

## **Immigrants and Employer-Sponsored Health Insurance**

Thomas C. Buchmueller  
Graduate School of Management  
University of California, Irvine

Anthony T. Lo Sasso\*  
School of Public Health  
University of Illinois at Chicago

Ithai Lurie  
Institute for Policy Research  
Northwestern University

Sarah Senesky  
Mathematica Policy Research

August 2005

\*Contact author: Associate Professor, Health Policy and Administration Division, School of Public Health, University of Illinois at Chicago, 1603 W. Taylor, Chicago, IL 60612, voice: 312-413-1312, fax: 312-996-5356, email: [losasso@uic.edu](mailto:losasso@uic.edu). We gratefully acknowledge financial support for this research by a grant from the Economic Research Initiative on the Uninsured. We thank Jen'nan Read, Leighton Ku, and seminar participants at the fall 2004 meeting of the ERIU and the 2004 AcademyHealth Annual Research Meeting.

## **Immigrants and Employer-Sponsored Health Insurance**

**Objective:** To investigate the factors underlying the lower rate of employer-sponsored health insurance coverage for foreign-born workers.

**Data Sources:** 2002 Survey of Income and Program Participation.

**Study Design:** We estimate probit regressions to determine the effect of immigrant status on employer sponsored health insurance coverage, including the probabilities of working for a firm that offers coverage, being eligible for coverage, and taking up coverage.

**Data Extraction Methods:** We identified native born citizens, naturalized citizens, and non-citizen residents between the ages of 18 and 65, in the year 2002.

**Principal Findings:** First, we find that the large difference in coverage rates for immigrants and native-born Americans is driven by the very low rates of coverage for non-citizen immigrants. Differences between native-born and naturalized citizens are quite small and for some outcomes are statistically insignificant when we control for observable characteristics. Second, our results indicate that the gap between natives and non-citizens is explained mainly by differences in the probability of working for a firm that offers insurance. Conditional on working for such a firm, non-citizens are only slightly less likely to be eligible for coverage and, when eligible, are only slightly less likely to take up coverage. Third, roughly two-thirds of the native/non-citizen gap in coverage overall and in the probability of working for an insurance-providing employer is explained by characteristics of the individual and differences in the types of jobs they hold.

**Conclusions:** The substantially higher rate of uninsurance among immigrants is driven by the lower rate of health insurance offers by the employers of immigrants.

**Keywords:** Health insurance coverage, employer-sponsored health insurance, immigrants, non-natives, naturalized citizens

## Introduction

Interest in the health status of immigrant populations has increased dramatically in response to their rapid growth over the past two decades. More immigrants came to live in the US in the 1990s than in any other decade in the nation's history, surpassing even the record number of arrivals during the 1980s. As a result, the foreign born share of the population has doubled from 5% to 10% between 1970 and 2000 (Fix and Passel 2002). In recent years, the majority of immigrants have come from Latin America and Asia (US Immigration and Naturalization Service 2003). Forty percent of Hispanics living in the US and over two-thirds of US Asians are foreign-born (Malone et al. 2003).

Immigrants represent a particularly vulnerable population when it comes to health insurance coverage and access to health care.<sup>1</sup> According to 2002 data from the Survey of Income and Program Participation (SIPP), adults who were born outside the US are nearly three times as likely to be uninsured as native-born Americans: nearly 32% vs. 13.4%.<sup>2</sup> The link between health insurance and health care utilization is well documented;<sup>3</sup> several recent studies show that their lower rate of insurance coverage is one factor contributing to immigrants' lower utilization, including lower rates of cancer screening and other types of preventive care (Ku and Matani 2001; Carrasquillo and Pati 2004; De Alba et al. 2005; Mohanty et al. 2005).

The difference in insurance coverage between native-born Americans and immigrants is almost entirely due to a difference in employer-sponsored insurance (ESI): 84.5% of native adults have such coverage compared to only 66.1% of foreign-born adults. Because they tend to

---

<sup>1</sup> Pollack and Kronebusch (2004) identify a number of (overlapping) groups that could be considered vulnerable: African Americans, Hispanics, Asians, people in poverty, people with self-reported poor health, people with health limitations in school or work, people between the ages of 55 and 64 and recent immigrants. Of these groups, recent immigrants were most likely to be uninsured.

<sup>2</sup> We provide more details on the SIPP data below.

<sup>3</sup> See Buchmueller et al. (2005) for a recent review.

have lower incomes, immigrant adults are actually more likely than natives to have public insurance, though the difference is small (9.2% vs. 7.8%). Non-group insurance is not an important source of coverage for either group (6% for natives and 5% for immigrants). Therefore, in order to understand immigrants' lower rate of insurance coverage it is necessary to understand why they are less likely to hold ESI coverage.

The objective of this study is to document and explain differences in ESI coverage between immigrant and native-born American adults. The analysis is based on 2002 data from the SIPP. We begin by examining whether immigrants are less likely to have ESI because they are less likely to be employed or more likely to be self-employed than natives. Then, turning our focus to workers, we decompose the native/immigrant gap in ESI into differences in (a) the probability of working for a firm that offers insurance; (b) eligibility for coverage conditional on working for such a firm; and (c) take-up conditional on eligibility. For each outcome, we estimate multivariate regression models to determine how much of the gap between native-born citizens and immigrants is explained by observable characteristics. Among immigrants, we distinguish between naturalized citizens and non-citizens. All analyses are performed on samples that include both men and women and separately by gender.

Four main findings emerge from our analysis. First, consistent with prior studies, we find that the large difference in coverage rates for immigrants and native-born Americans is driven by very low rates of coverage for non-citizen immigrants. Differences between native-born and naturalized citizens are fairly small and in many cases not significantly different from zero. Second, the gap between natives and non-citizens in ESI coverage is explained mainly by differences in the probability of working for a firm that offers health insurance. Conditional on working for such a firm, differences between natives and non-citizens in eligibility and take-up

are small and generally statistically insignificant. Third, most of the native/non-citizen gap can be explained by differences in observable characteristics between the two groups. Fourth, we find important differences by gender. The raw percentage point gap in ESI for between native and non-citizen workers is substantially larger for men than for women and observable characteristics explain a smaller share of the male gap than the female gap.

### **Background and Previous Literature**

Despite the great concern among policymakers and researchers about the health insurance coverage of vulnerable populations, research on explanations for the low rate of coverage among immigrants is relatively limited. Some recent studies consider differences between immigrants and natives in the propensity to enroll in Medicaid and other public programs and the extent to which the 1996 welfare reform legislation that restricted eligibility for new immigrants also had the effect of reducing the willingness of eligible immigrants to apply for public benefits (Borjas and Hilton 1996; Ellwood and Ku 1998; Zimmerman and Fix 1998; Lofstrom and Bean 2001; Capps et. al. 2002; Kandula et al. 2004; Kaushal and Kaestner 2005). Although important, this line of research is of limited usefulness for understanding the large difference in insurance coverage between natives and immigrants because that difference is driven primarily by a gap in ESI.

Three recent studies provide national estimates of private insurance coverage rates for foreign-born adults.<sup>4</sup> Thamer et al. (1997) show that in 1989-90 immigrants were roughly 20% less likely than native-born Americans to hold private insurance. Their descriptive analysis does not account for differences in citizenship status among immigrants, a distinction that the two

---

<sup>4</sup> Several studies report on the private health insurance coverage of specific demographic subgroups or immigrants living in certain geographic areas (Sidharthan 1991; Capps et al 2002; Lucas et al. 2003; Prentice, Pebley, and Sastry 2005; Ponce, Nordyke, and Hirota 2005).

other national studies show is important. Carrasquillo et al. (2000) report that in 1997 the percentage of non-citizen immigrants who were uninsured was 29 percentage points higher than the percentage of native-born citizens, whereas the difference between natives and naturalized citizens is less than 6 percentage points. Using different data for the same year, Ku and Matani (2001) find that after controlling for income and basic demographic characteristics, differences between natives and naturalized citizens are statistically insignificant. An important strength of that study is that the authors separately examine native/immigrant differences by type of coverage. The results confirm that the primary reason that non-citizen immigrants are more likely to be uninsured is that they are less likely to have ESI. However, the exact reasons why immigrants are less likely to have ESI remain unclear.

Coverage through an employer-sponsored health plan is determined by several intermediate outcomes. First, an adult must work (or have a spouse who works). In addition, the nature of a person's employment has important implications for private health insurance coverage. It is well-known that self-employed individuals have significantly lower rates of insurance coverage than wage and salary workers (Hamilton 2000; Rosen and Perry 2001). Other research shows that, conditional on working, immigrants are more likely than native-born Americans to be self-employed (Borjas 1986; Fairlie and Meyer 1996). It is not known how important self-employment behavior is in explaining the lower rate of health insurance coverage for immigrants.

Among wage and salary workers, in order to be covered by ESI it is necessary to work for a firm that offers health benefits, to be eligible for those benefits, and to take up coverage. Previous studies have shown that the distinction among these intermediate outcomes is important for understanding trends in insurance coverage and differences across groups of workers. For

example, Cooper and Schone (1997) show that the decline in ESI coverage between 1987 and 1996 was driven by a decline in employee take-up rather than a reduction in the number of employers offering health benefits. Farber and Levy (2000) contrast trends over the same period for higher skill “core” and lower skill “peripheral” workers. They find that for the former, declines in take-up explain most of the decline in ESI coverage, while changes in eligibility are important for the latter. Buchmueller, DiNardo, and Valleta (2002) show that the significant coverage gap between union and non-union workers has different sources, depending on firm size.

Decomposing the native/immigrant coverage gap according to these intermediate outcomes is useful for gaining a better understanding of the gap and for considering the effects of alternative policy initiatives. Suppose, for example, that immigrants were just as likely as natives to be offered ESI, but were less likely to take up coverage. This would point to low demand as a potentially important explanation for the lower insurance coverage of immigrants. If that were the case, policies that induced more employers to offer health benefits might have little impact on the coverage rate for immigrants. Or, suppose that immigrants were just as likely as natives to work for a firm that provided health insurance, but were more likely to be in part-time jobs that were not eligible for benefits. In this case, policies requiring employers to extend benefits to a broader number of employees could have a disproportionate impact on immigrants.<sup>5</sup> Expanding eligibility within firms that already offer coverage would have little effect on the native-immigrant gap if immigrants were less likely to work for firms that offer health benefits.

---

<sup>5</sup> An example of such a policy is California’s Senate Bill 2 (SB2) that was signed into law in 2003, but later repealed by a referendum. SB2 had several provisions that affected firms of different sizes and that would have been phased in over time. The initial provisions would have required larger firms that offered coverage to full-time workers to extend coverage to all employees working more than 100 hours per month (Brown et al, 2003). Since it is typical for firms to limit eligibility to full-time employees, SB2 would have expanded eligibility within firms that offer health benefits.

In this case, policies that increase the number of employers offering coverage or policies that made non-group insurance more affordable would have the greatest impact on the coverage of immigrants.

## **Data**

Our analysis is based on data from the 2001 panel of the Survey of Income and Program Participation. The SIPP is a longitudinal survey in which respondents are interviewed every four months over a three-year period. In each wave there is a core survey consisting of questions that are asked at every interview and several topical modules with detailed questions on specific topics. Information on employer offers of insurance is available in a Wave 5 topical module that was administered between July and October of 2002.<sup>6</sup> Data on immigration history and citizenship comes from a Wave 2 topical module administered exactly one year earlier. Our analysis focuses on adults between the ages of 18 and 64. A total of 38,041 adults responded to both Waves 2 and 5 of the survey.<sup>7</sup>

For this study the SIPP has several important advantages over the two datasets most commonly used to study health insurance coverage, the March Current Population Survey (CPS) and the Medical Expenditure Panel Survey (MEPS). The two main advantages of the SIPP over the CPS concern the data on health insurance. First, the health insurance questions in the SIPP refer to coverage at the time of the survey, whereas the March CPS question refers to coverage in the prior year. For this reason, the insurance coverage variable in the SIPP is generally viewed

---

<sup>6</sup> The core survey, which is asked every wave, includes questions on insurance coverage, but does not provide enough information to distinguish individuals who work for firms that do not provide insurance from workers who decline coverage.

<sup>7</sup> Restricting the sample to a group of respondents that could be found and re-interviewed over a year-and-a-half period had the effect of slightly increasing insurance coverage rates: 82.0 percent of all adults who responded to the Wave 5 survey reporting being insured compared to 82.9 percent for those who responded in both Waves 2 and 5.

to be more accurate (Short 2001). Second, in the March CPS it is not possible to distinguish individuals who work for firms that do not provide insurance from workers who decline coverage their employer offers. The insurance variables in the MEPS are more like those in the SIPP, but the information on immigration status is not as good. In particular, there is no information on citizenship status. This is important given our expectation that differences in insurance coverage between naturalized citizens and non-citizen immigrants are nearly as large as those between natives and non-citizens.

## **Results**

### ***Employment and Self-Employment by Nativity and Citizenship***

Employment status is clearly a crucial determinant of ESI coverage among adults. For our full sample, 43.8% of adults who are not employed report having ESI compared to 51.9% of those who are self-employed and 82.2% of wage/salary employees. Because of these large differences in ESI coverage across employment categories, we begin by examining the distribution of employment for native-born adults and immigrants (Table 1).

Consistent with previous studies, the data show that conditional on working, immigrants are more likely than natives to be self-employed. Splitting the immigrant group by citizenship status shows that self-employment differences are driven by higher rates of self-employment by naturalized citizens. All else equal, this should reduce ESI coverage of naturalized citizens relative to natives, though for men this effect will be countered by the fact that naturalized citizens are more likely to work than their native counterparts. The situation is different for non-citizens, who are both more likely to work and less likely to be self-employed than natives. These differences in employment outcomes should *increase* the coverage of non-citizen

immigrants relative to natives, all else constant.

### *The Determinants of Coverage by Employer-Sponsored Insurance*

Table 2 presents several estimates of the difference in ESI coverage between natives and immigrants controlling for different observable characteristics. In Panel I, the sample includes all adults (i.e., workers and non-workers) and dependent variable is ESI coverage from any source. Column 1 reports the raw difference in coverage between natives and all immigrants, which is 18 percentage points. In column 2, we split the immigrant group according to citizenship status. As expected, there are large differences between naturalized citizens and non-citizens. For non-citizens, the coverage gap relative to natives is 26 percentage points, compared to a gap of only 6 percentage points when naturalized citizens are compared to natives. These unadjusted differences are essentially the same as what Carrasquillo et al. (2000) find using data from the 1998 March CPS.

What fraction of these gaps can be explained by differences in observable individual characteristics between natives and foreign-born adults? In column 3 we report adjusted coverage gaps based on a regression that controls for basic demographic and human capital variables: age, gender, marital status, race/ethnicity and education.<sup>8</sup> Accounting for these variables cuts the gap between natives and naturalized citizens roughly in half and reduces the native/non-citizen gap by a little more than 40 percent. Education is the most important independent variable in terms of explaining the lower rate of ESI coverage for non-citizens. They are much more likely than the other two groups not to have completed high school (40.6% compared to 10.1% for natives) and slightly less likely to have at least a college degree (21% vs.

---

<sup>8</sup> Summary statistics for all variables are reported in Appendix Tables 1 (all adults) and 2 (workers). Full regressions results for several models are reported in Appendix Table 3.

26%). This difference in educational attainment accounts for about 6.8% points of the difference in ESI coverage between natives and non-citizens, or about 60% of the explained portion of the gap. Non-citizen immigrants are also younger on average than natives. The difference in age accounts for a small though still significant part of the gap. All else equal, the 4 year difference in mean age translates to a difference in ESI of 1.2 percentage points.

One “non-result” deserves mention. A number of studies have documented that recent immigrants tend to have healthier lifestyles, better health status, and better health outcomes than natives (see Singh and Siahpush (2002) and references therein). It is conceivable, then, that some immigrants may choose not to have health insurance because of a low expected need for medical care. Our results provide no evidence in support of this hypothesis. A similar percentage of natives and non-citizen immigrants describe their health as fair or poor, and immigrants are actually less likely to report excellent health. Moreover, the estimated effect of self-reported health in our regressions indicates a *positive* relationship between good health and employer-sponsored insurance coverage. Thus, to the extent that non-citizen immigrants are healthier than natives in ways not captured by this single self-assessed health measure, this should lead to higher, not lower rates of coverage.

In the last column of Panel I, we add controls for employment status. Based on the results in Table 1, we would expect this to decrease the adjusted gap between natives and naturalized citizens and increase the gap between natives and non-citizens. This is what we find, though for both groups the difference between the coefficients in columns 3 and 4 is small and not statistically significant. The point estimate of the gap between natives and naturalized citizens is 3.8 percent, which is comparable to the estimate by Ku and Matani (2001). Our regression adjusted gap for non-citizens is higher than what they find: 14 percentage points

compared to 9 percentage points. The difference may be the result of slight differences in empirical specification, such as their inclusion of income in the regression model.<sup>9</sup>

In Panel II of Table 2, the dependent variable is still ESI from any source, but the sample is limited to non-self-employed workers. The models in columns 1-3 have the same independent variables as the corresponding models in Panel I. As expected, the limiting the sample to workers does not have much effect on the regression-adjusted differences. The last column adds controls for several job characteristics: industry, occupation, union membership, job tenure, full time/part time employment, employer type (private for profit, private not for profit, government) and firm size. For non-citizens, the inclusion of these variables reduces the unexplained gap in coverage from 11.5 to 8.7 percentage points. Three job characteristics account for most of this change. First, natives are more likely than non-citizens to work for firms with more than 100 employees (the largest category in the SIPP): 69% vs. 56%. Because of the strong gradient with firm size, this difference translates to a difference in coverage of 1.7 percentage points. Unionized workers are also more likely to have coverage. The fact that nearly 15% of native workers are union members compared to only 8% of non-citizens accounts for a gap of 0.6 percentage points. Differences in industry and occupation account for an additional 0.8 percentage points. Just as they are similar in terms of demographics, natives and naturalized citizens have similar job characteristics. Therefore, the addition of these variables has little impact on the difference in ESI coverage between natives and naturalized citizens.

In Panel III the dependent variable is coverage through a worker's own employer. A comparison between these results with those in Panel II provides indirect evidence on the importance of dependent coverage in explaining differences between natives and immigrants.

---

<sup>9</sup> Because cash wages and ESI coverage are simultaneously determined, income is an endogenous regressor. Therefore, we exclude it from our models.

Again, the results indicate an interesting difference between the two groups of immigrants. There is no statistically significant difference in own-name ESI coverage between natives and naturalized citizens. This means that the 5 to 6 percentage difference in ESI coverage from any source shown in Panels I and II stems from a higher rate of dependent coverage for natives. In contrast, the native/non-citizen gap in ESI from any source is driven mainly by the fact that non-citizens are less likely to receive coverage through their own employer.

Because of the gender differences in employment patterns documented in Table 1, we conducted the same analyses on samples stratified by gender. These results are reported in Table 3 (men) and Table 4 (women). The main difference related to gender is that the differences between natives and non-citizens are smaller for women. For example, among men the unadjusted gap in own name ESI coverage between natives and non-citizens is 27 percentage points, whereas for women the corresponding figure is 15 percentage points. Another way to look at this is that native-born men are substantially more likely than native-born women to have ESI (71% vs. 59%), whereas among non-citizens, the rates for men and women are basically the same (44.5 for men, 44.0 for women). The similarity between non-citizen men and women in ESI coverage is consistent with the finding by Blau et al. (2003) that married male and female immigrants have similar hours and wage assimilation profiles. In the female sample, when we control for the type of job held, there is no significant difference in own-name coverage between natives and either immigrant group.

### ***Decomposing the Gap in Coverage: Offers, Eligibility and Take-up***

We can gain greater insight into why coverage rates differ across these three groups by decomposing the native/immigrant gaps in coverage into differences in employer offers,

employee eligibility and take-up. The decomposition can be understood within the context of the following equation determining ESI coverage through one's own employer ( $C$ ):

$$(1) \quad \Pr(C=1 | x) = \Pr(O=1 | x) \Pr(E=1 | O=1, x) \Pr(T=1 | O=1, E=1, x),$$

where  $O$  represents employer offers of coverage,  $E$  represents worker eligibility for coverage,  $T$  represents worker take-up of coverage, and  $x$  represents a vector of individual characteristics.<sup>10</sup>

The components of equation (1) can be estimated using data on the relevant subsamples of workers—i.e., differences in take-up are estimated using data on all workers who are eligible for coverage, differences in eligibility are estimated using data for all workers who are offered coverage, and differences in offers are estimated using data for all workers.

Table 5 presents regression results for a pooled (male and female) sample of workers. In Panel I, the dependent variable equals one if the worker's employer offers health insurance to any employees and zero otherwise. For all three groups, the probability of working for a firm that offers health insurance is higher than the probability of having ESI coverage. Because the difference in these two outcomes is slightly larger for natives than for immigrants, the unadjusted gaps in employer offers are slightly larger than the gaps in own name coverage reported in Table 2. This means that while the difference in own-name ESI coverage between natives and naturalized citizens is not significantly different from zero (Table 2, Panel III, column 2), there is a statistically significant difference in offer rates of nearly 5 percentage points (Table 5, Panel I,

---

<sup>10</sup> This set-up follows Farber and Levy (2000) who analyze differences in health insurance coverage between higher and lower skill jobs. Buchmueller, DiNardo, and Valletta (2002) use similar methods to examine union/non-union differences in coverage. Heckman and Smith (2004) use this type of empirical approach to examine the determinants of participation in job training programs.

column 2). However, this gap essentially disappears when we control for individual and job characteristics.

For non-citizens, the unadjusted gap in employer offers is nearly 23 percentage points, which is slightly larger than the gap in coverage (20 percentage points). As with coverage, differences in education and other individual characteristics explain roughly half of the native/non-citizen gap in offers (column 3). When we add job characteristics to the regression (column 4), the adjusted gap in offers falls even further to under 7 percentage points, which is less than one-third of the raw difference.

Roughly 90 percent of workers whose employers offer insurance are eligible for that coverage (Panel II). The eligibility rate for naturalized citizens is actually one percentage point higher than that for natives, though this difference is not statistically significant. The eligibility rate for non-citizens is 4 percentage points lower for non-citizens. As expected, two job characteristics that have an important effect on eligibility are full-time employment and job tenure. Non-citizen immigrants are slightly less likely than natives to work full-time and slightly more likely to have less than 6 months of job tenure. When we control for these variables and other individual and job characteristics the difference in eligibility rates for natives and non-citizens becomes small (1.4 percentage points) and statistically insignificant.

The take-up results (Panel III) exhibit a similar pattern. Conditional on being eligible for ESI, naturalized citizens are more likely to take up coverage than natives. However, the magnitude of this difference is small and imprecisely estimated. Non-citizens are less likely than natives to take up coverage, though the regression-adjusted differences are not significantly different from zero.

Taken together, these results indicate that the low rate of ESI coverage for non-citizens is explained almost entirely by the fact that they are less likely to work for an employer that offers health benefits. To be more precise, we use a decomposition analysis similar to the approach employed by Heckman and Smith (2004) in their study of the determinants of participation in job training programs.<sup>11</sup> The difference in offer rates explains 82% of the raw native/non-citizen gap in own-name ESI coverage. Differences in eligibility account for roughly equal portions of the remainder. The decomposition analysis tells a different story for naturalized citizens. While they are slightly less likely than natives to work for a firm that offers insurance, this disadvantage is offset by the fact that when they do work for such a firm, they are slightly more likely to be eligible for coverage and slightly more likely to accept the offer.

Tables 6 and 7 present the results on these intermediate outcomes for samples stratified by gender. As with the coverage analysis, the main difference is that the native/non-citizen gap is smaller for women. For both men and women, it is clear that the native/non-citizen gap in ESI coverage is driven by a difference in the probability of working for a firm that offers health benefits. However, the unadjusted gap in offers is roughly 50% larger for men than for women: 27 percentage points vs. 17 percentage points. Observable worker and job characteristics explain a greater share of the female gap than the male gap. In the fully-specified model, the native/non-citizen gap for women falls to 2.6 percentage points (p-value = .08). This means that the covariates explain 85% of the raw gap for women. For men, adding the full set of covariates reduces the native/non-citizen gap to 9 percentage points, or one-third of the unadjusted gap.

Cutting the data by gender does not affect the results for naturalized citizens. For both men and women, the probability of working for a firm that offers health benefits is about 5 percentage points lower for naturalized citizens than for natives and this difference becomes

---

<sup>11</sup> Details of this approach are available in a brief technical appendix available upon request of the authors.

statistically insignificant when we control for individual and job characteristics. For both men and women, naturalized citizens are more likely than natives to take up coverage. The difference is between 2 and 3 percentage points for men, depending on the specification. The difference for women is smaller and not significant.

## **Discussion**

The substantially higher rate of uninsurance for immigrant adults relative to natives is driven mainly by the fact that immigrants are less likely to hold employer-sponsored insurance. In this paper, we seek to better understand this gap in ESI. Using data from 2002, we estimate native/immigrant differences in ESI coverage among all working-age adults and among workers. For workers, we break down the gap in ESI coverage into differences in the probability of working for an employer that offers health insurance, differences in eligibility for that coverage and differences in take-up conditional on eligibility.

Four main findings emerge from our analysis. First, as in some previous studies, we find substantial heterogeneity among immigrants. Foreign-born adults who are now US citizens have insurance outcomes that are similar to (and in some cases better than) native born Americans. Naturalized citizens are slightly less likely than natives to work for a firm that offers health insurance but, conditional on working for such firms, are more likely to be eligible for coverage. These differences are small, though, and generally not statistically significant. In contrast, foreign-born adults who are not US citizens have substantially lower rates of ESI coverage than native or foreign-born citizens.

How should this difference between naturalized citizens and non-citizens be interpreted? One recent study finds evidence suggesting that naturalization has a positive causal effect on

wages and wage growth (Bratsberg, Ragan, and Nasir 2002). Those authors argue that one channel by which naturalization may affect wages is the types of jobs for which an individual is qualified. They note public sector jobs and jobs in industries that rely on government contracts as important example. We find some evidence consistent with this argument. Whereas the percentage of naturalized citizens holding government jobs is similar to the percentage for natives, the percentage of non-citizens employed by local, state or federal governments is significantly lower. However, this result notwithstanding, it seems likely that differences in skills are a more important explanation for differences in health insurance outcomes for these two groups of immigrants. Naturalized citizens “look like” natives in terms of age, education and the types of jobs they hold. Non-citizens are younger, less educated and are employed in different types of jobs. Foreign-born citizens and non-citizens are also likely to differ in terms of other aspects of human capital that we cannot measure, such as English fluency and education quality.

It is important to note that there are other important dimensions of immigrant heterogeneity that we do not capture. Previous research has found that country of origin, year of arrival, and age at arrival are related to labor market outcomes, with earlier arrival cohorts and those migrating at earlier ages typically earning wages closer to natives (Borjas 1991 and 1995; Card, DiNardo, and Estes 2000; Lubotsky 2000). However, the most critical unobserved characteristic in virtually all large data sets is undocumented status. This could plausibly explain much of the difference between naturalized citizens and non-citizens. According to some estimates, undocumented immigrants represent as much as one-quarter of the foreign-born population (Passel, Capps, and Fix 2004).

The second main finding is that roughly 80% of the difference in ESI coverage between natives and non-citizens comes from differences in the probability of working for a firm that offers health benefits. Differences between natives and foreign-born non-citizens in the probability of working and being self-employed have the effect of reducing the gap in ESI. Conditional on working for a firm that offers health insurance, non-citizens are slightly less likely to be eligible for coverage, though that difference is not statistically significant when we control for basic human capital and demographic characteristics. We find no significant difference in take-up conditional on eligibility.

Though not surprising, these results rule out some possible explanations for why immigrants are less likely to be insured and shed some light on how different public policies might affect their coverage. The finding of no differences in eligibility (conditional on working for a firm that offers coverage) means that policies that induced firms to extend eligibility to a broader number of workers would not disproportionately benefit immigrants. The results on take-up suggest that immigrants are not less likely to be insured because of a lower willingness to pay employee premium contributions.

Third, our results suggest that differences between native-born US citizens and foreign-born non-citizens in the probability of working for a firm that offers ESI are largely explained by differences in individual characteristics and the types of jobs held. Basic human capital and demographic variables account for about half of the native/non-native gap in employer offers for men and about two-thirds of the gap for women. Education is the single variable with the greatest impact on the gap. Since it is impossible to measure the quality of education in the SIPP and we lack other proxies for skill, our estimates probably understate the importance of human

capital. Adding job characteristics to the regression reduces the unexplained difference between natives and non-citizens by another twenty percent.

In order to get a sense of “how large” the effects of these characteristics on the employer-provided health insurance gap are, it is interesting to compare them to the results found in the literature on immigrant-native wage gaps. For instance, Borjas (1995) finds that adjusting for age composition and changes in the wage structure reduces the log wage gap by only about 10%, while Lubotsky (2000) finds that controlling for temporary out-migration and reentry reduces the gap by roughly 10-20% depending upon the arrival cohort.

A fourth important result is that we find interesting differences by gender. The unadjusted native/non-citizen gap in both ESI coverage and offers is roughly 50 percent larger for male workers than for female workers. Observable characteristics explain a greater share of the gap for women. As a result, when we control for demographics, human capital and job characteristics, the unexplained native/non-citizen gap in employer offers is less than 3 percentage points for women compared to 9 percentage points for men. This finding suggests the importance of considering labor supply and immigration decisions from a household perspective (see, for example, Stark 1991; Blau et al. 2003; Klein 2005). While such an approach has the potential to substantially improve our understanding of these health insurance patterns, it is beyond the scope of this paper.

Prior research from labor economics suggests that as new immigrants assimilate differences in labor market outcomes between them and natives decline. Lubotsky (2000) finds that the initial gap closes by about one-third to one-half over an immigrant’s first 10 years in the US, and Card, DiNardo and Estes (2000) find that the children of immigrants close 50 to 60% of the wage gap facing their father’s ethnic group. An important limitation of our study is that

because it is based on a single cross-section, we cannot directly examine whether the gap in insurance coverage also declines as immigrants assimilate. To the extent that naturalization is one proxy for assimilation, our results suggest that over time ESI coverage will improve for many non-citizens. Similarly, our results indicating the important effect of education suggest that as immigrants acquire human capital they will be more likely to find jobs offering health benefits. On the other hand, some researchers have argued that more recent cohorts of immigrants have lower skills and therefore poorer prospects for assimilation than earlier cohorts (Borjas 1995). This point of view would suggest that the low rates of ESI coverage of non-citizen immigrants will likely persist over time.

Epidemiologic research also suggests the importance of analyzing differences between immigrants and natives in a dynamic context. Numerous studies suggest that newly-arrived immigrants tend to have healthier lifestyles and better health outcomes than natives, but these advantages dissipate over time. An important direction for future research would be to examine trends in health behaviors, health status and insurance coverage within a dynamic context. Such an analysis would contribute to our understanding of the health insurance issues facing immigrants and would be of great value in making policy decisions.

## References

- Blau, Francine D., Lawrence M. Kahn, Joan Y. Moriarty and Andre Portela Souza. 2003. "The Role of the Family in Immigrants' Labor Market Activity: An Evaluation of Alternative Explanations: Comment." *American Economic Review* 93(1): 429-447.
- Borjas, George J. 1995. "Assimilation and Changes in Cohort Quality Revisited: What Happened to Immigrant Earnings in the 1980s?" *Journal of Labor Economics* 13(2): 201-245.
- Borjas, George J. 1991. "National Origin and the Skills of Immigrants in the Post-war Period," NBER Working Paper 3575.
- Borjas, George J. 1986. "The Self-Employment Experience of Immigrants," *Journal of Human Resources* 21(4): 485-506.
- Bratsberg, Bernt, James F. Ragan and Zafar M. Nasir. 2002. "The Effect of Naturalization on Wage Growth: a Panel Study of Young Male Immigrants," *Journal of Labor Economics* 20(3): 568-597.
- Brown, E. Richard, Hongjian Yu, Shana Alex Lavarreda, Lida Becerra, Arindrajit Dube, Richard Kronick. 2003. "SB2 Will Extend Coverage to 1 Million Workers and Dependents," UCLA Center for Health Policy Research Health Policy Fact Sheet (September).
- Buchmueller, Thomas C., John DiNardo and Robert G. Valletta. 2002. "Union Effects on Health Insurance Provision and Coverage in the United States," *Industrial and Labor Relations Review* 55(4): 610-627.
- Buchmueller, Thomas C., Kevin Grumbach, Richard Kronick and James G. Kahn. 2005. "The Effect of Health Insurance on Medical Care Utilization and Implications for Insurance Expansion: a Review of the Literature," *Medical Care Research and Review* 62(1):3-30.
- Card, David, John DiNardo and Eugena Estes. 2000. "The More Things Change: Immigrants and the Children of Immigrants in the 1940s, the 1970s, and the 1990s". In G. Borjas, editor, *Issues in the Economics of Immigration*. University of Chicago Press for NBER: Chicago.
- Carrasquillo, Olveen, Angeles I. Carrasquillo and Steven Shea. 2000. "Health Insurance Coverage of Immigrants Living in the United States: Differences by Citizenship and Country of Origin," *American Journal of Public Health* 90(6): 917-923.
- Carrasquillo, Olveen and Susmita Pati. 2004. "The Role of Health Insurance on Pap Smear and Mammography Utilization by Immigrants Living in the United States," *Preventive Medicine* 39: 943-950.
- Chen, Kong-Pin, Shin-Hwan Chiang and Siu Fai Leung. 2003. "Migration, Family, and Risk Diversification," *Journal of Labor Economics* 21(2): 353-380.

- Cooper, Philip and Barbara Steinberg Schone. 1997. "More Offers, Fewer Takers for Employment-Based Health Insurance: 1987-1996," *Health Affairs* 16(6): 142-149.
- De Alba, Israel, Allan Hubbell, Juliet McMullin, Jamie Sweningson, Richard Saitz. 2005. "Impact of U.S. Citizenship on Cancer Screening Among Immigrant Women," *Journal of General and Internal Medicine*, 20(3):290-6.
- Fairlie, Robert W. and Bruce D. Meyer. 1996. "Ethnic and Racial Self-Employment Differences and Possible Explanations," *Journal of Human Resources* 31 (4): 757-793.
- Farber, Henry S., and Helen Levy. 2000. "Recent Trends in Employer-Sponsored Health Insurance Coverage: Are Bad Jobs Getting Worse?" *Journal of Health Economics* 19(1), pp. 93-119.
- Hamilton, Barton. 2000. "Does Entrepreneurship Pay? An Empirical Analysis of the Returns to Self-Employment," *Journal of Political Economy*, 108(3): 604-631.
- Heckman, James and Jeffrey. Smith. 2004. "The Determinants of Participation in a Social Program: Evidence from a Prototypical Job Training Program," *Journal of Labor Economics* 22(2): 243-298.
- Kandula, Namratha R., Colleen M. Grogan, Paul J. Rathouz and Diane S. Lauderdale. 2004. "The Unintended Impact of Welfare Reform on the Medicaid Enrollment of Eligible Immigrants." *Health Services Research* 39(5): 1509-1526.
- Kaushal, Neeraj, and Robert Kaestner. 2005. "Medicaid and Welfare Reform Welfare Reform and Health Insurance of Immigrants," *Health Services Research* 40(3): 697-721.
- Ku, Leighton., and Matani, Sheetal. 2001. "Left out: Immigrants' access to health care and insurance," *Health Affairs* 20(1):247-56.
- Lubotsky, Darren. 2000. "Chutes or Ladders? A Longitudinal Analysis of Immigrant Earnings," University of Illinois at Urbana-Champaign.
- Malone, N., K.F. Baluja, J.M. Costanzo, and C.J. Davis. 2003. "The Foreign-Born Population 2000" Census 2000 Brief, US Census Bureau. December.
- Mohanty, Sarita, Steffie Woolhandler, David Himmelstein, Susmita Pati, Olveen Carrasquillo, and David Bor. 2005. "Health Care Expenditures of Immigrants in the United States: A Nationally Representative Analysis," *American Journal of Public Health* 95(8): 1431-1438.
- Passel, Jeffrey, Randy Capps and Michael Fix. 2004. "Undocumented Immigrants: Facts and Figures," Urban Institute Immigration Studies Program.

- Perry, Craig William and Harvey Rosen. 2001. "The Self-Employed are Less Likely to Have Health Insurance. So What?" NBER Working Paper no. 8490.
- Pollack, Harold and Karl Kronebusch. 2004. Health Insurance and Vulnerable Populations. In: *Health Policy and the Uninsured*, Catherine McLaughlin (Ed.). Washington, D.C.: Urban Institute Press, 2004.
- Ponce, Ninez, Robert J. Nordyke, and Sherry Hirota. 2005. "Uninsured Working Immigrants: A View from a California County," *Journal of Immigrant Health*, 7(1): 45-53.
- Short, Pamela F. 2001. "Counting and Characterizing the Uninsured," ERIU Working Paper No. 2.
- Stark, Oded. 1991. *The Migration of Labor*, Cambridge: Blackwell.
- Thamer, Mae, Christian Richard, Adrienne Waldman Casebeer and Nancy Fox Ray. 1997. "Health Insurance Coverage Among Foreign-Born US Residents: The Impact of Race, Ethnicity and Length of Residence," *American Journal of Public Health*, 87(1): 96-102.
- US Immigration and Naturalization Services. 2003. *2001 Statistical Yearbook of the Immigration and Naturalization Service*. Washington, DC: Government Printing Office.

**Table 1: Labor Force Participation of SIPP Sample, by Nativity Status**

<i>Employment</i>	<i>Observations</i>	<i>Foreign Born</i>			
		<i>Native</i>	<i>All</i>	<i>Naturalized</i>	<i>Non-citizen</i>
<u>Adults 18-64</u>					
Not Employed	9,025	24.73%	28.26%	25.45%	30.05%
Self Employed	2,883	8.29	8.97	10.91	7.74
Privately Employed	22,975	66.98	62.77	63.64	62.22
<u>Male 18-64</u>					
Not Employed	3,019	18.17	14.54	15.09	14.21
Self Employed	1,865	11.21	10.98	13.98	9.17
Privately Employed	11,823	70.63	74.48	70.93	76.62
<u>Female 18-64</u>					
Not Employed	6,006	30.91	42.13	35.32	46.67
Self Employed	1,018	5.55	6.93	7.99	6.23
Privately Employed	11,152	63.55	50.93	56.69	47.10

Note: Data from 2001 SIPP. Sample excludes 203 individuals who are either contingent workers or have military occupation/industry code.

**Table 2: Differences Between Immigrants and Natives in Employer-Sponsored Health Insurance Coverage, Selected Regression Results using the 2001 SIPP**

	% of sample	(1)	(2)	(3)	(4)
<b>All Adults (N = 34,883)</b>					
Sample mean = 0.700					
Native Mean = 0.724					
Immigrant	13.3%	-0.182*** (0.008)	---	---	---
Naturalized Citizen	5.1%	---	-0.061*** (0.012)	-0.038*** (0.013)	-0.038*** (0.013)
Non-Citizen	8.1%	---	-0.261*** (0.010)	-0.145*** (0.012)	-0.142*** (0.012)
<b>Coverage by Employer Insurance</b>					
<b>Workers (N = 22,975)</b>					
Sample mean = 0.821					
Native Mean = 0.845					
Immigrant	12.4%	-0.184*** (0.009)	---	---	---
Naturalized Citizen	4.9%	---	-0.054*** (0.012)	-0.025** (0.012)	-0.023** (0.012)
Non-Citizen	7.5%	---	-0.272*** (0.012)	-0.115*** (0.013)	-0.087*** (0.012)
<b>Owner of Employer Insurance</b>					
<b>Workers (N = 22,975)</b>					
Sample mean = 0.636					
Native Mean = 0.653					
Immigrant	12.4%	-0.133*** (0.010)	---	---	---
Naturalized Citizen	4.9%	---	-0.015 (0.015)	0.014 (0.016)	0.020 (0.017)
Non-Citizen	7.5%	---	-0.201*** (0.012)	-0.109*** (0.015)	-0.083*** (0.016)
<b>Control Variables</b>					
Demographic, Human capital		N	N	Y	Y
Employment Characteristics		N	N	N	Y

\* indicates  $p < 0.01$ , \*\* indicates  $0.05 < p < 0.01$ , \* indicates  $0.10 < p < 0.05$ .

Note: Data from 2001 SIPP. Model 1 includes only an immigrant versus non-immigrant indicator. Model 2 includes only naturalized citizen and non-citizen indicators. Model 3 includes citizenship indicators (naturalized + non-citizens), age, age-squared, male dummy, married dummy, Married\*male, education dummies (Less HS, HS no diploma, HS diploma, some college no diploma, AA degree, BA/BS, Advanced Degree), race indicators (white, black, Hispanic, other), state fixed effects (ME, VT in one category and ND SD and WY in another), type of family (Headed by Husband/Wife, Male Headed, Female Headed), dummy for presence of children under 18 in the family, health status dummies. For specifications among all adults, Model 4 includes all Model 3 variables plus indicators for employed or self-employed versus not employed; for specifications among workers, Model 4 includes all Model 3 variables plus full time versus part-time employment dummy, union dummy, less than 6 months tenure at the job dummy, industry dummies, occupation dummies, employer type (Private FP, private NFP, local/state government, Federal government), firm size dummies (Under 25, 25 to 99, 100+).

**Table 3: Differences Between Immigrants and Natives in Employer-Sponsored Health Insurance Coverage, Selected Regression Results using the 2001 SIPP for all Men Aged 18-64**

	% of sample	(1)	(2)	(3)	(4)
<b>All Adults (N = 16,707)</b>					
Sample mean = 0.702					
Native Mean = 0.727					
Immigrant	13.6%	-0.180*** (0.010)	---	---	---
Naturalized Citizen	5.2%	---	-0.047*** (0.016)	-0.000 (0.018)	-0.003 (0.017)
Non-Citizen	8.4%	---	-0.261*** (0.014)	-0.137*** (0.017)	-0.166*** (0.017)
<b>Coverage by Employer Insurance</b>					
<b>Workers (N = 11,823)</b>					
Sample mean = 0.816					
Native Mean = 0.848					
Immigrant	14.2%	-0.217*** (0.012)	---	---	---
Naturalized Citizen	5.2%	---	-0.058*** (0.017)	0.008 (0.016)	-0.008 (0.014)
Non-Citizen	9.0%	---	-0.301*** (0.015)	-0.135*** (0.017)	-0.089*** (0.016)
<b>Owner of Employer Insurance</b>					
<b>Workers (N = 11,823)</b>					
Sample mean = 0.686					
Native Mean = 0.712					
Immigrant	14.2%	-0.178*** (0.013)	---	---	---
Naturalized Citizen	5.2%	---	-0.018 (0.020)	0.043** (0.020)	0.031 (0.021)
Non-Citizen	9.0%	---	-0.267*** (0.016)	-0.143*** (0.020)	-0.107*** (0.021)
<b>Control Variables</b>					
Demographic, Human capital		N	N	Y	Y
Employment Characteristics		N	N	N	Y

\* indicates  $p < 0.01$ , \*\* indicates  $0.05 < p < 0.01$ , \* indicates  $0.10 < p < 0.05$ .

Note: Data from 2001 SIPP. Model 1 includes only an immigrant versus non-immigrant indicator. Model 2 includes only naturalized citizen and non-citizen indicators. Model 3 includes citizenship indicators (naturalized + non-citizens), age, age-squared, male dummy, married dummy, Married\*male, education dummies (Less HS, HS no diploma, HS diploma, some college no diploma, AA degree, BA/BS, Advanced Degree), race indicators (white, black, Hispanic, other), state fixed effects (ME, VT in one category and ND SD and WY in another), type of family (Headed by Husband/Wife, Male Headed, Female Headed), dummy for presence of children under 18 in the family, health status dummies. For specifications among all adults, Model 4 includes all Model 3 variables plus indicators for employed or self-employed versus not employed; for specifications among workers, Model 4 includes all Model 3 variables plus full time versus part-time employment dummy, union dummy, less than 6 months tenure at the job dummy, industry dummies, occupation dummies, employer type (Private FP, private NFP, local/state government, Federal government), firm size dummies (Under 25, 25 to 99, 100+).

**Table 4: Differences Between Immigrants and Natives in Employer-Sponsored Health Insurance Coverage, Selected Regression Results using the 2001 SIPP- for all Female Aged 18-64**

	% of sample	(1)	(2)	(3)	(4)
<b>All Adults (N = 18,176)</b>					
Sample Mean = 0.697					
Native Mean = 0.722					
Immigrant	12.9%	-0.185*** (0.011)	---	---	---
Naturalized Citizen	5.1%	---	-0.074*** (0.016)	-0.033*** (0.018)	-0.019 (0.018)
Non-Citizen	7.9%	---	-0.260*** (0.014)	-0.137*** (0.017)	-0.112*** (0.017)
<b>Coverage by Employer Insurance</b>					
<b>Workers (N = 11,152)</b>					
Sample Mean = 0.816					
Native Mean = 0.848					
Immigrant	10.6%	-0.138*** (0.014)	---	---	---
Naturalized Citizen	4.6%	---	-0.050*** (0.018)	-0.018 (0.018)	-0.035** (0.018)
Non-Citizen	6.0%	---	-0.211*** (0.019)	-0.087*** (0.019)	-0.059*** (0.017)
<b>Owner of Employer Insurance</b>					
<b>Workers (N = 11,152)</b>					
Sample Mean = 0.582					
Native Mean = 0.592					
Immigrant	10.6%	-0.093*** (0.015)	---	---	---
Naturalized Citizen	4.6%	---	-0.019 (0.022)	0.011 (0.020)	-0.001 (0.027)
Non-Citizen	6.0%	---	-0.152*** (0.020)	-0.061** (0.024)	-0.034 (0.026)
<b>Control Variables</b>					
Demographic, Human capital		N	N	Y	Y
Employment Characteristics		N	N	N	Y

\* indicates  $p < 0.01$ , \*\* indicates  $0.05 < p < 0.01$ , \* indicates  $0.10 < p < 0.05$ .

Note: Data from 2001 SIPP. Model 1 includes only an immigrant versus non-immigrant indicator. Model 2 includes only naturalized citizen and non-citizen indicators. Model 3 includes citizenship indicators (naturalized + non-citizens), age, age-squared, male dummy, married dummy, Married\*male, education dummies (Less HS, HS no diploma, HS diploma, some college no diploma, AA degree, BA/BS, Advanced Degree), race indicators (white, black, Hispanic, other), state fixed effects (ME, VT in one category and ND SD and WY in another), type of family (Headed by Husband/Wife, Male Headed, Female Headed), dummy for presence of children under 18 in the family, health status dummies. For specifications among all adults, Model 4 includes all Model 3 variables plus indicators for employed or self-employed versus not employed; for specifications among workers, Model 4 includes all Model 3 variables plus full time versus part-time employment dummy, union dummy, less than 6 months tenure at the job dummy, industry dummies, occupation dummies, employer type (Private FP, private NFP, local/state government, Federal government), firm size dummies (Under 25, 25 to 99, 100+).

**Table 5: Employer-Sponsored Health Insurance Offers, Eligibility and Take-up: Probit Regression Results for all Workers Aged 18-64**

	% of Sample	(1)	(2)	(3)	(4)
<b>Employed by a firm that offers insurance (N = 22,975)</b>					
Sample mean = 0.844					
Native mean = 0.864					
Immigrant	12.5%	-15.70*** (0.88)	---	---	---
Naturalized Citizen	4.9%	---	-4.75*** (1.23)	-1.55 (1.19)	-1.13 (1.02)
Non-Citizen	7.5%	---	-22.87*** (1.17)	-10.33*** (1.25)	-6.58*** (1.09)
<b>Eligible for Employer Health Insurance (N = 19,327)</b>					
Sample mean = 0.903					
Native mean = 0.892					
Immigrant	10.4%	-1.72** (0.77)	---	---	---
Naturalized citizen	4.7%	---	1.09 (1.01)	1.13 (1.03)	0.53 (0.96)
Non-citizen	5.7%	---	-4.08*** (1.09)	-1.56 (1.08)	-1.44 (0.98)
<b>Take-up of Employer Health Insurance (N = 17,172)</b>					
Sample mean = 0.846					
Native mean = 0.848					
Immigrant	10.3%	-0.61 (0.91)	---	---	---
Naturalized citizen	4.8%	---	1.88 (1.21)	2.00 (1.24)	2.36* (1.15)
Non-citizen	5.4%	---	-2.80** (1.27)	-1.28 (1.32)	0.06 (1.20)
<b>Control Variables</b>					
Demographic, Human capital		N	N	Y	Y
Job Characteristics		N	N	N	Y

\* indicates  $p < 0.01$ , \*\* indicates  $0.05 < p < 0.01$ , \* indicates  $0.10 < p < 0.05$ .

Note: Data from 2001 SIPP. Model 1 includes only an immigrant versus non-immigrant indicator. Model 2 includes only naturalized citizen and non-citizen indicators. Model 3 includes citizenship indicators (naturalized + non-citizens), age, age-squared, male dummy, married dummy, Married\*male, education dummies (Less HS, HS no diploma, HS diploma, some college no diploma, AA degree, BA/BS, Advanced Degree), race indicators (white, black, Hispanic, other), state fixed effects (ME, VT in one category and ND SD and WY in another), type of family (Headed by Husband/Wife, Male Headed, Female Headed), dummy for presence of children under 18 in the family, health status dummies. Model 4 includes all Model 3 variables plus full time employment dummy, union dummy, less than 6 months tenure at the job dummy, industry dummies, occupation dummies, employer type (Private FP, private NFP, local/state government, Federal government), firm size dummies (Under 25, 25 to 99, 100+).

**Table 6: Summary Probit Regression Results of Employer-Sponsored Health Insurance Coverage, for all Male Workers Aged 18-64**

	% of Sample	(1)	(2)	(3)	(4)
<b>Employed by a firm that offers insurance (N = 11,823)</b>					
Sample mean = 0.845					
Native mean = 0.873					
Immigrant	14.2%	-18.90*** (1.17)	---	---	---
Naturalized citizen	5.2%	---	-5.03*** (1.69)	-1.58 (1.61)	-1.32 (1.36)
Non-citizen	9.0%	---	-26.66*** (1.52)	-12.73*** (1.69)	-9.00*** (1.52)
<b>Eligible for employer HI (N = 9,982)</b>					
Sample mean = 0.913					
Native mean = 0.916					
Immigrant	11.6%	-2.48*** (0.96)	---	---	---
Naturalized citizen	5.0%	---	0.85 (1.24)	1.73 (1.13)	1.00 (1.02)
Non-citizen	6.6%	---	-5.01*** (1.34)	-1.14 (1.23)	-1.08 (1.10)
<b>Take-up of coverage (N = 9,100)</b>					
Sample mean = 0.889					
Native mean = 0.890					
Immigrant	11.4%	-1.37 (1.07)	---	---	---
Naturalized citizen	5.1%	---	2.24 (1.37)	2.60* (1.37)	2.80** (1.21)
Non-citizen	6.3%	---	-4.29** (1.52)	-2.11 (1.57)	-0.56 (1.37)
<b>Control Variables</b>					
Demographic, Human capital		N	N	Y	Y
Job Characteristics		N	N	N	Y

\* indicates  $p < 0.01$ , \*\* indicates  $0.05 < p < 0.01$ , \* indicates  $0.10 < p < 0.05$ .

Note: Data from 2001 SIPP. Model 1 includes only an immigrant versus non-immigrant indicator. Model 2 includes only naturalized citizen and non-citizen indicators. Model 3 includes citizenship indicators (naturalized + non-citizens), age, age-squared, male dummy, married dummy, Married\*male, education dummies (Less HS, HS no diploma, HS diploma, some college no diploma, AA degree, BA/BS, Advanced Degree), race indicators (white, black, Hispanic, other), state fixed effects (ME, VT in one category and ND SD and WY in another), type of family (Headed by Husband/Wife, Male Headed, Female Headed), dummy for presence of children under 18 in the family, health status dummies. Model 4 includes all Model 3 variables plus full time employment dummy, union dummy, less than 6 months tenure at the job dummy, industry dummies, occupation dummies, employer type (Private FP, private NFP, local/state government, Federal government), firm size dummies (Under 25, 25 to 99, 100+).

**Table 7: Summary Probit Regression Results of Employer-Sponsored Health Insurance Coverage, for all Female Workers Aged 18-64**

	% of Sample	(1)	(2)	(3)	(4)
<b>Employed by a firm that offers insurance (N = 11,152)</b>					
Sample mean = 0.842					
Native mean = 0.855					
Immigrant	10.64%	-11.40*** (1.31)	---	---	---
Naturalized citizen	4.62%	---	-4.54*** (1.79)	-1.16 (1.74)	-0.85 (1.51)
Non-citizen	6.03%	---	-16.99*** (1.85)	-5.76*** (1.80)	-2.57* (1.48)
<b>Eligible for employer HI (N = 9,345)</b>					
Sample mean = 0.865					
Native mean = 0.866					
Immigrant	9.20%	-1.40 (1.25)	---	---	---
Naturalized citizen	4.44%	---	1.06 (1.64)	0.09 (1.84)	-0.65 (1.74)
Non-citizen	4.76%	---	-3.73** (1.80)	-1.56 (1.84)	-1.63 (1.69)
<b>Take-up of coverage (N = 8,072)</b>					
Sample mean = 0.798					
Native mean = 0.799					
Immigrant	9.03%	-0.80 (1.55)	---	---	---
Naturalized citizen	4.52%	---	0.78 (2.09)	0.93 (2.19)	1.14 (2.13)
Non-citizen	4.51%	---	-2.39 (2.20)	-0.21 (2.26)	-0.62 (2.17)
<b>Control Variables</b>					
Demographic, Human capital		N	N	Y	Y
Job Characteristics		N	N	N	Y

\* indicates  $p < 0.01$ , \*\* indicates  $0.05 < p < 0.01$ , \* indicates  $0.10 < p < 0.05$ .

Note: Data from 2001 SIPP. Model 1 includes only an immigrant versus non-immigrant indicator. Model 2 includes only naturalized citizen and non-citizen indicators. Model 3 includes citizenship indicators (naturalized + non-citizens), age, age-squared, male dummy, married dummy, Married\*male, education dummies (Less HS, HS no diploma, HS diploma, some college no diploma, AA degree, BA/BS, Advanced Degree), race indicators (white, black, Hispanic, other), state fixed effects (ME, VT in one category and ND SD and WY in another), type of family (Headed by Husband/Wife, Male Headed, Female Headed), dummy for presence of children under 18 in the family, health status dummies. Model 4 includes all Model 3 variables plus full time employment dummy, union dummy, less than 6 months tenure at the job dummy, industry dummies, occupation dummies, employer type (Private FP, private NFP, local/state government, Federal government), firm size dummies (Under 25, 25 to 99, 100+).

**Appendix Table 1: Descriptive Characteristics by Nativity Status, for Adults 18-64**

	<i>Native</i>	<i>All</i>	<i>Foreign Born</i>	
			<i>Naturalized</i>	<i>Non-citizen</i>
Observations	30,256	4,627	1,791	2,836
Age	41.9	40.0	44.3	37.3
Male	48.5%	50.3%	48.8%	51.2%
Married	60.9	69.0	71.6	67.4
Race/Ethnicity				
White/Non-Hispanic	78.7	23.3	29.4	19.5
Black	12.1	6.6	7.7	5.8
Hispanic	7.0	47.8	32.4	57.6
Asian/Pacific Islander	2.2	22.3	30.6	17.0
Education				
Less than high school	2.3	19.9	10.8	25.7
Some high school, no diploma	8.1	12.4	8.5	14.9
High school diploma	31.4	23.1	23.2	23.1
Some college, no diploma	19.2	11.7	15.1	9.6
AA degree	12.3	7.5	10.3	5.7
BA/BS	17.9	15.4	20.3	12.3
Advanced Degree	8.8	10.0	11.9	8.7

**Appendix Table 2: Descriptive Characteristics by Nativity Status, for all Workers Aged 18-64**

	<i>Foreign Born</i>			
	<i>Native</i>	<i>All</i>	<i>Naturalized</i>	<i>Non-citizen</i>
Observations	20,115	2,860	1,129	1,731
Age	40.7	39.0	42.9	36.4
Male	51.1%	59.6%	54.4%	63.1%
Married	60.6	66.8	71.1	64.0
Race/Ethnicity				
White/Non-Hispanic	79.4	21.1	25.7	18.2
Black	11.6	7.6	9.0	6.7
Hispanic	6.8	48.2	33.2	57.9
Asian/Pacific Islander	2.2	23.1	32.2	17.2
Education				
Less than high school	1.2	17.8	8.9	23.6
Some high school, no diploma	5.7	12.1	8.3	14.6
High school diploma	30.3	22.7	22.9	22.6
Some college, no diploma	20.0	12.8	16.3	10.5
AA degree	13.5	7.4	10.5	5.5
BA/BS	19.6	15.6	20.4	12.5
Advanced Degree	9.8	11.5	12.8	10.7
Employed Part-Time	9.5	8.6	8.5	8.6
Union	14.9	11.1	15.5	8.3
Job Tenure				
Less than 6 months	9.4	9.1	6.5	10.8
6 month to a year	8.4	10.3	8.6	11.5
one to five years	34.8	44.2	35.1	50.2
more than five years	47.4	36.4	49.8	27.6
Type of Employer				
Private, for-profit	72.7	84.7	79.0	88.5
Private, non-profit	8.2	4.7	5.5	4.2
State/Local government	15.7	8.6	12.1	6.3
Federal government	3.4	2.0	3.4	1.0
Firm Size				
less than 25 employees	18.4	24.8	18.6	28.8
25 to 100 employees	12.4	14.6	13.7	15.1
more than 100 employees	69.2	60.7	67.7	56.1
Occupation				
Managerial, professional	30.8	24.1	30.0	20.2
Technical, sales, administration	29.8	21.7	27.9	17.6
Service occupations	12.1	18.5	16.3	19.8
Farming, forestry, fishing	1.3	4.0	1.5	5.6
Production, craft and repair	9.6	12.7	10.5	14.1
Operators, fabricators, laborers	13.4	19.1	13.8	22.6

(continued)

**Appendix Table 2 (cont.): Descriptive Characteristics by Nativity Status, for all Workers Aged 18-64**

Industry	<i>Native</i>	<i>All</i>	<i>Foreign Born</i>	
			<i>Naturalized</i>	<i>Non-citizen</i>
Agriculture	1.2%	4.1%	1.9%	5.6%
Mining	0.6	0.4	0.3	0.4
Construction	5.3	8.5	5.5	10.7
Manufacturing-nondurable	5.7	8.1	5.7	9.0
Manufacturing-durable	9.6	10.4	10.4	10.9
Transportation	7.3	6.4	8.0	5.4
Wholesale trade- durable	2.0	2.0	2.1	1.8
Wholesale trade- nondurable	2.0	2.6	2.4	2.5
Retail trade	13.9	14.8	12.9	16.6
Finance	6.8	5.0	7.5	3.2
Repair Services	6.4	8.7	7.2	9.7
Personal Services	2.2	5.4	3.8	5.5
Entertainment	1.6	1.2	1.3	1.2
Professional Services	28.1	19.4	25.6	15.9
Public Administration	7.5	3.1	5.5	1.7

Note: Data from 2001 SIPP.

**Appendix Table 3: Employer-Sponsored Health Insurance Offers, Eligibility and Take-up:  
Full Probit Regression Results for all Workers Aged 18-64**

	<b>Offer</b>	<b>Eligibility</b>	<b>Take-up</b>
Naturalized	-0.011 (0.010)	0.005 (0.010)	0.024* (0.011)
Non-Citizens	-0.066*** (0.011)	-0.014 (0.010)	0.001 (0.012)
Age	0.002* (0.001)	0.008*** (0.001)	0.007*** (0.002)
Age-squared	-0.00003 (0.00002)	-0.00009*** (0.00002)	-0.00008*** (0.00002)
Male	-0.017* (0.010)	0.002 (0.010)	-0.005 (0.016)
Married	-0.011 (0.009)	-0.005 (0.010)	-0.126*** (0.012)
Married × Male	0.036*** (0.010)	0.038*** (0.010)	0.099*** (0.014)
Education [Relative to less than HS]			
Some high school, no diploma	0.016 (0.010)	0.017 (0.012)	-0.019 (0.022)
High school diploma	0.049*** (0.009)	0.020 (0.012)	0.034* (0.017)
Some college, no diploma	0.061*** (0.007)	0.023* (0.012)	0.048*** (0.016)
AA degree	0.068*** (0.006)	0.024* (0.012)	0.044** (0.016)
Bachelor's degree	0.071*** (0.007)	0.028** (0.012)	0.072*** (0.015)
Advanced Degree	0.074*** (0.006)	0.029** (0.012)	0.080*** (0.012)
Race [Relative to White]			
Black	-0.019*** (0.007)	-0.003 (0.007)	-0.023** (0.009)
Hispanic	-0.042*** (0.009)	-0.019** (0.008)	0.012 (0.010)
Asian/Pacific Islander	-0.027** (0.012)	0.003 (0.010)	-0.006 (0.014)
Family type: male head Relative to two parents	0.018** (0.008)	0.015 (0.009)	0.054*** (0.011)
Family type: Female head	0.002 (0.009)	0.013 (0.009)	0.053*** (0.011)
Kids under 18 present	-0.014*** (0.005)	-0.013*** (0.005)	-0.027*** (0.006)

(Continued)

**Appendix Table 3: Employer-Sponsored Health Insurance Offers, Eligibility and Take-up: Full Probit Regression Results for all Workers Aged 18-64 (continued)**

	<b>Offer</b>	<b>Eligibility</b>	<b>Take-up</b>
Health status [relative to excellent]			
Very good	0.008* (0.005)	-0.005 (0.005)	0.001 (0.006)
Good	-0.002 (0.005)	-0.013** (0.006)	0.010 (0.007)
Fair	-0.007 (0.010)	-0.024** (0.012)	0.018 (0.012)
Poor	-0.034 (0.027)	-0.071** (0.035)	0.016 (0.032)
Full time worker [relative to part time]	0.152*** (0.010)	0.325*** (0.015)	0.254*** (0.020)
Union	0.040*** (0.006)	0.009 (0.006)	0.063*** (0.006)
Tenure: Under 6 Months	-0.089*** (0.009)	-0.238*** (0.013)	-0.146*** (0.016)
Firm Size [relative to less than 25]			
25- 100 Employees	0.081*** (0.003)	0.020*** (0.006)	-0.004 (0.010)
Over 100 Employees	0.254*** (0.007)	0.018*** (0.006)	0.015* (0.008)
Sample size	22,975	19,327	17,172

\* indicates  $p < 0.01$ , \*\* indicates  $0.05 < p < 0.01$ , \* indicates  $0.10 < p < 0.05$ .

Note: Data from 2001 SIPP. Probit marginal probability effects displayed. Regression models also include state fixed effects (ME, VT in one category and ND SD and WY in another), industry dummies, and occupation dummies.