers may need to pay more attention to populations with longer lives and higher rates of poverty.

### Research Questions

In response to the abovementioned gaps in the literature on immigrants' well-being in later life, I ask the following research questions in the paper.

1. How does the risk of being in poverty vary across ages for US- and foreign-born adults after age 50? How do patterns vary by sex, race, and year of immigration?
2. What explains nativity differences in life course poverty risks? What are the roles played by:
  - Nativity differences in mortality selection
  - Nativity differences in family configuration
  - The higher share of later-life immigrants among older groups of immigrants and the lower income of later-life immigrants
  - Undocumented immigrants' lack of eligibility for public assistance
  - Nativity differences in salary/wage income and wealth

3. Do immigrants live longer than the native-born but spend most of these “advantageous” extra years in poverty?

## Data and Methods

Data from this paper are from three sources: The Current Population Survey and its Annual Social and Economic Supplement (CPS-ASEC); the National Health Interview Survey’s Linked Mortality Files; and United States Life Tables. The former two datasets were downloaded from the Integrated Public Use Microdata Series (IPUMS) website (Blewett et al., 2018; Flood et al., 2018) and third was downloaded from the National Vital Statistics Reports (Arias & Xu, 2019). All three sources are nationally-representative. The specific measures and analytical strategies used for each part of this paper are described below.

### 1. Life Course Patterns of Poverty

To answer the first and second questions regarding nativity differences in life course patterns of poverty, I pool together the 2011 to 2018 waves of the CPS-ASEC. The CPS-ASEC is the ideal source of data for these two research questions because it provides detailed information on individuals’ demographic characteristics (age, sex, race/ethnicity, nativity, years in the US, citizenship status) and on their official poverty status.

#### Measures

*The official poverty status* is a CPS-constructed variable that compares each respondent’s total family income to the official poverty thresholds (anchored in the 1960s and taking into account household size, number of children and the age of household head) that year and is commonly used to produce official statistics on poverty in the United States (Flood et al., 2018). This information allows me to understand, from a cross-sectional perspective, what the risks of poverty are for individuals of specific demographic groups at different ages. Pooling together eight waves of CPS-ASEC data gives me a large enough sample to provide reliable estimates for subgroups.

*Nativity* is a variable based on respondents’ self-reported place of birth. Those born in the United States (50 states or Washington D.C.) are coded as US-born, and those born elsewhere are coded as foreign-born.

*Age at migration* is a variable calculated among foreign-born individuals to reflect the age at which they first came to the US to stay. This variable is not directly available in the CPS-ASEC data but was constructed using immigrants' self-reported current age, survey year, and immigrants' reported year of immigration. Depending on the wave of the survey, year of immigration is sometimes in ten-, five- or two-year bins. In these cases, I take the mid-point of the year range as a proxy for the respondent's exact year of immigration. In some analyses, I also split *age at migration* into two categories. Following convention (Angel et al., 2010), I define *early arrivals* as those who arrived in the US before 50 years old and *late arrivals* as those who arrived in the US between 50 and 84 years old.

### Analytical strategy

Throughout the analysis of life course patterns of nativity, I focus on adults aged 50 and above and use logistic regressions to model the odds of being in poverty. The equation of the logistic regression is as follows for any given respondent  $i$ :

$$Y_i = \beta_0 + \beta_1(\text{Foreign}_i) + \beta_2(\text{Age}_i) + \beta_3(\text{Age}_i^2) + \beta_4(\text{Foreign}_i * \text{Age}_i) \\ + \beta_5(\text{Foreign}_i * \text{Age}_i^2) + \beta_6 C_i + \beta_7 X_i$$

where

$$Y_i = \log\left(\frac{p_i}{1 - p_i}\right)$$

$C_i$  is a vector of control variables always included in the model, including sex and survey year.  $X_i$  is a vector of variables occasionally included model to test different mechanisms behind nativity differences in poverty risks, such as educational attainment.  $p_i$  is respondent  $i$ 's probability of being in poverty.

Age and age-squared are both included in all models and interacted with a binary indicator of "foreign-born" to test for nativity differences in curvilinear trajectories of poverty in later life. Because of this and because odds are less intuitive than probabilities, coefficients from regression tables are not straight-forward to interpret. To help readers better understand the meaning of my findings, I present most of my results in the form of predicted margins plots. Detailed regression tables are available upon request. Across all models, I also control for sex and survey year.

Occasionally, the binary variable of “foreign-born” is replaced with a categorical indicator of detailed migration status, such as “US-born”, “foreign-born early arrival” and “foreign-born late arrival”; or “US-born”, “foreign-born naturalized citizens” and “foreign-born non-citizens”. There are also a few cases where, instead of modelling the logged odds of being in poverty, I use Ordinary Least Squares regressions to model the dollar amount of income that different groups receive across ages.

## 2. Poverty-free Life Expectancy

To answer my third question, I calculate age, sex, race/ethnicity and nativity- specific poverty and poverty-free life expectancies in the United States. The calculation consists of four steps.

First, I gain age, sex, and race/ethnicity-specific mortality rates from the 2017 CDC life tables and use them as the basis of my calculations. Specifically, I take mortality information on non-Hispanic white, non-Hispanic Black, and Hispanic adults between ages 65 and 85+ at five-year intervals.

Second, I use age, sex, race/ethnicity and nativity-specific mortality rates from the NHIS-linked mortality files to gain a mortality adjustment factor for nativity and convert our overall life expectancies from the CDC lifetables into nativity-specific ones<sup>1</sup>. Our calculation of the adjustment factor is based on procedures described in Shryock & Siegel (1976).

Third, I calculate age, race/ethnicity, and nativity-specific poverty rates using the 2012-2017 CPS-AESC with appropriated population weights. I define being in poverty as being below the official poverty threshold, consistent with definitions in the CPS (Flood et al., 2018).

Last, I use the Sullivan method (Sullivan, 1971) to apply poverty rates to life expectancies and gain sex-, race/ethnicity, and nativity-specific expected number of years lived in poverty at age 65, 70, 75, 80, and 85+.

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<sup>1</sup> While I could also gain nativity-specific mortality directly from the NHIS-linked mortality files, I use CDC life tables combined with a nativity adjustment because CDC life tables are based on the 2010 decennial census and 2017 Medicare data, both of which are much larger samples than the NHIS and should provide a more accurate basis for my calculations.



## Results

### 1. US- and Foreign-born Adults' Income after Age 50

Between 2011 and 2018, the poverty rate for those aged 50-64 was 10% among the US-born and 13% among the foreign-born (Table 1a). The average foreign-born person receives about \$10,000 less in family income than do the average US-born person, and about \$12,000 less in individual income. The foreign-born disadvantage can be observed across different categories of income (active, passive, assistance, or other).

Table 1a. Descriptive statistics of the sample by nativity, individuals aged 50-64

	U.S.-born	Foreign-born	Sig.
<100 % of poverty threshold	0.10	0.13	***
100-124% of poverty threshold	0.03	0.04	***
125-149% of poverty threshold	0.03	0.05	***
Age	56.77	56.26	***
Female	0.52	0.52	***
Race/ethnicity			
Non-Hispanic white	0.82	0.22	***
Non-Hispanic Black	0.12	0.08	***
Hispanic	0.05	0.44	***
Non-Hispanic Asian	0.01	0.25	***
Income (CPI-adjusted to June 2018 dollar)			
<b>Total family income</b>	98249	88126	***
<b>Total personal income</b>	52490	40830	***
<b>Active income - total</b>	44460	38085	***
Wage/salary	41779	35557	***
Non-farm business income	2422	2491	***
Farm income	259	37	***
<b>Passive/portfolio income - total</b>	5509	2651	***
Income from rent	584	404	***
Income from interest	1732	1037	***
Income from dividends	809	385	***
Retirement (pension) income	2383	825	***
<b>Government assistance income - total</b>	3440	1900	***
Social Security income	1909	944	***
Welfare (public assistance) income	16	22	**
Income from SSI	373	266	***

Income from unemployment benefits	260	241	
Income from worker's compensation	91	75	*
Income from veteran's benefits	275	106	***
Income from survivor's benefits	218	73	***
Income from disability benefits	298	174	***
<b>Other income - total</b>	224	143	***
Income from educational assistance	37	29	
Income from child support	59	37	***
Income from assistance	41	47	
Income from other source not specified	87	30	***
Number of observations	229,572	50,416	

Source: CPS-ASEC 2011-2018

The nativity gap in poverty is larger at older ages: 8% of US-born adults aged 65-85 lived in poverty between 2011 and 2018, compared with 16% of foreign-born adults (Table 1b). This results from the fact that poverty decreased with age among the US-born but increased among the foreign-born. The average foreign-born person aged 65-85 receives \$4000 less in family income than do their US-born counterpart, and about \$9000 less in individual income. In this age range, however, there is no longer a statistically significant difference in active income between US- and foreign-born adults.

Table 1b. Descriptive statistics of the sample by nativity, individuals aged 65-85

	U.S.-born	Foreign-born	Sig.
Below poverty threshold	0.08	0.16	***
100-124% of poverty threshold	0.05	0.06	***
125-149% of poverty threshold	0.05	0.07	***
Age	72.14	71.99	***
Female	0.54	0.57	***
Race/ethnicity			
Non-Hispanic white	0.87	0.31	***
Non-Hispanic Black	0.09	0.06	***
Hispanic	0.03	0.37	***
Non-Hispanic Asian	0.01	0.26	***
Income (CPI-adjusted to June 2018 dollar)			
<b>Total family income</b>	68145	64137	***

<b>Total personal income</b>	36890	27575	***
<b>Active income - total</b>	11869	11585	
Wage/salary	10425	10480	
Non-farm business income	1215	1082	
Farm income	229	24	***
<b>Passive/portfolio income - total</b>	11877	6146	***
Income from rent	807	544	***
Income from interest	1929	1185	***
Income from dividends	1209	752	***
Retirement (pension) income	7933	3664	***
<b>Government assistance income - total</b>	14897	10809	***
Social Security income	13359	9503	***
Welfare (public assistance) income	6	14	**
Income from SSI	129	585	***
Income from unemployment benefits	66	61	
Income from worker's compensation	30	27	
Income from veteran's benefits	592	222	***
Income from survivor's benefits	585	296	***
Income from disability benefits	130	100	**
<b>Other income - total</b>	94	158	
Income from educational assistance	8	15	
Income from child support	4	6	
Income from assistance	19	59	***
Income from other source not specified	63	79	
Number of observations	161,828	28,965	

Source: CPS-ASEC 2011-2018

The demographic profiles of native- and foreign-born adults also change with age. Consistent with the fact that female life expectancy is longer, a higher proportion of adults aged 65-85 than those aged 50-64 are female; this is especially the case among the foreign-born. Among both foreign- and native-born adults, a higher proportion of older-age individuals are non-Hispanic white. Again, this change is especially pronounced among the foreign-born, where 31% of the population aged 65-85 are white, compared with 22% among those aged 50-64.

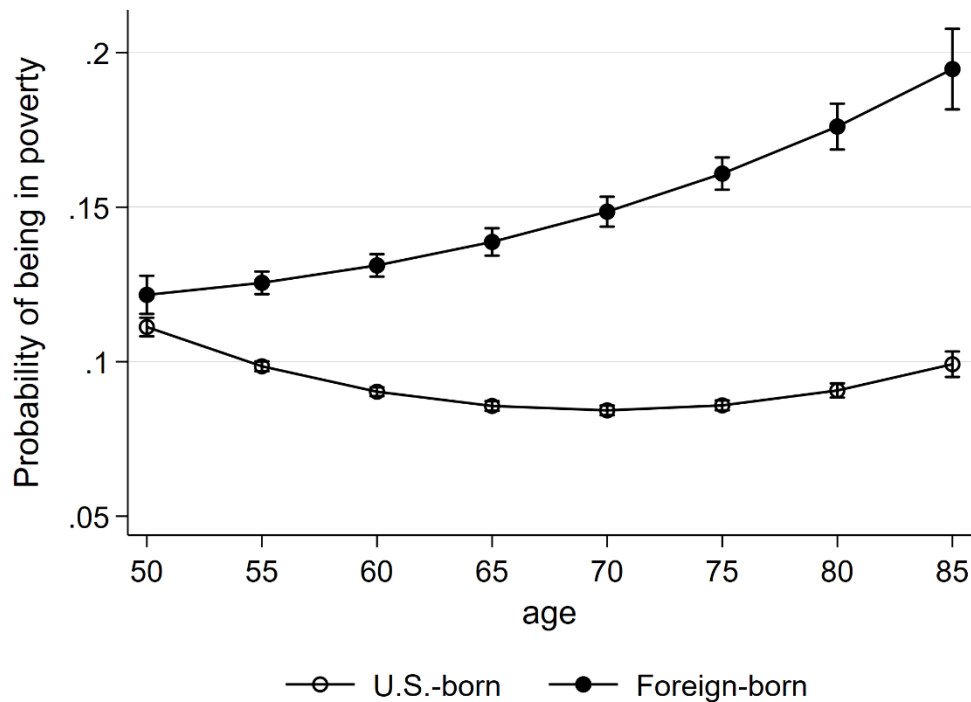
## 2. Nativity Differences in Poverty Risks after Age 50

A key finding from the crude descriptive statistics above is that the risk of poverty seems to change in different directions for the native- and foreign-born adults in the sample, assuming that 50-64 year-olds today will have similar economic profiles as their counterparts who are currently

65-85 years old when they reach those ages. Next, I more formally model the risk of being in poverty with age.

Figure 1 shows the predicted probability of poverty by nativity after age 50. The predicted probability of being in poverty is about .12 for both foreign- and native-born adults at age 50. After age 50, US-born adults experience changes in poverty risks in a U-shaped pattern: their risks decrease between ages 50 and 70 until they increase again, rising to about .1 at age 85. Overall, the risks of poverty for US-born adults after age 50 are relatively stable. For the foreign-born, the probability of being in poverty increases in an accelerated fashion after age 50. As a result, there is a widening nativity gap in poverty risks as individuals age and by age 85, the average foreign-born adult is twice as likely as her native-born counterpart to live in poverty.

Figure 1. Predicted probability of poverty by nativity, individuals aged 50-85



Source: CPS-ASEC 2011-18; model controls for sex and survey year

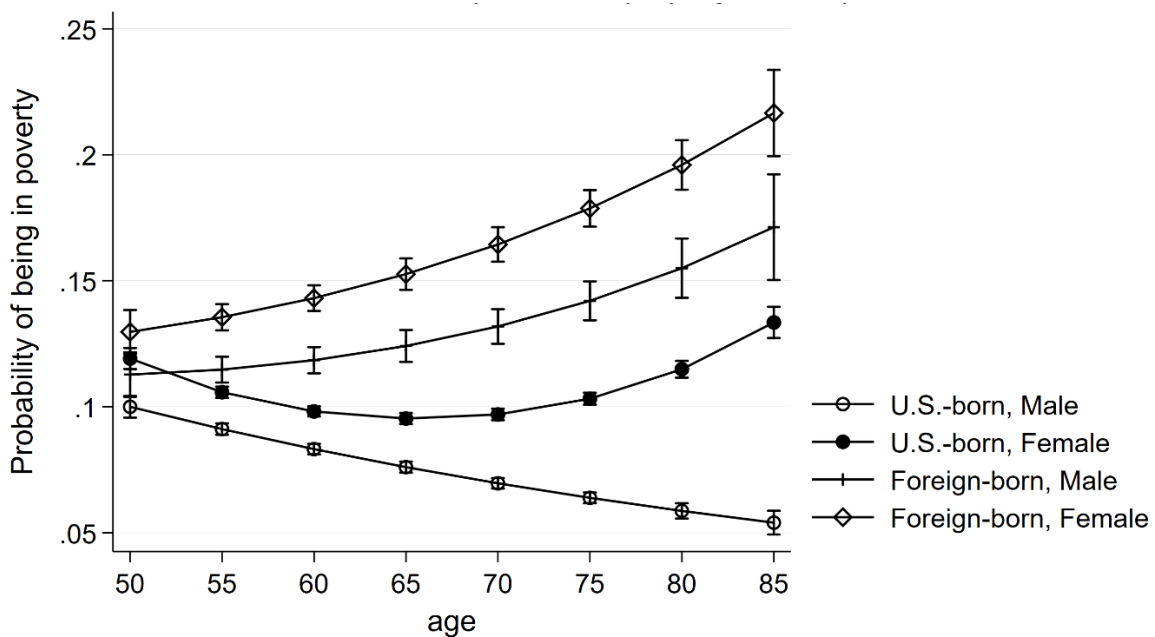
Next, I explore whether these patterns hold when we further break down the population by sex, race, and year of immigration. I expect individuals' risks to vary by all of these factors given what we know in the literature on the disadvantage in economic well-being throughout the

life course for women and people of color (Addo & Lichter, 2013; Brown, 2016), and on the detrimental effect of the 1996 welfare reform on immigrants’ access to resources (Nam & Hyo, 2008; O’Neil & Tienda, 2015). I expect that immigrant status interacts with all these factors to create intersectional inequalities for certain groups.

**Stratification by sex**

Figure 2 shows that nativity differences in poverty “trajectories” after age 50 exist within men and women but are especially pronounced among men. This graph is produced after a regression in which age and age-squared are interacted with both sex and nativity. Notably, individuals regardless of nativity and sex have similar risks of poverty at age 50. After age 50, foreign-born men and women have accelerated risks of poverty and native-born men have decreasing risks of poverty, whereas native-born women have a U-shaped “trajectory”. Overall, this figure shows that the widening nativity gap in poverty risks is a phenomenon found among both men and women. Stratification in poverty risks are also stronger by nativity than by sex, denoted by the fact that foreign-born men have yet higher risks of poverty across different ages (except for age 50) than native-born women.

Figure 2. Predicted probability of poverty by nativity and sex, individuals aged 50-85

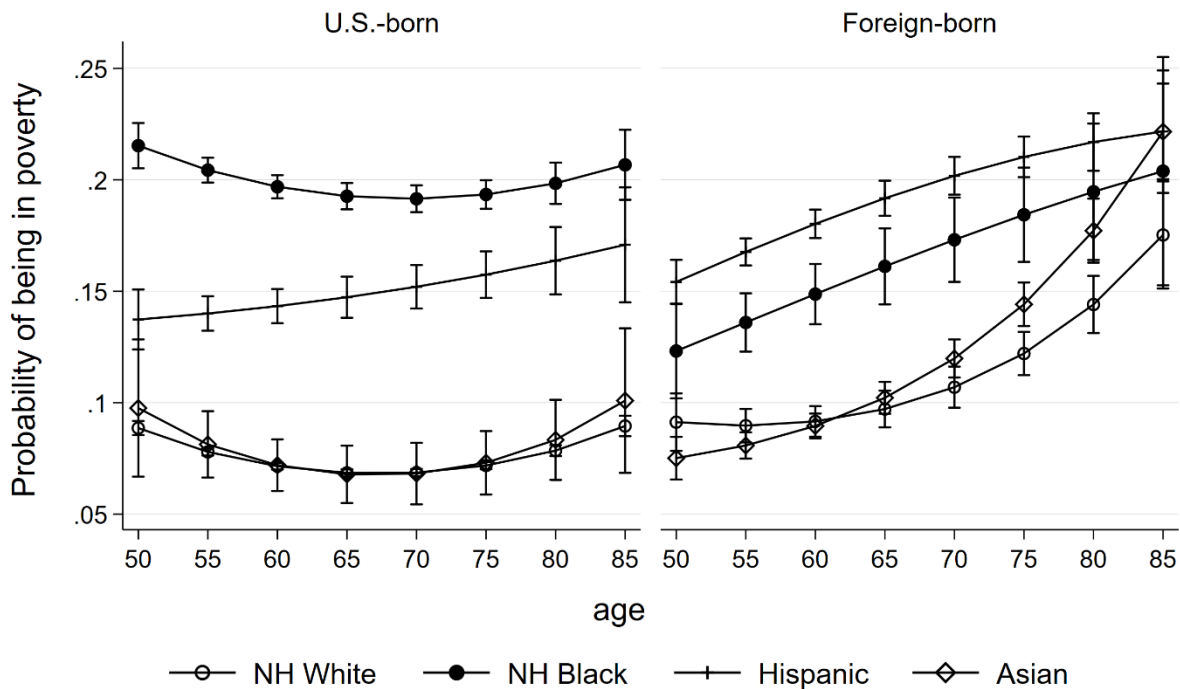


Source: CPS-ASEC 2011-18; model controls for survey year

### Stratification by race/ethnicity

Figure 3 shows that racial stratification overpowers nativity stratification in terms of poverty risks after age 50. First, whether among US- or among foreign-born adults, the age patterns of poverty risks are similar between non-Hispanic whites and Asians and somewhat similar between Hispanics and non-Hispanic Blacks. Poverty risks are lower among Asians and whites, taking a U-shaped pattern among the US-born and an accelerated increase pattern among the foreign-born across ages. Poverty risks are higher among Hispanics and Blacks and generally increase after age 50 (except for US-born non-Hispanic Blacks). Second, the nativity gap in poverty risks is reversed among non-Hispanic Blacks, highlighting the considerable economic disadvantage experienced by US-born non-Hispanic Blacks in later life. The nativity gaps persist within all other racial ethnic groups.

Figure 3. Predicted probability of poverty by nativity and race, individuals aged 50-85

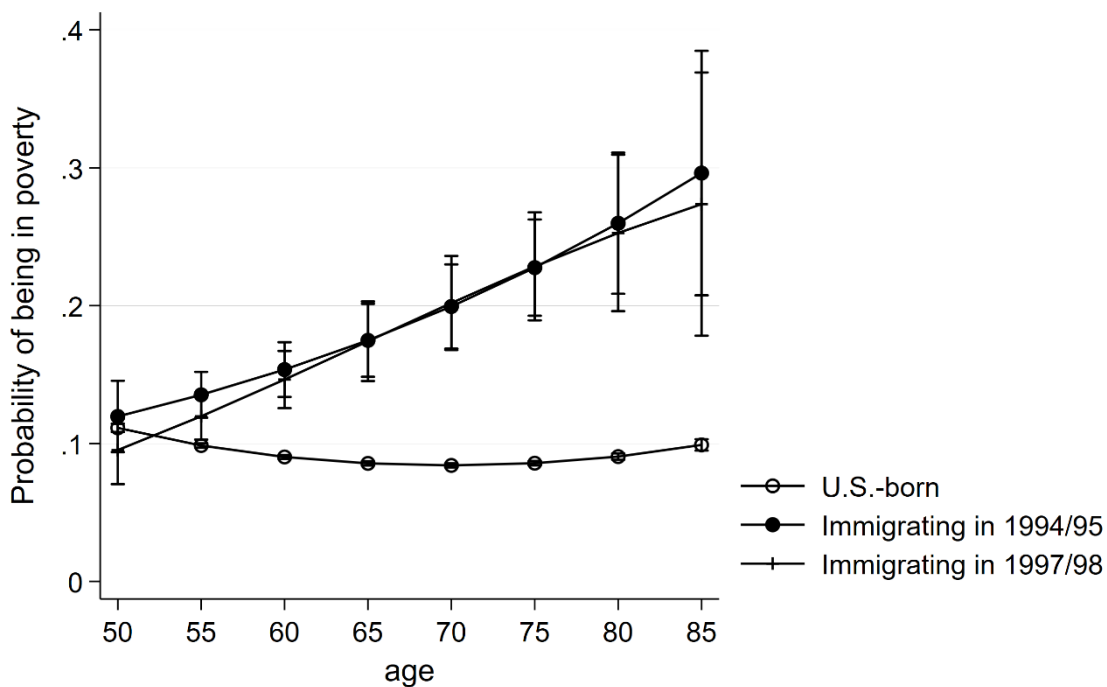


Source: CPS-ASEC 2011-18; model controls for sex and survey year

## The effect of the 1996 welfare reform

The signing of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in August 1996, also known as the 1996 Welfare Reform Act, considerably reduced the eligibility for legal immigrants for different types of welfare during their first few years of US residence. Some studies have found an effect of the welfare reform on older immigrants' enrollment in health insurance and their income (Burr et al., 2008; Nam & Hyo, 2008; O'Neil & Tienda, 2015). Therefore, I expected some discontinuity in later-life poverty risks between immigrants moving to the US right before and right after the reform came into effect (i.e. those immigrating in 1994 and 95 vs. those immigrating in 1997 and 98). My findings using the CPS-ASEC, however, indicate that the welfare reform did not alter US immigrants' age patterns in poverty risks after age 50 (Figure 4). Instead, immigrants arriving right before and right after the welfare reform have higher and increasing risks of poverty after age 50, compared with their US-born counterparts.

Figure 4. Predicted probability of poverty by age and nativity (pre- vs. post 96 immigrants), individuals aged 50-85



Source: CPS-ASEC 2011-18; model controls for sex and survey year

### 3. Explanations for Nativity Differences in Life Course Poverty Risks

I have demonstrated that, with few exceptions, there is a widening nativity gap in poverty risks after age 50. What might explain this phenomenon? While there are a range of potential mechanisms, I focus on the five most testable hypotheses in this report.

#### Nativity differences in mortality selection

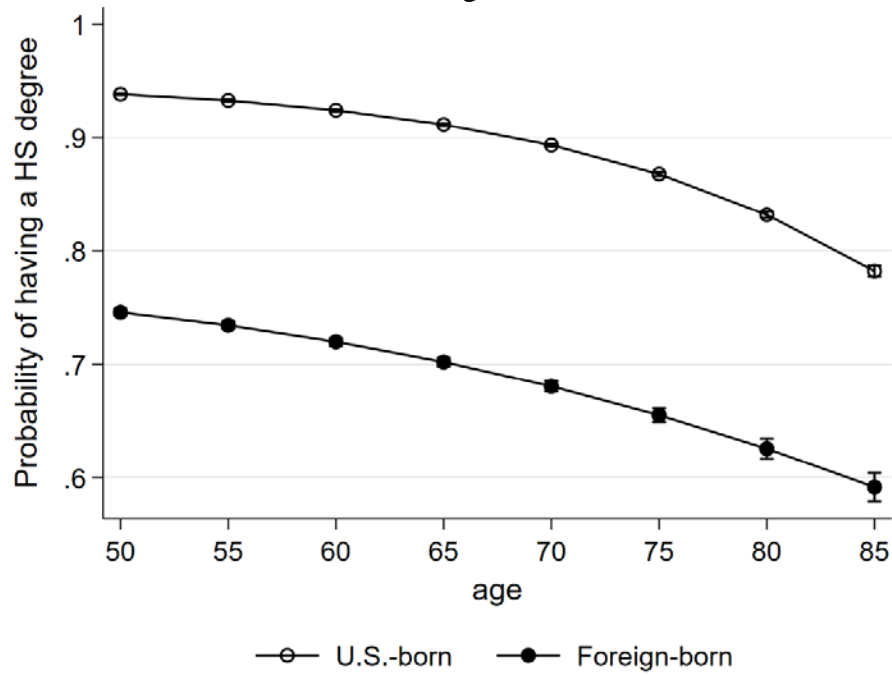
There is a well-documented inverse relationship between income and mortality (Backlund et al., 1996). While individuals' income also generally decreases with age as they leave the labor force, their underlying propensity to have lower socioeconomic status (SES) is expected to decrease because survival is selective.

If mortality is somehow less correlated with poverty among immigrants than among the US-born, then the nativity gap in poverty could expand in later life. CPS is a cross-sectional survey and does not allow a direct check of mortality selection. Nonetheless, if the mortality selection on SES is much stronger among the native-born than among the foreign-born, one should expect a large increase in certain salient SES measures (e.g., educational attainment) at older ages among the US-born and a smaller increase among the foreign-born.

I test this using the case of educational attainment, both at the high-school level and at the college level. Likely due to the fact that earlier cohorts have lower educational attainments, educational attainment decreases with age for both native- and foreign-born adults (Figure 5a and 5b). I find no evidence that the mortality selection on SES is stronger among the native-born; in fact, mortality selection on SES seems stronger among the foreign-born when SES is measured by whether or not respondent holds a college degree. At 50 years old, there is a clear nativity gap in college degree attainment, with the probability of having a college degree being .35 for the US-born and .32 for the foreign-born; at 80 years old, there is barely a nativity gap in college degree attainment. If the "decline" in educational attainment across different ages is completely due to mortality selection, then foreign-born adults with lower educational attainment are more likely to succumb to mortality. In other words, it is unlikely that the widening nativity differential in poverty in later life shown in Figure 1 is due to nativity differences in mortality selection.

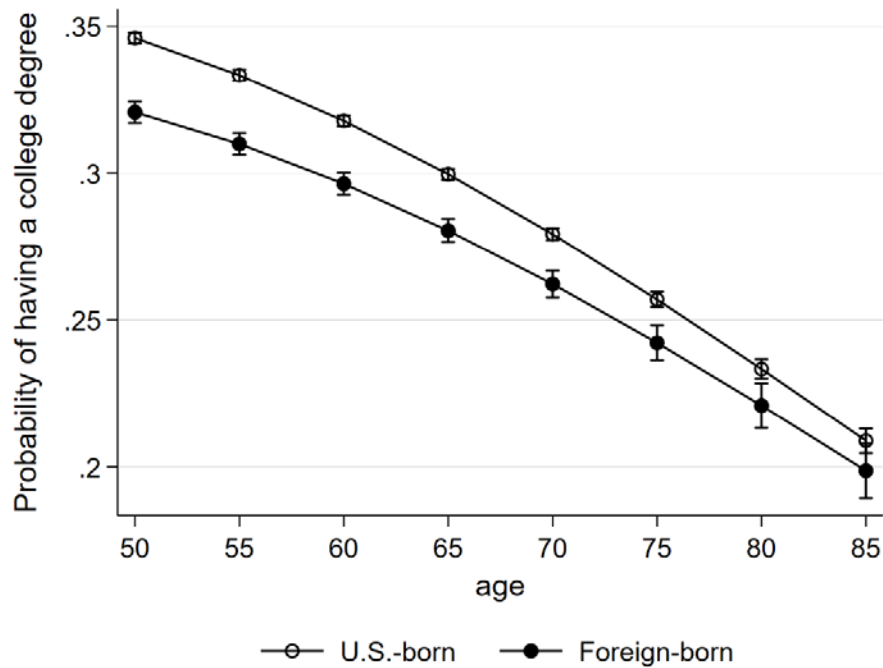


Figure 5a. Predicted probability of having a high school education by age and nativity, individuals aged 50-85



Source: CPS-ASEC 2011-18; model controls for sex and survey year

Figure 5b. Predicted probability of having a college degree by age and nativity, individuals aged 50-85

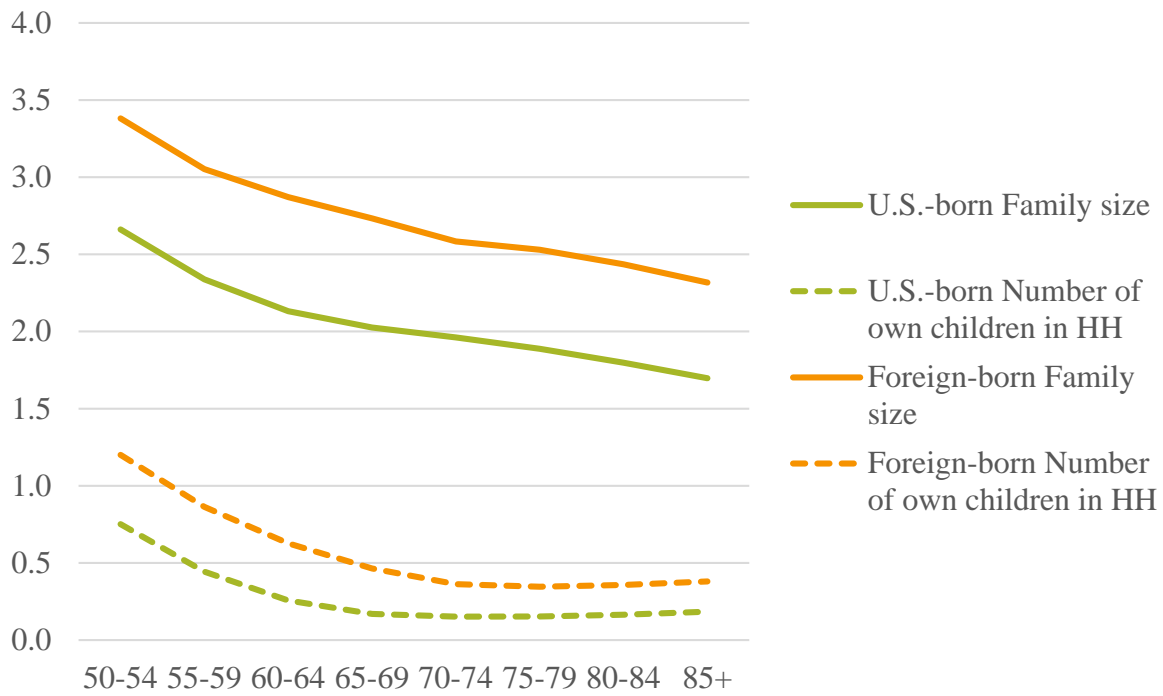


Source: CPS-ASEC 2011-18; model controls for sex and survey year

### Nativity differences in family configuration

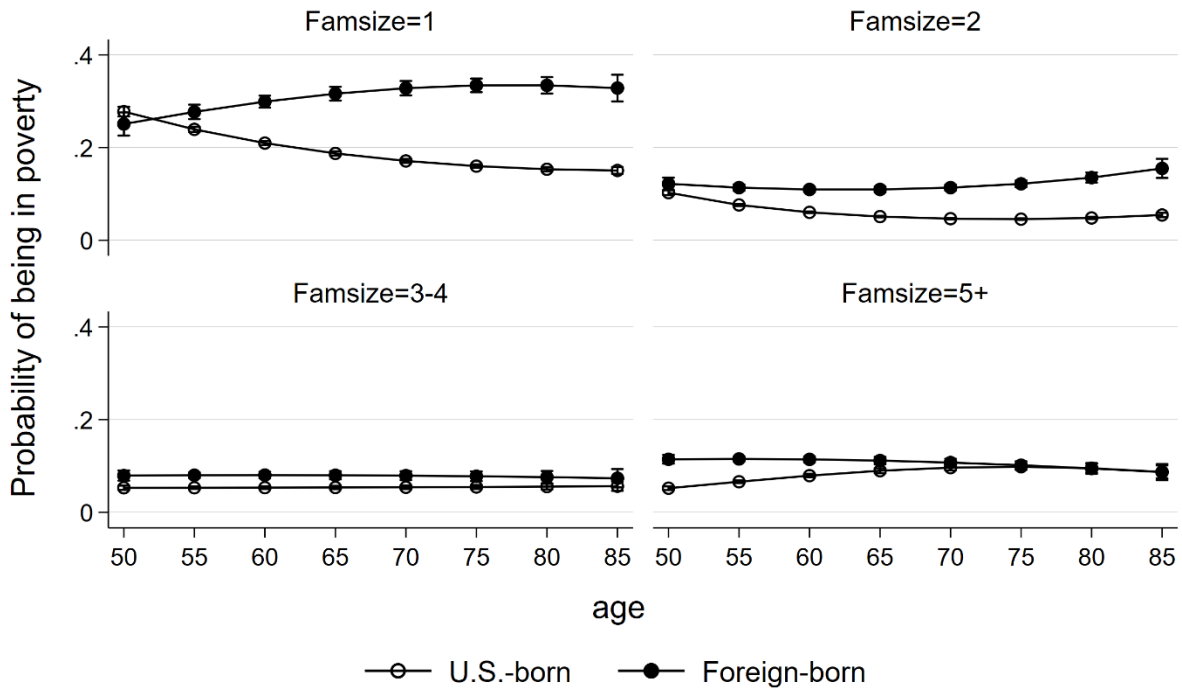
If immigrants tend to have larger families and larger families are also more likely to be categorized as being in poverty, then the nativity differences in life course patterns of poverty could be in part due to nativity differences in family configuration. Figure 6 provides evidence from the CPS that immigrants indeed have larger families and live with more children of their own. At age 75-79, for example, the average family size is 2.5 for the foreign-born and a little below two for the native-born. Figure 7 and 8, however, show that being in larger families does *not* explain immigrants' higher and accelerated risks of poverty: the nativity gaps in poverty risks are much more pronounced in families of one and two and barely exist in families of three and above (Figure 7), and there is not a clear gradient in poverty risks by family size (Figure 8). In summary, foreign-born individuals have different family configuration than their native-born counterparts but this does not explain their higher risks of being in poverty in later life.

Figure 6. Average family size by nativity



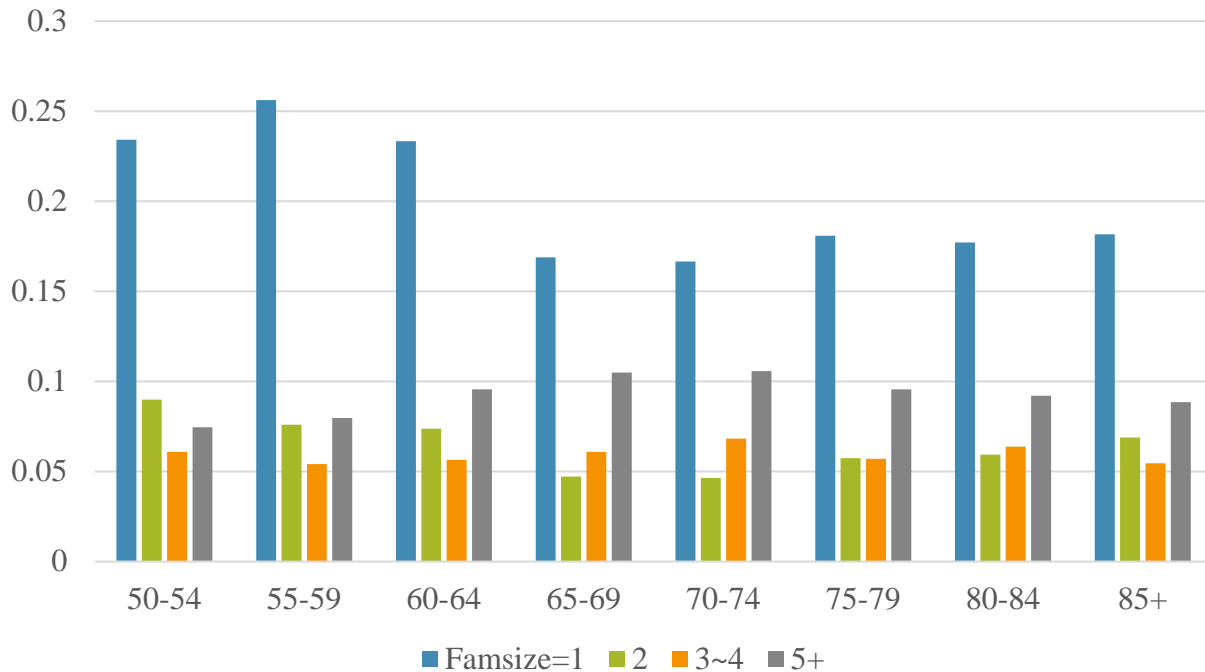
Source: CPS-ASEC 2011-18

Figure 7. Predicted probability of being in poverty by nativity and family size, individuals aged 50-85



Source: CPS-ASEC 2011-18; model controls for sex and survey year

Figure 8. Poverty rates by age group and family size



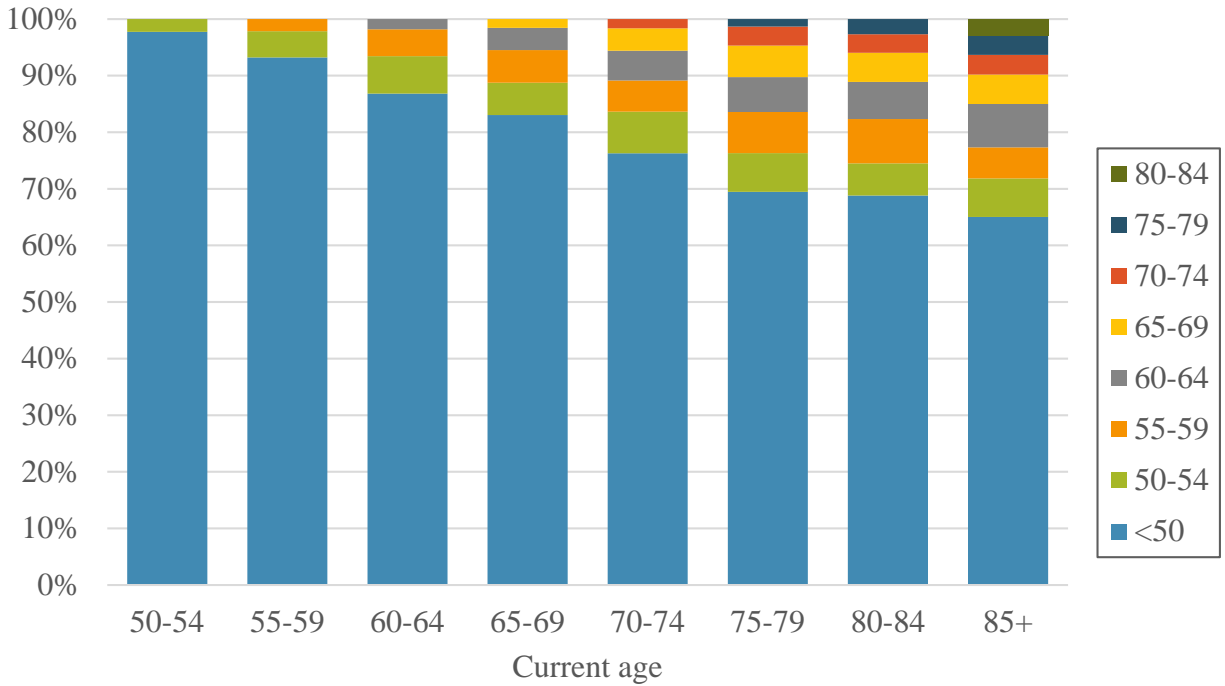
Source: CPS-ASEC 2011-18

### Later-life immigrants’ lack of income

One of the main deviations of viewing CPS-ASEC observations by age group from the idea of “poverty risks over the life course” is the cross-sectional nature of the data. Ideally, a study of poverty risks over the life course would use data that continuously follow individuals who live in the United States. Cross-sectional data, on the other hand, include individuals who arrived at different ages and even new arrivals. If older immigrant groups in each cross section also contain more immigrants who just arrived in the US, and new immigrants are less likely to receive good income, then immigrants’ poverty risks would appear to increase with age.

Figure 9, 10, and 11 provide evidence for the hypothesis above. Figure 9 shows the age-at-migration compositions of immigrants of different age groups, where each different color represents a different age at migration (in 5-year intervals). Naturally, later-life immigrants take up a higher share of older immigrants than of younger ones. At age 85 and above, nearly a third of immigrants arrived in the US after age 50.

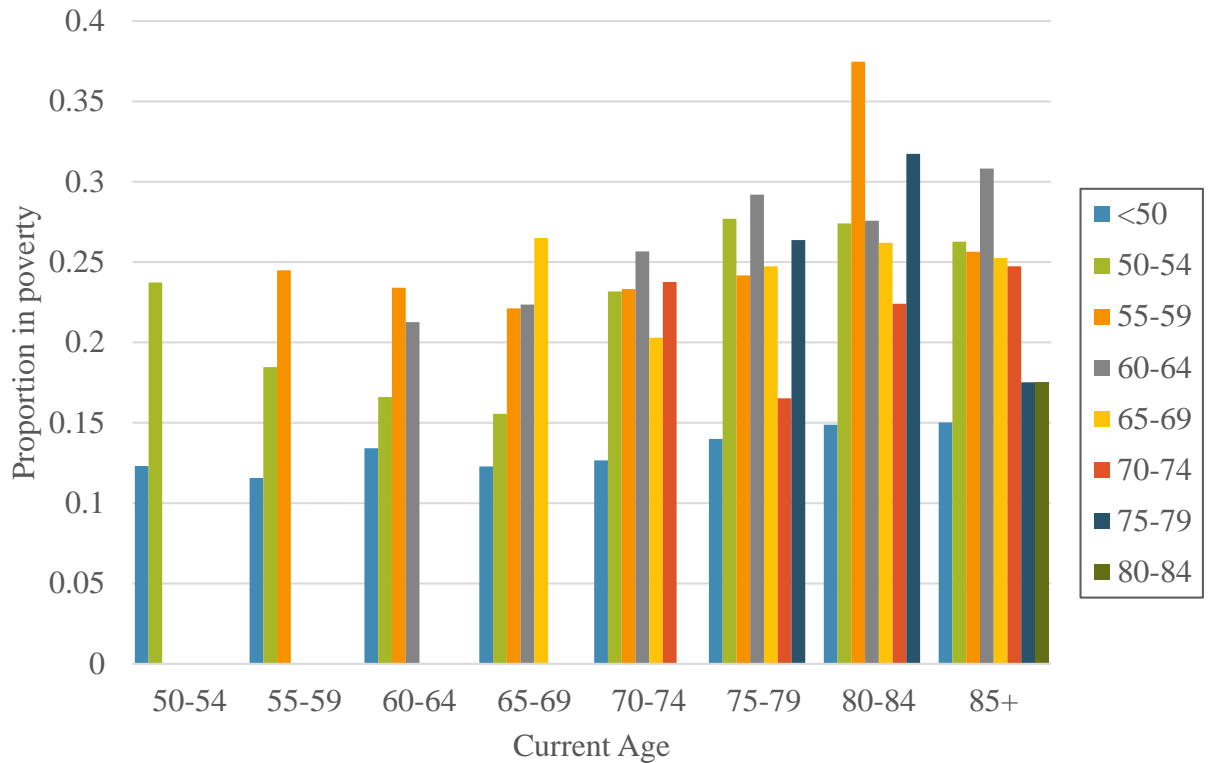
Figure 9. Age-at-migration breakdown of immigrants at different ages



Source: CPS-ASEC 2011-18

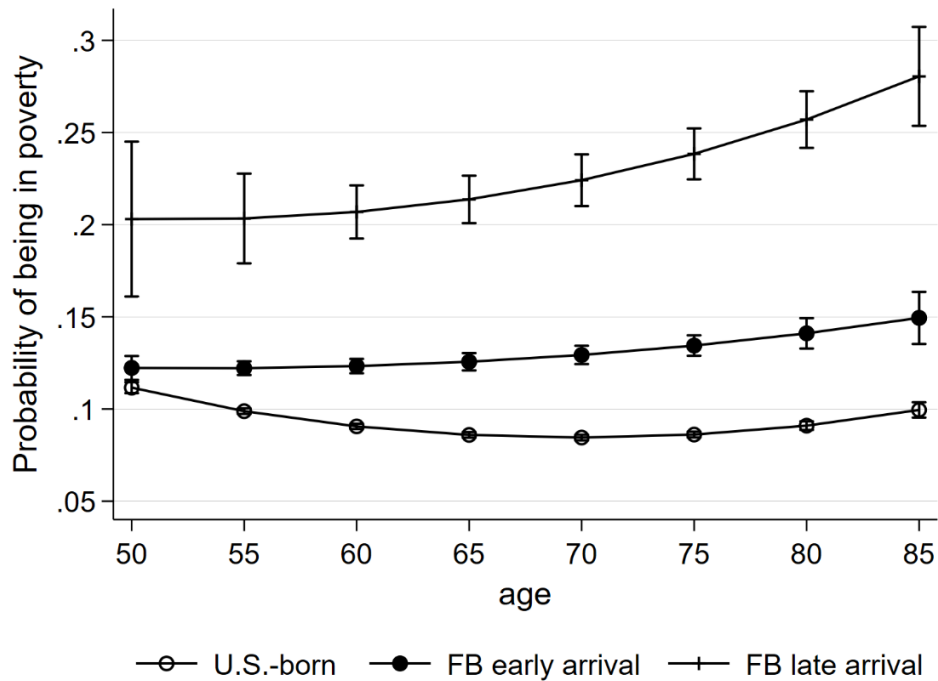
Individuals arriving in the US later in life are unlikely to receive much income from public assistance since individuals typically need to have 40 quarters of earnings to qualify for Social Security Old-Age Benefits and a certain amount of years of earnings, depending on age, to qualify for Social Security Disability Insurance (SSDI) benefits. As a result, late-life immigrants may receive significantly less family income than their counterparts who arrived earlier in life. While there is not a clear age-at-migration gradient in poverty rates, those arriving after age 50 do seem to have higher levels poverty compared with those arriving before age 50 (Figure 10).

Figure 10. Poverty rates by current age and age at migration



More formally, if immigrants were further divided into two groups by whether they migrated before 50 years old, it becomes clear that the accelerating trend of poverty among immigrants is much driven by late arrivals (Figure 11). However, there is still a significant and widening gap between early arrivals and the US-born. At age 50, early-arrival immigrants' risks of poverty are not significantly different than those of their US-born counterparts; while the risks for US-born then stay relatively stable across different age groups, the risks for foreign-born adults increase slightly with age so that at age 85, early-arrival immigrants have a .15 probability of being in poverty on average, compared with .1 among the US-born. In summary, late-life immigrants' lack of income indeed explains part of the nativity gaps in poverty across ages. The next question is what explains the differences in age patterns of poverty between early-arrival immigrants and the US-born.

Figure 11. Predicted probability of being in poverty, individuals aged 50-85



Source: CPS-ASEC 2011-18; model controls for sex and survey year

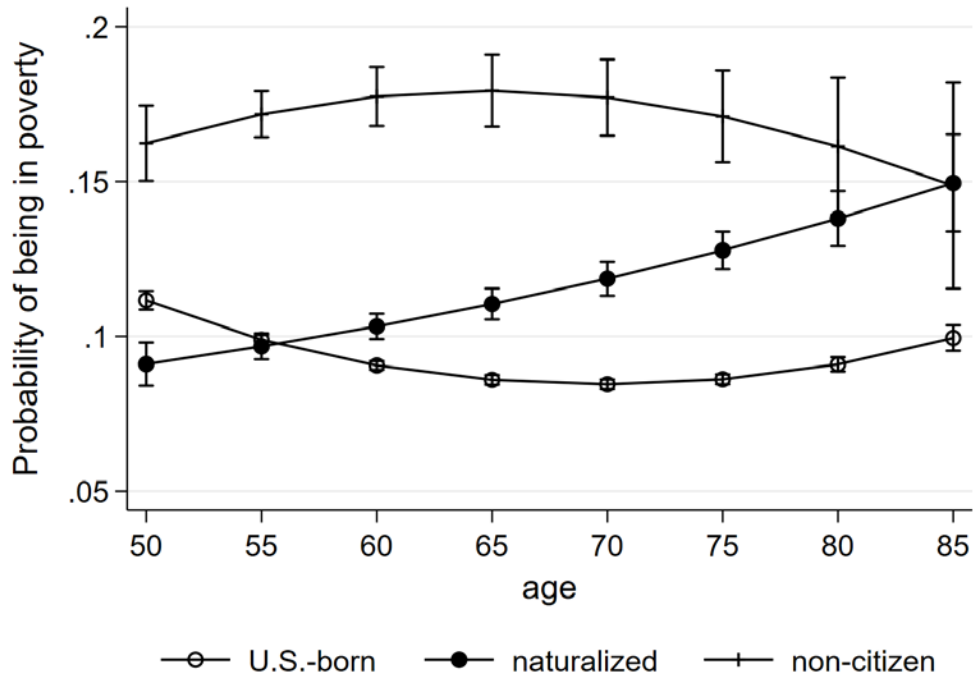
### Undocumented immigrants' lack of eligibility for public assistance

Not all individuals who presumably have enough quarters of earnings are eligible for public assistance. It is possible that undocumented immigrants and other individuals with precarious immigration statuses drive up the later-life increase in poverty risks among immigrants by gradually leaving the labor force and not receiving public assistance.

Figures 12 and 13 both speak to the argument above. Both figures are based on regressions that only include individuals who arrived in the US before age 50. Immigrants who are non-citizens have much higher risks of poverty than those who are naturalized citizens (Figure 12), although naturalized citizens still have increasing risks of poverty as they age. Non-citizens are anyone who is neither a birthright US citizen nor a naturalized citizen, which includes both legal permanent residents, immigrants on temporary visas, and undocumented immigrants. While this is a very crude proximation of individuals who are undocumented or otherwise have a precarious immigration status, it still provides suggestive evidence that help tease out the different patterns among those with and without US citizenship. Figure 13 shows

that non-citizens also receive less dollar amount of government assistance<sup>2</sup>, averaging at around \$10,000 per year at age 80, compared with \$15,000 among naturalized citizens and nearly \$20,000 among US-born individuals of the same age.

Figure 12. Predicted probability of being in poverty by citizenship status, individuals aged 50-85  
Immigrants = arriving before age 50 only

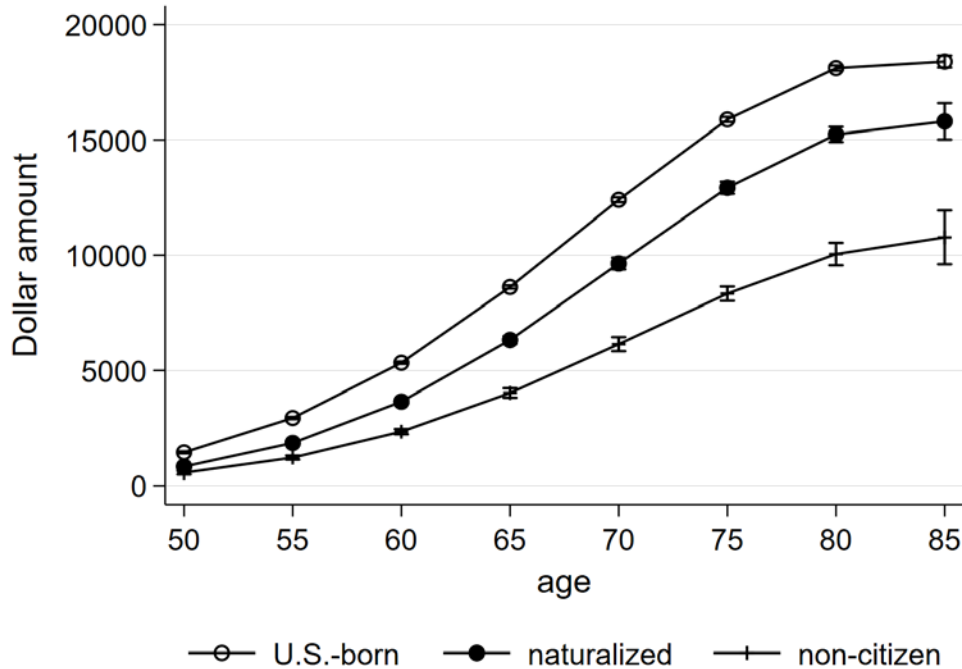


Source: CPS-ASEC 2011-18; model controls for sex and survey year

Figure 13. Predicted dollar amount of government assistance received annually; individuals aged 50-85  
Immigrants = arriving before age 50 only

<sup>2</sup> Government assistance is defined as the sum of the following: Social Security income, SSI, “welfare” income, unemployment, worker’s comp, veteran benefits, survivor benefits, disability benefits.





Source: CPS-ASEC 2011-18; model controls for sex and survey year

Together, these results demonstrate that non-citizen immigrants (some of whom would be undocumented) indeed have much fewer economic resources in later life than do immigrants who are naturalized citizens. However, this does not seem to be the main driver of nativity differences in age patterns of poverty since the gap between naturalized citizens and the US-born still increases with age.

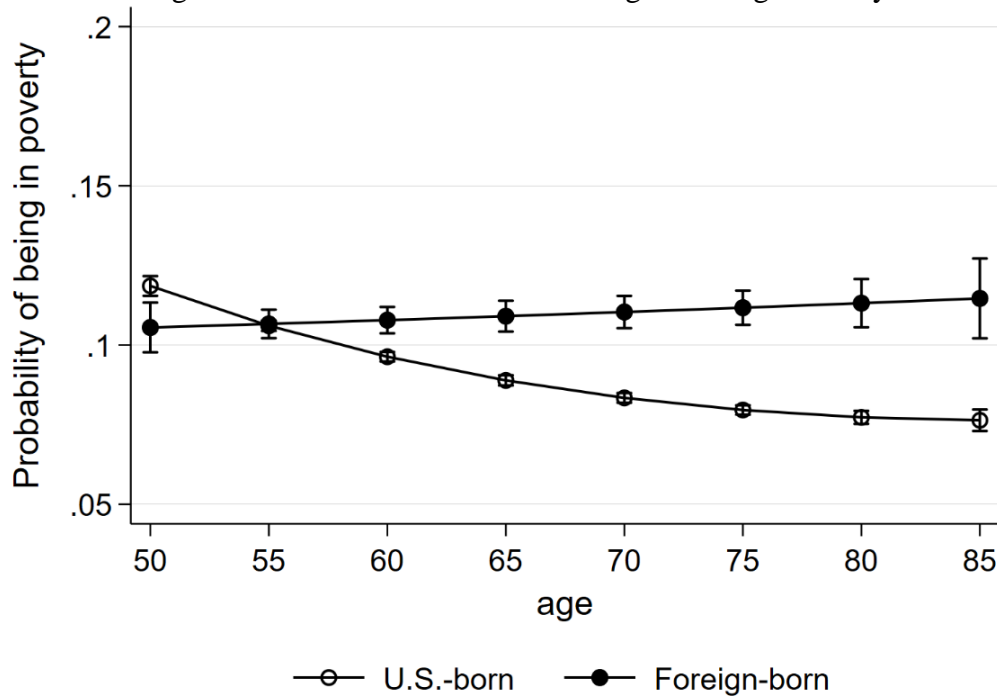
### Nativity differences in salary/wage income and wealth

The last hypothesis I test here is that foreign- and US-born adults experience different changes in their poverty risks in later life simply because they had different earnings while they were in the labor force and because they have lower household wealth. While I do not directly observe individuals' pre-retirement earnings or wealth levels in the CPS-ASEC, I should be able to observe a reduction in nativity gaps in poverty risks after accounting for educational attainment if the hypothesis was true. I should also observe that immigrants receive less passive income: income from rent, interest, dividends, and pension.

Figures 14 and 15 provide evidence that nativity differences in pre-retirement earnings and in wealth can explain immigrants' higher poverty risks in later life. To make sure other mechanisms are not at play, I limit the sample to naturalized citizens who migrated to the US

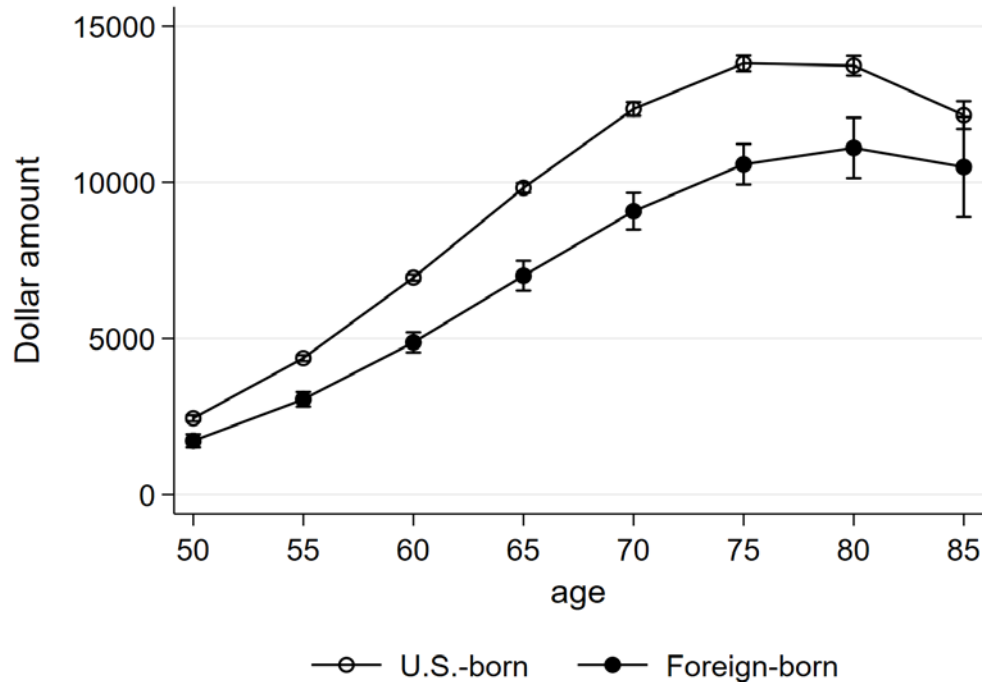
before age 50. Accounting for educational attainment, US immigrants and the native-born still have different age patterns in poverty after age 50 but immigrants' poverty risks barely increase. Instead, the US-born experience steadily decreasing risks of poverty (Figure 14). Naturalized citizens who arrived in the US before age 50 receive slightly less passive income than do their US-born counterparts: at age 75, the average foreign-born adult received a little over \$10,000 in passive income, compared with about \$14,000 among the US-born (Figure 15). This is evidence that nativity differences in wealth accumulation are a partial driver of nativity differences in poverty in later life because passive income is nearly always generated from existing wealth.

Figure 14. Predicted probability of being in poverty by nativity, individuals aged 65-85  
Immigrants = naturalized citizens arriving before age 50 only



Source: CPS-ASEC 2011-18; model controls for sex, survey year, and educational attainment

Figure 15. Predicted dollar amount of passive income received annually, individuals aged 65-85  
Immigrants = naturalized citizens arriving before age 50 only



Source: CPS-ASEC 2011-18; model controls for sex, survey year, and educational attainment

It is worth noting that there is at least one other plausible mechanism behind the nativity-age patterns in poverty: there can be a weaker association between material deprivation and mortality among immigrants than among the foreign-born. I did not test this hypothesis due to the lack of relevant variables in the CPS-ASEC but I highly suspect that mortality selection indeed plays a role in shaping these patterns, given an extensive literature on differential SES gradients in health and infant mortality by nativity (Franzini & Fernandez-Esquer, 2004; Li & Keith, 2011).

#### 4. Immigrants' Life Expectancy in Poverty

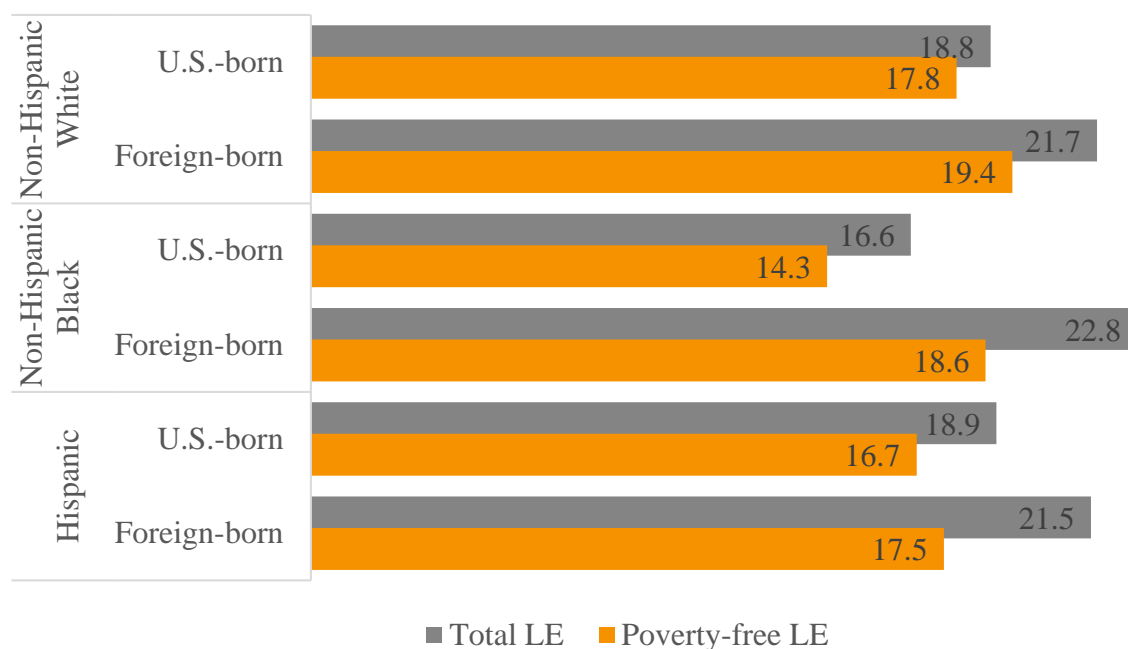
The last goal of this project is to combine knowledge about immigrants' longevity advantage and their economic disadvantage to understand the degree to which immigrants spend their extra years of life in poverty. Throughout this section of the paper, I stratify the analysis by sex and race/ethnicity.

Immigrants across the board have longer total life expectancies than do their US-born co-ethnics (Figures 16a, 16b). This advantage is the largest among Blacks: foreign-born Black men and women both live six to seven years longer than their native-born counterparts. Notably, foreign-born Black women are also the longest living of all groups, with a life expectancy of

26.7 years at age 65. They are followed by foreign-born white and Hispanic women, who have a life expectancy of 23-24 years. US-born Black men are the most short-lived of all groups, with a life expectancy of 16.6 years at age 65.

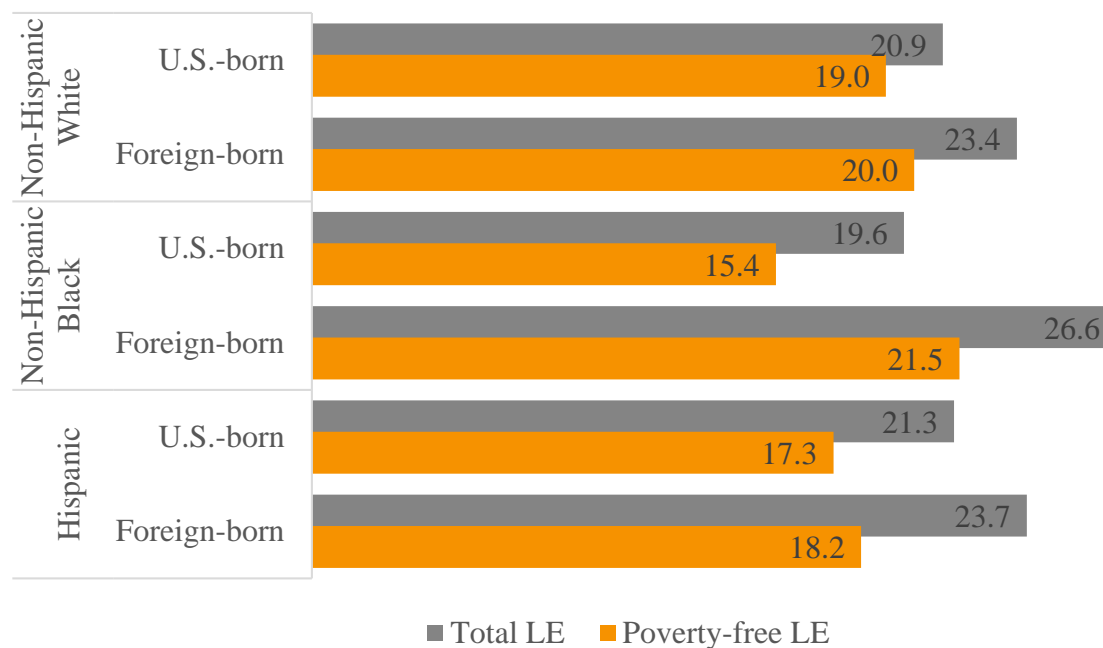
When it comes to poverty-free life expectancy, immigrants still have some advantage over their native-born counterparts. Foreign-born Black women have the longest poverty-free life expectancy at 21.5 years, this time closely followed by foreign-born white women (20 years) and men (19.4 years), as well as US-born white women (19 years). On the other extreme, native-born Blacks can expect to live 14.3 (women) to 15.4 (men) years above the poverty threshold after age 65.

Figure 16a. **Male** life expectancy vs. poverty-free life expectancy at age 65, by race/ethnicity and nativity



Source: CPS-ASEC 2012-17; U.S. life tables 2017; National Health Interview Survey Linked Mortality Files

Figure 16b. **Female** life expectancy and poverty-free life expectancy at age 65, by race/ethnicity and nativity



Source: CPS-ASEC 2012-17; U.S. life tables 2017; National Health Interview Survey Linked Mortality Files

Notably, foreign-born Hispanic men and women have longer total life expectancy but shorter poverty-free life expectancy than do native-born non-Hispanic white men and women. This finding highlights the considerable socioeconomic disparities by nativity and race/ethnicity, and the many years of life that foreign-born Hispanic adults spend in poverty in later life.

## Summary and Conclusion

This paper serves as the first study to (1) examine life course patterns of poverty by nativity and (2) calculate poverty-related life expectancies by nativity and race/ethnicity in the United States. The goal is to understand the degree to which immigrants' poverty risks change in later life, why these changes occur, and whether their economic disadvantage should affect the way we interpret their longevity advantage. The results can be summarized as follows. First, foreign-born adults' risks of poverty increase after 50 while they remain somewhat stable for the US-born, resulting in widening nativity gaps in poverty in later life. Second, immigrants' accelerated risks of

poverty in later life is mainly driven by the inflow of late-life immigrants who receive little or no income. Other mechanisms, such as undocumented immigrants' lack of eligibility for public assistance and immigrants' lower pre-retirement earnings, are likely also at play but to a lesser extent. Third, US immigrants have longer total life expectancies than do the native-born, but they do not always have longer poverty-free life expectancies. Notably, while foreign-born Hispanic individuals live about 3 years longer than US-born non-Hispanic whites, their poverty-free life expectancies are slightly shorter than US-born non-Hispanic whites.

Findings of this study highlight the importance of perspective when we think about life expectancies: while longevity advantages are typically seen as desirable, extra years in material deprivation are certainly not. Immigrants' longevity advantage is, in many cases, spent below the poverty threshold. However, my findings also highlight the importance to consider population composition when one makes conclusions about foreign-born adults' economic disadvantages. At least in the case of poverty, immigrants' accelerated levels of economic disadvantage are more driven by the inflow of late-life arrivals than by other mechanisms.

While this paper focused on the official poverty measure, immigrants also have higher rates of living near poverty (Table 1a and 1b); previous has shown that the nativity gap in poverty is even larger when poverty is measured by Supplemental Poverty Measure (SPM) (Thiede & Brooks, 2018), which takes into account noncash transfers and refund tax credits. I expect that the nativity gap in poverty measured by OPM can also be partially attributed to late-life immigrants, whose disadvantage in language skills and social network (Lai et al., 2019; Treas & Mazumdar, 2002) can hamper their access to food stamps and housing subsidies. Overall, this paper calls for more policy attention to immigrants migrating at different ages and to populations that have longer lives and higher rates of poverty.

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