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Can Human Capital Explain the Difference in Private Health Insurance Coverage Rates between Natives and Immigrants?

Benjamin S. White
Illinois Wesleyan University, bwhite2@iwu.edu

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This paper investigates how human capital variables, especially educational attainment and health disability, affect an immigrant's probability to have private health insurance. Specifically, is there a convergence to natives' coverage rates for immigrants as human capital is controlled for? Two probit regressions are used to answer this question, one to analyze the employer provided health insurance market and another to analyze privately purchased health insurance market. The principle finding is that human capital variables are important in determining access to private health insurance. However, a health insurance coverage differential does remain between immigrants and natives.

Keywords

Immigrant health insurance employer provided health insurance

Cover Page Footnote

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I. Introduction

The 2011 dataset of the American Community Survey (ACS) (Ruggles, Alexander, Genadek, Goeken, Schroeder, Sobek, 2010) shows that the distribution of health insurance among natives differs greatly from the distribution of health insurance among immigrants. For example, in this dataset about 32.3% of immigrants did not have any health insurance, while only 16.3% of natives lacked health insurance. However, it should also be noted that other variables aside from immigrant status could affect the probability of an individual having health insurance – these variables are distributed differently for immigrants and natives. Naturally, this raises the question: do these other determinants of health insurance explain the difference in health insurance coverage rates between natives and immigrants?

This differential in health insurance coverage between immigrants and natives is especially worrying as Choi (2010) reports that insurance coverage is a major determinant of receiving regular healthcare among older immigrant adults. Furthermore, Siddiqi, Zuberi, and Nguyen (2009) find that 1/3 of uninsured immigrants report unmet medical needs while only 1/10th of insured immigrants report unmet medical needs. There is evidence the primary way immigrants have higher unmet medical needs compared to natives is due to lack of health insurance coverage (Choi, 2010) (Siddiqi, Zuberi, and Nguyen, 2009).

This paper seeks to explore what factors cause immigrants to not have private health insurance coverage. As 80% of the insured in the U.S. have private health insurance (Gruber 2008), analyzing the private health insurance market for important casual factors is important to solving public policy problems dealing with health insurance coverage. Once these factors that affect private health insurance coverage have been identified, public policy can be more

efficiently implemented. For instance, this paper could identify characteristics that make immigrants unlikely to have private health insurance; therefore it may be necessary to target public policy to help immigrants with these characteristics. However, this paper may instead find that the differential in coverage rates between immigrants and natives rapidly diminishes as immigrants gain U.S. specific human capital, which suggests there are already economic forces working to close the health insurance coverage gap between immigrants and natives. This implies that lack of health insurance coverage for immigrants is not a serious social problem. As such, identifying factors that affect the probability in obtaining private health insurance has great policy relevance.

Perhaps most important among these factors that causes one be more likely to have private health insurance coverage is human capital. The fact that many immigrants lack human capital relative to natives raises the question of whether these human capital differences can explain the differences between immigrants and natives in private health insurance coverage. This paper will control for human capital to answer this question. This paper will separately examine the two types of private health insurance, privately purchased health insurance and employer provided health insurance.

Employer provided health insurance is where employees receive health insurance from their employer as a form of compensation. Gruber (2008) reports that 9 out of every 10 individuals in the United States with private health insurance acquire it from their employers, this amounts to over 160 million people in the United States in 2008. Thus, employer provided

health insurance is a massive industry with enormous consequences for the entire population of the U.S.

Next there is privately purchased health insurance by an individual. This is when an individual pays a premium to an insurance company to insure against future health risks. As such, the individual is essentially purchasing greater healthcare certainty. This category is expected to grow as the Affordable Care Act is implemented, due to the individual mandate and health insurance exchanges created by this Act.

It can be seen by examining recent trends that private health insurance is a large, expanding market, which can be expected to continue to expand, especially considering the Affordable Care Act. For instance, the market for private health insurance (both privately purchased health insurance and employer provided insurance) has grown from 12 million in 1940, to 76.6 million in 1950, to 158.8 million by 1970, to over 200 million people in 2000 (Folland, Goodman, and Stano, 2004). At the same time, Goldberg and Zainbulbnai (2012) show that private healthcare costs rose on average 6% from 1997-2010, which should translate into higher health insurance costs as well. Therefore, we should expect economically vulnerable groups such as immigrants to be squeezed out of this market, despite this market's growing numbers.

The overall purpose of this paper is to explore why immigrants are less likely to have private health insurance than natives. Section I explains why this is an important research question. Section II explores the literature on the coverage differential in health insurance between immigrants and natives. Section III outlines predictions from economic theory that show how characteristics like education, U.S. specific human capital, and disability can be used to predict

the probability of having private health insurance. Section IV explains the empirical model to test the predictions outlined in Section III and Section V discusses the results of the empirical model. Finally, Section VI discusses conclusions and implications of these results.

II. Literature review

Much of the literature on access to health insurance finds that more economically vulnerable groups have restricted access to health insurance. For instance, it appears that different types of legal immigrants differ on how likely they were to have health insurance. In particular immigrants who came to the U.S. to work were more likely to have health insurance compared to other types of legal immigrants (Pandey and Kagotho, 2010).

Also there is evidence that legal immigrants have an advantage in acquiring health insurance compared to undocumented immigrants, but have a disadvantage relative to natives (Goldman, Smith, and Sood, 2005). Furthermore, undocumented immigrants with health insurance were more likely to lose their insurance than natives and legal immigrants with health insurance (Prentice, Pebley, and Sastry, 2005). Furthermore, both undocumented and legal immigrants were less likely to gain insurance over a period of time than natives (Prentice, Pebley, and Sastry, 2005).

However, some ethnic groups appear more likely to have health insurance than others. For example, there is evidence that Hispanics are more likely to have health insurance after controlling for other variables (Paringer, 2007) (Angel, Frias, and Hill, 2005). However, it has also been found that Hispanic immigrants are less likely to have employer provided health insurance than non-Hispanic non-immigrants (Paringer, 2007).

A potential reason for Hispanic immigrants to be less likely to have employer provided health insurance, all other factors held constant, is that they may have access to substitutes other groups do not. Specifically, there is evidence immigrants from Mexico travel home to Mexico and purchase Mexican healthcare out of pocket, especially if they do not have to travel far to return Mexico (Brown, 2008). This is an example of an ethnic group specific substitute for health insurance, which could contribute to the differential in health insurance coverage between natives and immigrants. There could likely be other ethnic group specific substitutes, for different immigrant groups which could explain some of the private health insurance differential between immigrants and natives.

Similarly non-ethnic group specific substitutes for private health insurance need to be controlled for as well. For instance, there is evidence that when immigrants have public health insurance coverage removed, this causes immigrants to be more likely to acquire compensation packages that include employer provided health insurance (Borjas, 2003). As immigrants are more likely to be low-income, they may have increased access to public health insurance. As such, they may have little value for private health insurance. This could potentially explain part of the health insurance coverage difference between immigrants and natives as well.

Thus the literature finds that immigrants are less likely than natives to have health insurance. It shows that immigrants, particularly economically disadvantaged immigrants, are less likely to have private health insurance than natives. However, the empirical evidence also finds that many immigrants have substitutes for private health insurance in the U.S. Thus this

paper will need to control for not only human capital (which causes one to be more economically advantaged) but potential substitutes for private health insurance as well.

III. Theoretical model

This paper will test predictions of neoclassical microeconomic theory in predicting an immigrant's access to private health insurance. Two types of private insurance are considered: private insurance purchased by an individual in the insurance marketplace and employer provided health insurance.

a) Private Insurance Purchased by an Individual

First consider the market for privately purchased health insurance. This can be modeled using utility maximization subject to an income constraint. From this model, we can make some theoretical predictions.

Assuming insurance is a normal good, it can be predicted from this theory that individuals with higher incomes will purchase more health insurance. Since immigrants typically have less assets and human capital than natives and thus less income, we can expect them to purchase less private health insurance.

Similarly, individuals may have a preference structure that causes them not to value privately purchased health insurance in the United States. This could be due to a number of reasons. First, immigrants may have access to substitutes that natives do not, such as public health insurance or cheap healthcare that can be paid for out of pocket from their home country. Second, immigrants may also be risk loving and thus prefer to spend less income on

insurance compared to more risk averse natives. Given that immigrants take a risk by immigrating to the U.S., it seems likely immigrants could be more risk loving than natives. Another reason is that preferences for purchasing health insurance in the United States may be lower for immigrants is because they lack knowledge of insurance in general. They are new arrivals and, in many instances, may lack the English language proficiency or institutional connections to learn of health insurance opportunities. Similarly, they could be from a culture that does not use insurance, as such, it does not occur to them to purchase health insurance. For instance, in some societies, the younger generation takes care of the older generation, instead of hiring healthcare providers or purchasing health insurance.

Given the income and preference differences between natives and immigrants, it seems that immigrants will be less likely to have privately purchased health insurance than natives. However, after controlling for these variables, the coverage gap between immigrants and natives with regards to privately purchased health insurance should decrease.

b) Private Insurance Provided by the Employer

Health insurance is also provided by employers, which can be modeled as a hedonic wage function where workers have different preferences and different firms offer jobs with different characteristics (Borjas, 2010) (Folland, Goodman, Stano, 2004).

This theory can make many predictions similar to the utility maximization subject to an income constraint model. It predicts that individuals who have more human capital are more likely to choose a compensation package with employer provided health insurance. Immigrants often possess less human capital than natives, which could lead them to be less likely to have

employer provided health insurance. Similarly, it predicts differences in preferences for health insurance between immigrants and natives causes an immigrant to not value employer provided health insurance as highly. This causes immigrants to prefer compensation in the form of wages or some other benefit, instead of employer provided health insurance. These different preferences can be caused by things like the presence of substitutes and different risk preference. Immigrants could have access to substitutes in the form of cheap healthcare in their home country or public health insurance. Immigrants are likely to be more risk loving than natives as they are willing to travel to a new country. Thus, it seems likely that immigrants have different preferences for employer provided health insurance than natives. Considering immigrant's different preferences compared to natives and their lack of human capital compared to natives, it seems quite likely that immigrants are less likely to have employer provided health insurance. However, after controlling for these differences, there should be a convergence between immigrants and natives in employer provided health insurance coverage.

IV. Empirical Model

This paper uses data from the 2011 American Community Survey (ACS) extract via the IPUMS facility (Ruggles et al., 2010). The ACS is a yearly survey done by the U.S. Census Bureau. It is a large dataset, with many variables describing a respondent's human capital. Included in these human capital variables are variables that tend to be more immigrant specific human capital variables, such as the year an individual became a naturalized citizen and if the individual speaks English. Also included are more general human capital variables such as educational attainment. It also contains many health disability variables, denoting the type of

disability a respondent has. Finally, it contains a set of dummy variables denoting the type of health insurance an individual has. Most important of these variables are if an individual reports having employer provided health insurance or privately purchase health insurance. This paper uses data from all respondents who are aged 18-66, to omit those who qualify for Social Security and thus are likely not in the labor force.

This paper will report the results of two probit regressions with robust standard errors to determine if differences in private health insurance coverage between immigrants and natives can be explained by human capital and other variables. Since the dependent variables are dummy variables, a probit regression is used instead of an OLS regression. As such, theoretical variables that predict changes in the amount of private health insurance bought instead predict changes in the probability that private health insurance is bought. As employer provided health insurance is a substitute for privately purchased insurance, individuals with employer provided health insurance are omitted from the sample when estimating the probability of purchasing private health insurance. Therefore the sample size for employer provided health insurance is n=1978064, while the sample size for privately purchased health insurance is n=809433. For ease of interpretation, the reported coefficients are marginal effects on the probability of having private health insurance. This means the coefficients represent the change in probability of having private insurance (either employer provided insurance or privately purchased insurance), when the independent variable has a unit increase from its mean value, with all other independent variables held at their mean. If the independent variable is a dummy variable, the coefficient reports the change in probability of having private health insurance when the dummy variables changes from 0 to 1.

All variables used in both regressions are defined in Table 1. First, the dependent variables are defined, with regards to the ACS survey. These are EMPHINS, the variable for if the respondent has employer provided health insurance and PRVTHINS, where the respondent reports having privately purchased health insurance.

The first group of independent variables is all dummy variables used to control for the effect of education. These variables include HS, SOMECOLLEGE, ASSOCIATES, BACHELORS, MASTERS, and PHD, with the omitted group being high school dropouts. As education is a human capital variable, it should raise an individual's productivity. This causes them to be likely to receive more benefits, such as employer provided insurance, from their employer. It is also an important control variable for socio economic status in the privately purchased health insurance regression. As educational attainment is correlated with higher socio economic status, it should increase the probability an individual purchases private health insurance. As each of these variables signify higher human capital than the omitted group (high school dropouts), it can be hypothesized they will all have positive coefficients, with each higher educational attainment level having a larger coefficient than the last level.

The next group of independent variables is the dummy variables indicating if the individual possesses or does not possess U.S. specific human capital. These variables are SPKENG, NATURALIZEDCTZ, and NOTCITIZEN. It should be noted that unlike educational attainment, U.S. specific human capital makes privately purchased health insurance easier to obtain, instead of merely being a proxy for socio economic status. For example, an individual that speaks English will have an easier time purchasing health insurance than an individual who

does not. Like all forms of human capital, these variables should make one more productive, and thus more likely to receive employer provided health insurance. Thus individuals with higher amounts of U.S. specific human capital should have increased probability of having private health insurance. Since speaking English is a type of human capital, it can be expected to have a positive coefficient. Also being a naturalized citizen (NATURALIZEDCTZ) or not having citizenship (NOTCITIZEN) leaves native citizens as the omitted group. Therefore, as non-citizens and naturalized citizens have less U.S. specific human capital than natives, these coefficients should be negative. It can be hypothesized that naturalized citizens will have a less negative coefficient than non-citizens, as they have more U.S. specific human capital.

Next there are the immigrant cohort dummy variables, EARLYCOHORT, MIDDLECOHORT, and RECENTCOHORT. These variables denote how long the respondent has been in the U.S., with natives being the omitted group. EARLYCOHORT denotes an immigrant who has been in the U.S. for over ten years, MIDDLECOHORT denotes an immigrant who has been in the U.S. for five to ten years and EARLYCOHORT denotes an immigrant who has been in the U.S. for less than five years. These variables will answer the primary question of this paper, what is the health insurance differential between natives and immigrants after controlling for human capital. As natives are the omitted group, all of these variables should have a negative effect on the probability of having private health insurance, with RECENTCOHORT having the smallest coefficient, then MIDDLECOHORT, and then EARLYCOHORT. This is because over time immigrants should acquire U.S. specific human capital. However, they will have less U.S. specific human capital than natives, so it can be predicted all of the coefficients of these variables will

be negative in both regressions. However, these variables should show if the health insurance differential is narrowing as immigrant acquire U.S. specific capital.

The next group of independent variables is the disability dummy variables. These include DISCOG, DISPHYS, DISSENSORY, DISINDLIVE, and DISCARE. The omitted group for each dummy variable is an individual who reports not having the disability. As individuals with a disability will be more expensive to insure and thus they will be less likely to have private insurance, these variables should have a negative coefficient.

Finally, there are the UHRSWORK, FTOTINC, and AGE variables. UHRSWORK is how many hours a week the respondent reports usually working. More hours worked should correspond with more compensation from their firm. Therefore, more hours worked implies that an individual will be more likely to receive employer provided health insurance. However, there is no reason for this to affect one's probability to have privately purchased insurance, after controlling for income. Therefore, UHRSWORK will only be in regression 1. FROTINC is the respondent's reported total family income. Since income should make it easier for individuals to purchase health insurance, it can be hypothesized to have a positive coefficient. As such it will only be used in regression 2, which estimates the probability an individual purchases private health insurance. Finally, AGE should be correlated with work experience and other types of human capital this study does not measure for, along with socio economic status. However, AGE could also be correlated with health problems that would make it more expensive to insure an individual. These health problems could also make an individual less productive. As such, no theoretical prediction can be made for the AGE variable.

Table 1: Variable Definitions

Variable Name	Variable Definition	Expected Sign
EMPHINS	If the respondent receives health insurance from an employer or union (whether it be their employer\union or a family member's). Dependent variable for Regression 1.	N\A
PRVTHINS	If the respondent reports having privately purchased insurance (purchased by them or another family member). Dependent variable for Regression 2.	N\A
HS	If the respondent reports having a high school diploma or GED.	+
SOMECOLLEGE	If the respondent reports having college credit but no degree.	+
ASSOCIATES	If the respondent reports having an Associate's degree.	+
BACHELORS	If the respondent reports having a Bachelor's degree.	+
MASTERS	If the respondent reports having a Master's degree or another professional degree.	+
PHD	If the respondent reports having a Ph.D.	+
SPKENG	If the respondent can speak English	-
NATURALIZEDCTZ	If the respondent is a naturalized U.S. citizen.	-
NOTCITIZEN	If the respondent is not a U.S. citizen.	-
EARLYCOHORT	If the respondent has lived for over 10 years in the U.S.	

MIDDLECOHORT	If the respondent has lived between 5 and 10 years in the U.S.	-
RECENTCOHORT	If the respondet has lived in the U.S. for less than 5 years.	-
DISCOG	If the respondent notes having cognitive difficulty.	-
DISPHYS	If the respondent is notes having difficulty doing physical tasks, such as walking, lifting etc.	-
DISSENSORY	If the respondent reports having earing difficulty, vision difficulty or both.	-
DISINDLIVE	If the respondent reports having an emotional, physical, or mental condition preventing them from living independently.	-
DISCARE	If the respondent reports having an emotional, physical, or mental condition preventing them from caring for themselves.	+
FTOTINC	Reported family income of the respondent (only in regression 2).	+
UHRSWORK	Reported usual hours worked (only in regression 1).	N\A
AGE	Respondent's reported age.	-
PUBHINS	If the respondent reports having access to public health insurance.	

V. Results

a. Descriptive Statistics

Table 2 presents the health insurance coverage rates of the immigrant cohorts and natives with regards to health insurance. The early cohort is defined as immigrants who have been in the U.S. for over 10 years (as such, they arrived the earliest), the middle cohort is defined as immigrants who have been in the U.S. for 5 to 10 years (including 5 and 10 years of residence) and the recent cohort is defined as immigrants who have been in the U.S. for less than 5 years. As Table 2 shows, there is quite a big difference between natives and immigrants on health insurance coverage rates. Specifically, only 16.3% of natives lack health insurance, compared to 28.8% of the early arrivals, 44.2% of the middle arrivals and, 39.0% of recent arrivals. Other health insurance categories show that natives have higher coverage rates for every category of health insurance. Also Table 2 reports that it is unlikely that these populations all have the same distribution of health insurance, by using a Pearson Chi-Square test. This is important as it suggests that the distribution in health insurance among the immigrant groups and natives is unlikely to be the same.

Table 2: Health Insurance Rates by Immigrant Cohorts and Natives.				
	Natives	Early Cohort	Middle Cohort	Recent Cohort
No Insurance	16.3%	28.8%	44.2%	18.7%
Employer Provided Insurance	58.2%	48.3%	36.5%	33.9%
Privately Purchased Insurance	8.1%	6.7%	5.7%	13.3%
Other Insurance	11.4%	16.2%	13.6%	13.8%
Pearson Chi Square Statistic: 54348.132				
Significance: 0.000				

Next this paper examines differences in educational attainment rates between immigrants and natives. Table 3 reports the educational attainment rates of the immigrant cohort and natives. It especially stands out that only 9.8% of natives have less education than a high school diploma, while 27.8% of the early immigrant cohort does, 28.9% of middle immigrant cohort does, and 22.7% of recent immigrant cohort does. However, immigrants appear to have more graduate degrees than natives. For instance, .9% of natives have a Ph.D. compared to 1.9% of the early immigrant cohort, and 2.3% of the middle immigrant cohort and 2.3% of recent immigrant cohort. However, natives have a greater percentage of bachelor degree holders than all but the most recent immigrant cohort. This suggests that immigrants may be over represented among both the high skill and low skill sectors of the economy. As such, immigrants who are in the low skill sectors of the economy may lack health insurance because of their low skills, either directly in the case of employer provided health insurance (they receive less compensation) or indirectly in the case of privately purchased health insurance (they cannot afford to purchase health insurance). These findings suggest that at

least some of the differences in health insurance coverage between immigrants and natives could be explained by their differences in educational attainment. This is shown formally, as the Pearson Chi-Square test was found to be highly statistically significant.

Table 3: Educational Attainment and Immigrant Cohorts and Natives.				
	Natives	Early Cohort	Middle Cohort	Recent Cohort
Less than High School	9.8%	27.8%	28.9%	22.7%
High School Diploma	28.9%	21.9%	23.6%	20.2%
Some College	26.1%	16.6%	15.0%	17.8%
Associate's Degree	8.4%	6.5%	5.2%	4.2%
Bachelor's Degree	17.3%	16.0%	15.8%	20.4%
Master's Degree	8.6%	9.3%	9.3%	12.4%
Ph.D.	.9%	1.9%	2.3%	2.3%
Pearson Chi Square Statistic: 86061.766				
Significance:0.000				

Thus, it can be seen that while there are vast differences in health insurance coverage between the immigrant cohort and natives, there are also vast differences among educational attainment between these groups. This is formally shown using a Pearson Chi-Square test for these categories. The next section uses probit regressions with marginal effects to predict the effect of being an immigrant on the probability of having private insurance, while controlling for these human capital related variables.

b. Regression Results and Discussion

The first regression examines the probability that an individual has employer provided health insurance. Table 4 shows the coefficients of each independent variable in this regression. It also reports that this regression has a Wald Chi-Square value of 410000. Therefore, the regression is statistically significant. The coefficients show that all three of the immigrant

groups are less likely to have employer provided health insurance than natives. This result is consistent with theory. Surprisingly, this regression reports that immigrants who have been in the U.S. for less than 5 years are more likely to have employer provided health insurance than immigrants who have been in the U.S. for 5 to 10 years. However, immigrants who have been in the U.S. for over 10 year were the most likely of all immigrant cohorts to have employer provided health insurance. Age was found to be positively correlated with employer provided health insurance. Similarly, so was usual hours worked. However, access to public health insurance was negatively correlated with having employer provided health insurance. Naturalized citizens were not found to statistically different from natives in their probability of having employer provided health insurance. However, non-citizens were found to be statistically less likely to have employer provided health insurance than natives. All of the education dummy variables had the correct sign and were increasing with higher levels of educational attainment, except for PH.D which had a slightly smaller coefficient than MASTERS. Finally, all of the disability dummy variables are negative and significant, which was predicted. Overall, this regression is loosely consistent with the hypothesis that immigrants' health insurance coverage rate will converge to natives' employer provided health insurance coverage rate after controlling for human capital.

Table 4: Results from Employer Provided Health Insurance Regression

Variable Name	Coefficient	Z value	Statistical Significance (Standard Error)
RECENTCOHORT	-.089825	-19.63	0.000 (.0046226)
MIDDLECOHORT	-.0994478	-23.93	0.000 (.0041953)
EARLYCOHORT	-.0552212	-17.10	0.000 (.0032577)
AGE	.0040817	142.50	0.000 (.0000286)
UHRSWORK	.0047105	218.77	0.000 (.0000215)
PUBHINS	-.3925431	-346.12	0.000 (.0010044)
SPKENG	.1773125	40.32	0.000 (.0043472)
NATURALIZEDCTZ	-.0002469	0.07	0.944 (.0034931)
NOTCITIZEN	-.1516093	-41.75	0.000 (.0036339)
HS	.142395	106.75	0.000 (.0012871)
SOMECOLLEGE	.2124145	159.81	0.000 (.0012297)
ASSOCIATES	.2369165	150.58	0.000 (.0013028)
BACHELORS	.2935685	218.44	0.000 (.0011068)
MASTERS	.3187362	210.22	0.000 (.0010672)
PHD	.3184193	95.53	0.000 (.0019256)
DISCOG	-.1044186	-45.38	0.000 (.0023219)
DISPHYS	-.0528859	-24.71	0.000 (.0021606)
DISSENSORY	-.042723	-19.82	0.000 (.0021744)
DISINDLIVE	.009483	3.38	0.001 (.0027966)
DISCARE	.0273955	7.70	0.000 (.0035223)
Wald Chi-square: 410000 (4.1e+05)			
Prob > chi2: 0.0000			

Next, regression 2 shows how the various independent variables explain the probability of an individual having privately purchased health insurance. These results are reported in Table 5. This regression has a Wald Chi-square value of 94600.58, thus this regression is highly statistically significant. It finds that recent arrivals were more likely than natives to buy health insurance. This is inconsistent with expectations, as recent immigrants should be at a disadvantage when it comes to purchasing health insurance. However, the results also show that later arrivals were less likely to buy health insurance than natives. Furthermore, as length

in the time in the US increases, immigrants became less likely to buy health insurance. This is again inconsistent with expected results. Age and income were both statistically significant and positively correlated with purchasing private health insurance. Access to public health insurance is negatively correlated with purchasing private health insurance. All of the variables measuring U.S. specific human capital were statistically significant, with only naturalized citizenship not matching the predicted sign. All of the education variables are positive and statistically significant and increasing with educational attainment. Only disability in living independently was statistically insignificant with regards to the disability dummy variables. All of the disability variables except disability in self-care were negatively correlated with an individual purchasing health insurance. It appears that this regression had many findings that were not consistent with predictions, particularly with regards to the immigrant dummy variables.

Table 5: Results from Privately Purchased Insurance Regression

Variable Name	Coefficient	Z value	Statistical Significance (Standard Error)
RECENTCOHORT	.0753134	14.62	0.000 (.0057431)
MIDDLECOHORT	-.0589847	-14.91	0.000 (.0033619)
EARLYCOHORT	-.0623955	-19.41	0.000 (.0028363)
AGE	.0035694	113.67	0.000 (.0000313)
FTOTINC	-9.98e-10	-6.84	0.000 (1.46e-10)
PUBHINS	-.149841	-165.23	0.000 (.0007895)
SPKENG	.1019433	27.11	0.000 (.0024772)
NATURALIZEDCTZ	.0387534	9.29	0.000 (.0044333)
NOTCITIZEN	-.0572788	-16.16	0.000 (0031459)
HS	.0844052	56.78	0.000 (.0015461)
SOMECOLLEGE	.1702041	102.89	0.000 (.0018188)
ASSOCIATES	.2005724	82.69	0.000 (.0028424)
BACHELORS	.3519524	160.35	0.000 (.0025031)
MASTERS	.4258391	141.13	0.000 (.0033572)
PHD	.4808549	60.07	0.000 (.0085345)
DISCOG	-.0485239	-26.31	0.000 (.0016547)
DISPHYS	-.0289829	-15.79	0.000 (.0011269)
DISSENSORY	-.026849	-13.72	0.000 (.001846)
DISINDLIVE	-.0009799	-0.40	0.689 (.0024441)
DISCARE	.0115674	3.58	0.000 (.0032987)
Wald Chi-square: 94600.58			
Prob > chi2: 0.0000			

VI Conclusions

Many studies examine immigrant status and the probability of having private health insurance. However, few look at privately purchased health insurance and employer provided health insurance separately. This paper did this by running two separate probit regressions.

In the first regression, this paper analyzed how immigrant status is correlated with the probability of having employer provided health insurance. It found that immigrants who had lived in the US for less than 5 years were more likely to have employer provided health

insurance than those who had lived in the U.S. for 5 to 10 years. This is inconsistent with the hypothesis that as the human capital gap narrows between immigrants and natives, the private health insurance gap should narrow as well. This is because the longer an immigrant lives in the U.S., the more U.S. specific human capital they should accumulate, lessening the human capital gap between immigrants and natives, all other factors held constant. A possible explanation for this result is that there may be unobserved heterogeneity among these immigrant cohorts. For instance, more recent immigrants could be coming to the US primarily seeking employment, while the middle immigrant cohort could have come to the US primarily for other reasons. This would cause the recent immigrants to be more likely to receive employer provided health insurance. Furthermore, these cohorts could be composed of different ethnicities and this could cause heterogeneity as well. Therefore, more research may be needed to be done in this area to better control for this heterogeneity across immigrant cohorts.

However, it was found that immigrants who had lived in the U.S. for over 10 years were more likely to have employer provided health insurance than either of the other two immigrant cohorts. This suggests there may be some convergence in employer provided insurance coverage after all. However, it is still possible this effect could be due to unobserved heterogeneity between these immigrant cohorts. It should be noted that all of these coefficients were relatively small compared to other coefficients in this regression. For instance, all educational attainment variables were found to have a larger effect than the immigrant variables. This suggests that while immigrants may be less likely to have employer provided health insurance relative to natives, the effect of immigrant status is small. Therefore, the best way to close the unadjusted health insurance coverage rate gap between immigrants and

natives with regards to employer provided health insurance is to close the human capital gap between immigrants and natives. However, these results cannot rule out that immigrants suffer discrimination with regards to employer provided health insurance. However, one should not read into this conclusion too strongly, as more controls for immigrant heterogeneity are likely needed. In sum, it appears that the results of this regression loosely support the hypothesis that there is a convergence in employer provided health insurance rates between natives and immigrants, as human capital is controlled for. However, further research is needed in this area, specifically to account for heterogeneity between these immigrant cohorts.

Regression 2 found that the recent immigrant cohort was more likely to purchase private health insurance than natives. This finding is inconsistent with the expectations that the human capital gap between immigrants and natives creates the private health insurance coverage gap between immigrants and natives. This is because the most recent immigrants likely have less U.S. specific human capital than natives, so they should be less likely to purchase private health insurance, all other factors held constant.

It also found that immigrants, who had lived in the U.S. for 5 years or more, were less likely to purchase private health insurance than natives. Surprisingly, it was found that the longer an immigrant was in the U.S., the less likely they were to purchase private health insurance. This is also inconsistent with the hypothesis that the private health insurance coverage gap between natives and immigrants is driven by differences in human capital. This is because the longer an immigrant lives in the U.S. the more U.S. specific human capital they acquire, which should increase the probability they purchase health insurance.. A possible

explanation for this finding is that there is unobserved heterogeneity in these immigrant cohorts and this causes them to have different preferences for health insurance. Another possible explanation could be that privately purchased health insurance is actually an inferior good relative to some alternative. Some other form of health insurance or another substitute could be purchased instead of privately purchased health insurance as immigrants gain human capital. All of the educational dummy variables were positive and increasing with educational attainment.

All of the educational attainment dummy variables were found to have larger coefficients than the immigrant dummy variables. Therefore, the best way to close the unadjusted coverage rate gap between immigrant and natives is the help increase educational attainment among immigrants. Overall, this regression appears to support the hypothesis that the human capital gap between immigrants and natives creates much of the insurance coverage differential between immigrants and natives. However, it is still possible that immigrants suffer discrimination or some type of systematic disadvantage in acquiring privately purchased health insurance.

Furthermore, every individual with employer provided health insurance was omitted from this sample. This could lead to sample selection bias. There also appears to be some evidence that at high level of human capital, individuals switch to some other substitute instead of privately purchased health insurance. This is strengthened by the fact that if this regression is run with the same sample as regression 1, educational attainment appears to have a quadratic effect on the probability of purchasing private health insurance (this result is not shown in this

paper). Therefore, it appears that a possible substitute is employer provided health insurance. More research is needed to address these issues, particularly dealing with unobserved heterogeneity in the immigrant cohorts and potential substitutes for privately purchased health insurance..

In all, this paper found that the hypothesis that, much of the differential in private health insurance coverage between immigrants and natives is caused by human capital, was loosely supported. However, even after controlling for human capital, natives had a higher probability to have private health insurance than immigrants in both regressions, with the exception of the most recent immigrants in regression 2. It is important for research to continue in this area over the next several years to determine how these results might change when the Affordable Care Act is fully implemented. Furthermore, more research is needed to explore heterogeneity between these immigrant cohorts and how this heterogeneity changes the estimates of the probability an immigrant is to receive private health insurance.

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