

Health differentials of older Hispanic immigrants by age at arrival

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Introduction

Current research has demonstrated the health advantage of Hispanic immigrants compared to U.S. born Hispanics and non-Hispanic whites. Hispanic immigrants have shown both lower mortality rates and better birth outcomes while generally having low socio-economic status (Escarce et al. (2006), Jasso et al. (2004), Singh and Siahpush (2002)). The determinants of this health advantage are important to understand because this contradicts the normally negative association between low SES and positive health outcomes (Adler et al. (1994)). Older immigrants often experience worse economic outcomes than native-born because of more limited access to means tested public programs since the 1996 immigration and welfare reforms. Not only do late-age immigrants have fewer potential working years to earn access to social security benefits and Medicare, but depending on their home country work histories, likely have limited of retirement savings. Because health and economic well-being are so closely linked, it is important to study whether this disadvantage of older immigrants persists to health outcomes as well. This study will provide useful information for evaluating the fiscal consequences of current immigration policy.

One possible hypothesis for the Hispanic immigrant health advantage is the “healthy migrant effect” which suggests Hispanic immigrants self-select based on health attributes (Palloni and Arias (2004)). This theory while intuitive, is challenging to analyze as many of the characteristics differentiating a would-be immigrant and not-immigrant are unobservable. Most longitudinal datasets regarding immigrant health only have information about one country making it difficult to study the trajectory of health status. A second hypothesis for the immigrant health advantage suggests that Hispanics have cultural and social norms and behaviors that are protective, lowering their risk factors of morbidity such as cardiovascular disease, lung cancer and COPD (Singh and Siahpush (2002)). The third hypothesis is that the health advantage is purely measurement error or a data artifact. Some immigrants when they fall ill, will return home to their country of origin and stay there until they die. This “salmon bias” is used to describe the possibility of measurement error when immigrants are measured by a survey or census in the U.S. but because they return home their deaths are not counted here. Another possible source of measurement error can come from ethnic misidentification as many analyses use linked data such as Vital Statistics where ethnicity is self-reported and mortality data where ethnicity is observed from an outside source. Along these lines, there could be possible age misreporting (Elo and Preston (1997)). However, with so much research validating the Hispanic immigrant health advantage it is hard to believe it is entirely a data artifact. Late-age Hispanic immigration has become an increasingly large component of overall immigration (ONeil and Tienda (2012)) yet we do not know much about their health status and how it may compare to the U.S. population of the same age.

The Illegal Immigration Reform and Immigration Responsibility Act of 1996 further limited legal immigrants access to public benefits. Immigrants are required to have five years of residency and 10 years or 40 credits of work in the U.S. to receive social security benefits¹. For many Hispanic immigrants they will never qualify for social security and depend entirely upon Medicaid, which they can receive after a five year residency as well. Late-age immigrants as they age in place here in the United States may lay additional financial burdens on our already heavily taxed healthcare system. For these reasons, it is quite imperative we learn about Hispanic late-age immigrants and their health as the U.S. is faced with its own aging population and a formidable health care reform.

For this paper I will focus on quantifying two aspects of late-age Hispanic immigrant health. First, does self-reported health by age at arrival differ from that of the native born Hispanic pop-

¹Illegal Immigration Reform and Immigrant Responsibility Act of 1996, Pub. L. No.104-208, 110 Stat. 3009-546. <http://www.gpo.gov/fdsys/pkg/PLAW-104publ208/pdf/PLAW-104publ208.pdf>

ulation? Secondly, I will look at changes in the health and healthcare utilization of Hispanic immigrants as they age *in situ*. I will be using the New Immigrant Survey (NIS), which interviews newly-legalized immigrants from June 2003 through June of 2004. The NIS dataset is extremely unique in that it has age at arrival, visa category and country of origin. Many datasets have only age data by range and length of time in the U.S. by a variable specifying less than or more than 15 years in the United States. The fact that NIS data includes exact age, and information about arrival and time spent in the U.S. in the past makes this dataset extremely useful. We also know that foreign born Hispanics are not a homogenous group, and therefore knowing their home country can be very beneficial to the analysis. Finally, the most distinguishing characteristic of the NIS data is that it has the type of visa each immigrant was granted. The visa category variable helps shed light on possible within group differences in health. To compare the health of Hispanic immigrants with that of U.S. Hispanics, I have combined the NIS data with data from National Health Interview Survey. All observations used will be of ages 50 and above.

Methods

To Analyze health status, I use logistic regression to model self-reported health. I have condensed a five category ordinal variable of health status into a binary good health/bad health outcome variable. My key variable of interest is a “visa category” variable with six categories – U.S. born, family visa (sponsored by a child), family visa (sponsored by another family member), work visa, legalization visa, and other which includes refugee and diversity visas. All U.S. born Hispanics are classified as “U.S. born”. This variable allows me to compare the relationship of Hispanics immigrating on different visa types with the probability of having good health compared to that of native born Hispanics. For my first specification I will be modeling health status on visa category and age. For my second specification I will add in control variables for education, and for my third specification I will include income as well. Hispanic immigrants in the NIS data have much lower levels of completed education and of income (many report having no income) as compared to that of U.S. born Hispanics making these additional controls quite informative.

Results

In the first specification we see that the only two groups of Hispanic immigrants who have higher log odds of having good health as compared to native born Hispanics are those that came on a work visa and those that came on a family visa sponsored by a child. As these coefficients represent log odds, the magnitudes are not easily interpretable, however their sign and significance are. As we add in controls for education we see that all the coefficients on the visa categories are now positive and all except for “other” are statistically significant at a 95% level. In the third specification, with the addition of income controls, the coefficients remain positive further supporting our findings that there is a Hispanic immigrant health advantage even above ages 50. Finally, I have included a graph showing the difference in predicted probabilities for the average person in my sample if they could change from being a U.S. born Hispanic to one of the visa categories for immigrants. We see that the differences are all positive and all the confidence intervals are above zero. This implies that for every category of visa, the average Hispanic has a higher probability of good health than if they were U.S. born.

Conclusion

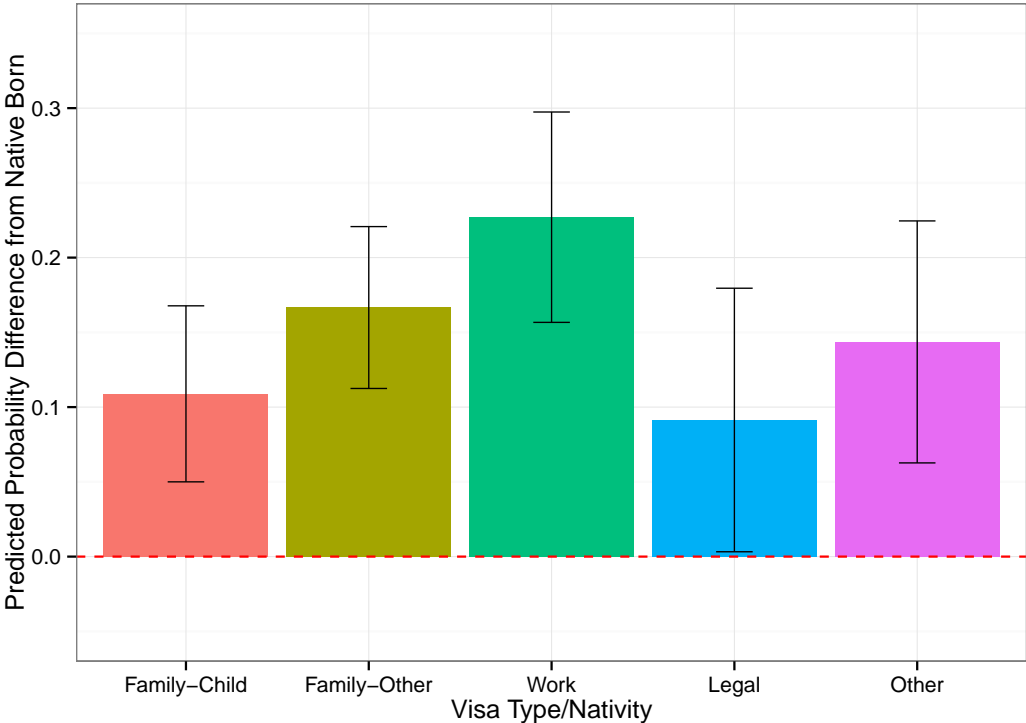
For this paper I have modeled self-reported health on a key variable of visa category showing suggestive evidence that the Hispanic immigrant health advantage persists even at ages above 50. While this data is suggestive, it is not conclusive. Further work needs to be done in multiple imputation for both this wave of NIS data and the follow-up in 2007. Multiple imputation of missing data is necessary to show more robust results, especially for the second wave which had a low response rate. Additionally the second wave of NIS data will allow me to analyze changes in health status and healthcare utilization over time as these immigrants age here in the United States and meet the five year residence requirement to receive Medicaid. Finally, I will perform some robustness checks to validate the cross-cultural comparison of self-reported health.

Table 1: Logistic Regression Results

	Model 1	Model 2	Model 3
Family - Child	3.23*** (0.43)	1.47** (0.51)	0.41 (0.69)
Family - Other	-0.20 (0.13)	0.37* (0.16)	0.72** (0.24)
Work	0.49* (0.25)	0.90*** (0.27)	1.35*** (0.32)
Legal	2.56** (0.99)	2.25* (0.92)	2.92** (1.02)
Other	-0.35 (0.28)	0.27 (0.29)	0.58 (0.33)
Age	0.33 (0.37)	0.62 (0.38)	1.06** (0.41)
High School		-0.02** (0.01)	-0.01 (0.01)
College		0.80*** (0.17)	0.59** (0.21)
Adv Degree		1.32*** (0.20)	0.86** (0.27)
\$10,000-44,999			1.11* (0.55)
\$45,000+			0.50* (0.24)
Intercept	-0.04*** (0.01)	1.86*** (0.45)	1.27*** (0.29)
Num. obs.	2018	2016	1550

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Figure 1: Plot of Differences in Predicted Probabilites between Visa Category and U.S. born Hispanics



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