Immigrants and Employer-Sponsored Health Insurance

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

Data Sources. 2001 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 noncitizen 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 noncitizen 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 noncitizens is explained mainly by differences in the probability of working for a firm that offers insurance. Conditional on working for such a firm, noncitizens 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/noncitizen 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.

Key Words: Health insurance coverage, employer-sponsored health insurance, immigrants, nonnatives, naturalized citizens

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 U.S. 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 percent between 1970 and 2000 (Fix and Passel 2002). In recent years, the majority of immigrants have come from Latin America and Asia (U.S. Immigration and Naturalization Service 2003). Forty percent of Hispanics living in the U.S. and over two-thirds of Asians living in the U.S. 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.¹ According to 2002 data from the Survey of Income and Program Participation (SIPP), adults who were born outside the U.S. are nearly three times as likely to be uninsured as native-born Americans: nearly 32 percent versus 13.4 percent.² The link between health insurance and health care utilization is well documented³; 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; Mohanty et al. 2005; De Alba 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 percent of native adults have such coverage compared with only 66.1 percent of foreign-born adults. Because they tend to have lower incomes, immigrant adults are actually more likely than natives to have public insurance, though the difference is small (9.2 percent versus 7.8 percent). Nongroup—i.e., individually purchased—insurance is not an important source of coverage for either group (6 percent for natives and 5 percent 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 (ages 18–64). 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

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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 noncitizens. Because of well-documented differences in labor market behavior between men and women, all analyses are performed on samples that include both men and women and separately by gender.

BACKGROUND AND PREVIOUS LITERATURE

Despite the great concern among policy makers and researchers about the health insurance coverage of vulnerable populations, research on explanations for the low rate of coverage among immigrants is 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 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.⁴ Thamer et al. (1997) show that in 1989–1990 immigrant adults were roughly 20 percent 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 other national studies show is important. Carrasquillo, Carrasquillo, and Shea (2000) report that in 1997 the percentage of noncitizen immigrants between the ages of 18 and 64 who were uninsured was 27 percentage points higher than the percentage of native-born citizens, whereas the difference between natives and naturalized citizens was just over 7 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 noncitizen 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; Perry and Rosen 2001). Other research shows that, conditional on working, immigrants are more likely than native-born Americans to be self-employed (Borjas 1986; Yuengert 1995; Fairlie and Meyer 1996; Lofstrom 2002). 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.⁵

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.⁶ 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. In this case, policies that increase the number of employers offering coverage or policies that made nongroup 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 4 months over a 3-year period.⁷ 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 2002.⁸ Data on immigration history and citizenship come from a Wave 2 topical module administered exactly 1 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.⁹

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 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 offered by their employer. 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 noncitizen immigrants are nearly as large as those between natives and noncitizens. It is also important to note that the SIPP, like most large surveys, is likely to under-represent undocumented residents.

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 percent of adults who are not employed report having ESI compared with 51.9 percent of those who are self-employed and 82.2 percent of wage/salary employees. Because of these large differences in

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

<i>Employment</i>	<i>Observations</i>	<i>Native</i>	<i>Foreign Born</i>		
			<i>All</i>	<i>Naturalized</i>	<i>Noncitizen</i>
<i>Adults 18–64</i>					
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
<i>Male 18–64</i>					
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
<i>Female 18–64</i>					
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: Weighted data from 2001 SIPP. Sample excludes 203 individuals who are either contingent workers or have military occupation/industry code.
SIPP, Survey of Income and Program Participation.

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 (Borjas 1986; Yuengert 1995; Fairlie and Meyer 1996; Lofstrom 2002), 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 noncitizens, 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 noncitizen immigrants relative to natives, all else constant.

The Determinants of Coverage by ESI

Before investigating differences in employer health insurance offer rates, employee eligibility, and take-up among workers, we first want to examine the role of employment more generally in employer-sponsored health insurance coverage among natives and immigrants. To do so we estimate a series of probit regressions for different subsamples to examine how immigrant/native

differences in coverage are affected. For each subsample, we add blocks of variables as indicated:

$$Pr(ESI\ Coverage_i) = F(\alpha\ Immigrant_i + \beta\ Human\ Capital_i + \gamma\ job_i) \quad (1)$$

where the initial specification controls only for immigrant status of person i and thus α represents simply the unconditional mean difference in ESI coverage between immigrants and natives. By adding human capital variables in the next specification we can observe the extent to which α changes as the coverage difference is explained by observable characteristics related to differential human capital attributes between natives and immigrants; a similar exercise is undertaken with the addition of job characteristics. This approach mimics the Oaxaca–Blinder decomposition as any differences between natives and immigrants that remain after conditioning on observables are attributable to unobservable factors, which might include cultural factors, preferences, labor market factors, language, discrimination, or any number of other factors. One way that this approach diverges from the Oaxaca–Blinder is that results from our pooled regressions might obscure differences in the responsiveness of coverage to changes in characteristics. For example, if coverage is more responsive to education among immigrants than it is for natives then our approach might overstate the magnitude of the unexplained difference between immigrants and natives.

Table 2 presents several estimates of the difference in ESI coverage between natives and immigrants. In Panel I, the sample includes all adults (i.e., workers and nonworkers) 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 noncitizens. For noncitizens, the coverage gap relative to natives is 26 percentage points, compared with a gap of only 6 percentage points when naturalized citizens are compared with natives. These unadjusted differences are essentially the same as what Carrasquillo, Carrasquillo, and Shea (2000) find using data from the 1998 March CPS.

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.¹⁰ Accounting for these variables cuts the gap between natives and naturalized citizens by just under 40 percent and reduces the native/noncitizen gap by a little more than 40 percent. Education is the most important regressor in terms of explaining the lower rate

Table 2: Differences between Immigrants and Natives in Coverage by Employer-Sponsored Health Insurance Coverage, Selected Coefficients from Probit Regressions Using the 2001 SIPP, Adults Aged 18–64

	% of Sample	(1)	(2)	(3)	(4)
<i>Coverage by employer insurance, all adults (N= 34,883)</i>					
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)
Noncitizen	8.1	—	– 0.261*** (0.010)	– 0.145*** (0.012)	– 0.142*** (0.012)
<i>Coverage by employer insurance, workers (N= 22,975)</i>					
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)
Noncitizen	7.5	—	– 0.272*** (0.012)	– 0.115*** (0.013)	– 0.087*** (0.012)
<i>Owner of employer insurance, workers (N= 22,975)</i>					
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)
Noncitizen	7.5	—	– 0.201*** (0.012)	– 0.109*** (0.015)	– 0.083*** (0.016)
Control variables					
Demographic, human capital		N	N	Y	Y
Employment characteristics		N	N	N	Y

Note: Data from 2001 SIPP. Marginal probability effects calculated at the mean of the independent variables. Robust standard errors displayed in parentheses. Regression model include population weights. All statistical tests performed using two-sided *t*-tests. Model 1 includes only an immigrant versus nonimmigrant indicator. Model 2 includes only naturalized citizen and noncitizen indicators. Model 3 includes citizenship indicators (naturalized + noncitizens), age, age-squared, male dummy, married dummy, married $\times$ male, education dummies (less high school, 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 for-profit, private not-for-profit, local/state government, federal government), firm size dummies (under 25, 25–99, 100+).

SIPP, Survey of Income and Program Participation.

*** $p < .01$; ** $p < .05$; * $p < .10$.

of ESI coverage for noncitizens. They are much more likely than the other two groups not to have completed high school (40.6 percent compared with 10.1 percent for natives) and slightly less likely to have at least a college degree (21 percent versus 26 percent). This difference in educational attainment accounts for about 6.8 percent points of the difference in ESI coverage between natives and noncitizens, or about 60 percent of the explained portion of the gap. Noncitizen 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 of 1.2 percentage points.

One “nonresult” 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). 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 noncitizen 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 ESI coverage. Thus, to the extent that noncitizen immigrants are healthier than natives in ways not captured by this single self-assessed health measure, this difference will tend to 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 noncitizens. This is what we find, though for both groups the coefficients in columns 3 and 4 are virtually identical. 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 noncitizens is higher than what they find: 14 percentage points compared with 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.¹¹

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, 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 noncitizens, 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 noncitizens to work for firms with more than 100 employees (the largest category in the SIPP): 69 percent versus 56 percent. 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 percent of native workers are union members compared with only 8 percent of noncitizens 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. 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 5–6 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/noncitizen gap in ESI from any source is driven mainly by the fact that noncitizens 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 noncitizens are smaller for women. In fact, 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

Table 3: Differences between Immigrants and Natives in Coverage by Employer-Sponsored Health Insurance Coverage, Selected Coefficients from Probit Regressions Using 2001 SIPP, Men Aged 18–64

	% of Sample	(1)	(2)	(3)	(4)
<i>Coverage by employer insurance, all adults (N = 16,707)</i>					
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)
Noncitizen	8.4	—	– 0.261*** (0.014)	– 0.137*** (0.017)	– 0.166*** (0.017)
<i>Coverage by employer insurance, workers (N = 11,823)</i>					
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)
Noncitizen	9.0	—	– 0.301*** (0.015)	– 0.135*** (0.017)	– 0.089*** (0.016)
<i>Owner of employer insurance, workers (N = 11,823)</i>					
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)
Noncitizen	9.0	—	– 0.267*** (0.016)	– 0.143*** (0.020)	– 0.107*** (0.020)
Control variables					
Demographic, human capital		N	N	Y	Y
Employment characteristics		N	N	N	Y

Note: Data from 2001 SIPP. Marginal probability effects calculated at the mean of the independent variables. Robust standard errors displayed in parentheses. Regression model include population weights. All statistical tests performed using two-sided *t*-tests. Model 1 includes only an immigrant versus nonimmigrant indicator. Model 2 includes only naturalized citizen and noncitizen indicators. Model 3 includes citizenship indicators (naturalized+noncitizens), age, age-squared, male dummy, married dummy, married $\times$ male, education dummies (less high school, 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 for-profit, private not-for-profit, local/state government, federal government), firm size dummies (under 25, 25–99, 100+).

SIPP, Survey of Income and Program Participation.

*** $p < .01$; ** $.05 < p < .01$; * $.10 < p < .05$.

Table 4: Differences between Immigrants and Natives in Coverage by Employer-Sponsored Health Insurance Coverage, Selected Coefficients from Probit Regressions Using 2001 SIPP, Women Aged 18–64

	% of Sample	(1)	(2)	(3)	(4)
<i>Coverage by employer insurance, all adults (N = 18,176)</i>					
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)
Noncitizen	7.9	—	– 0.260*** (0.014)	– 0.137*** (0.017)	– 0.112*** (0.017)
<i>Coverage by employer insurance, workers (N = 11,152)</i>					
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)
Noncitizen	6.0	—	– 0.211*** (0.019)	– 0.087*** (0.019)	– 0.059*** (0.017)
<i>Owner of employer insurance, workers (N = 11,152)</i>					
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)
Noncitizen	6.0	—	– 0.152*** (0.020)	– 0.061** (0.024)	– 0.034 (0.026)
Control variables					
Demographic, human capital		N	N	Y	Y
Employment characteristics		N	N	N	Y

Note: Data from 2001 SIPP. Marginal probability effects calculated at the mean of the independent variables. Robust standard errors displayed in parentheses. Regression model include population weights. All statistical tests performed using two-sided *t*-tests. Model 1 includes only an immigrant versus nonimmigrant indicator. Model 2 includes only naturalized citizen and noncitizen indicators. Model 3 includes citizenship indicators (naturalized + noncitizens), age, age-squared, male dummy, married dummy, married $\times$ male, education dummies (less high school, 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 for-profit, private not-for-profit, local/state government, federal government), firm size dummies (under 25, 25–99, 100+).

SIPP, Survey of Income and Program Participation.

*** $p < .01$. ** $p < .05$. * $p < .10$. $p < .05$.

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):

$$Pr(C = 1|x) = Pr(O = 1|x)Pr(E = 1|O = 1, x)Pr(T = 1|O = 1, E = 1, x) \quad (2)$$

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.¹² The components of equation (2) 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. The difference in offer rates between natives and naturalized citizens is nearly 5 percentage points. However, this gap essentially disappears when we control for individual and job characteristics. For noncitizens, 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/noncitizen 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 noncitizens is 4 percentage points lower for noncitizens. As expected, two job characteristics that have an important effect on eligibility are full-time employment and job tenure. Noncitizen 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 noncitizens 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

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)
<i>Employed by a firm that offers health insurance (N = 22,975)</i>					
Sample mean = 0.844					
Native mean = 0.864					
Immigrant	12.5	– 0.157*** (0.009)	—	—	—
Naturalized citizen	4.9	—	– 0.048*** (0.012)	– 0.016 (0.012)	– 0.011 (0.010)
Noncitizen	7.5	—	– 0.229*** (0.012)	– 0.103*** (0.013)	– 0.066*** (0.011)
<i>Eligible for employer health insurance (N = 19,327)</i>					
Sample mean = 0.903					
Native mean = 0.892					
Immigrant	10.4	– 0.017** (0.008)	—	—	—
Naturalized citizen	4.7	—	0.011 (0.010)	0.011 (0.010)	0.005 (0.010)
Noncitizen	5.7	—	– 0.041*** (0.011)	– 0.016 (0.011)	– 0.014 (0.010)
<i>Take-up of employer health insurance (N = 17,172)</i>					
Sample mean = 0.846					
Native mean = 0.848					
Immigrant	10.3	– 0.006 (0.009)	—	—	—
Naturalized citizen	4.8	—	0.019 (0.012)	0.020 (0.012)	0.024* (0.012)
Noncitizen	5.4	—	– 0.028** (0.013)	– 0.013 (0.013)	0.001 (0.012)
Control variables					
Demographic, human capital		N	N	Y	Y
Job characteristics		N	N	N	Y

Note: Data from 2001 SIPP. Marginal probability effects calculated at the mean of the independent variables. Robust standard errors displayed in parentheses. Regression model include population weights. All statistical tests performed using two-sided *t*-tests. Model 1 includes only an immigrant versus nonimmigrant indicator. Model 2 includes only naturalized citizen and noncitizen indicators. Model 3 includes citizenship indicators (naturalized+noncitizens), age, age-squared, male dummy, married dummy, married $\times$ male, education dummies (less high school, 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 for-profit, private not-for-profit, local/state government, federal government), firm size dummies (under 25, 25–99, 100+).

SIPP, Survey of Income and Program Participation.

*** $p < .01$; ** $p < .05$; * $p < .10$.

citizens are more likely to take up coverage than natives. However, the magnitude of this difference is small and imprecisely estimated. Noncitizens are less likely than natives to take up coverage, though the regression-adjusted differences are not significantly different from zero.

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/noncitizen gap is smaller for women. Cutting the data by gender does not affect the results for naturalized citizens.

These results indicate that the low rate of ESI coverage for noncitizens 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.¹³ For the full sample, the difference in offer rates explains 82 percent of the raw native/noncitizen gap in own-name ESI coverage. Differences in eligibility and take-up account for roughly equal portions of the remainder. The decomposition analysis tells a different story for naturalized citizens. Although 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.

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 ESI. 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 U.S. 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

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)
<i>Employed by a firm that offers health insurance (N = 11,823)</i>					
Sample mean = 0.845					
Native mean = 0.873					
Immigrant	14.2	– 0.189*** (0.012)	—	—	—
Naturalized citizen	5.2	—	– 0.050*** (0.017)	– 0.016 (0.016)	– 0.013 (0.014)
Noncitizen	9.0	—	– 0.267*** (0.015)	– 0.127*** (0.017)	– 0.090*** (0.015)
<i>Eligible for employer health insurance (N = 9,982)</i>					
Sample mean = 0.913					
Native mean = 0.916					
Immigrant	11.6	– 0.025*** (0.010)	—	—	—
Naturalized citizen	5.0	—	0.009 (0.012)	0.017 (0.011)	0.010 (0.010)
Noncitizen	6.6	—	– 0.050*** (0.013)	– 0.011 (0.012)	– 0.011 (0.011)
<i>Take-up of employer health insurance (N = 9,100)</i>					
Sample mean = 0.889					
Native mean = 0.890					
Immigrant	11.4	– 0.014 (0.011)	—	—	—
Naturalized citizen	5.1	—	0.022 (0.014)	0.026* (0.014)	0.028** (0.012)
Noncitizen	6.3	—	– 0.043*** (0.015)	– 0.021 (0.016)	– 0.006 (0.014)
Control variables					
Demographic, human capital		N	N	Y	Y
Job characteristics		N	N	N	Y

Note: Data from 2001 SIPP. Marginal probability effects calculated at the mean of the independent variables. Robust standard errors displayed in parentheses. Regression model include population weights. All statistical tests performed using two-sided *t*-tests. Model 1 includes only an immigrant versus nonimmigrant indicator. Model 2 includes only naturalized citizen and noncitizen indicators. Model 3 includes citizenship indicators (naturalized+noncitizens), age, age-squared, male dummy, married dummy, married $\times$ male, education dummies (less high school, 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 for-profit, private not-for-profit, local/state government, federal government), firm size dummies (under 25, 25–99, 100+).

SIPP, Survey of Income and Program Participation.

*** $p < .01$; ** $p < .05$; * $p < .10$.

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)
<i>Employed by a firm that offers health insurance (N = 11,152)</i>					
Sample mean = 0.842					
Native mean = 0.855					
Immigrant	10.64	– 0.114*** (0.013)	—	—	—
Naturalized citizen	4.62	—	– 0.045*** (0.018)	– 0.012 (0.017)	– 0.009 (0.015)
Noncitizen	6.03	—	– 0.170*** (0.019)	– 0.058*** (0.018)	– 0.026* (0.015)
<i>Eligible for employer health insurance (N = 9,345)</i>					
Sample mean = 0.865					
Native mean = 0.866					
Immigrant	9.20	– 0.014 (0.013)	—	—	—
Naturalized citizen	4.44	—	0.011 (0.016)	0.001 (0.018)	– 0.0.07 (0.017)
Noncitizen	4.76	—	– 0.037** (0.018)	– 0.016 (0.018)	– 0.016 (0.017)
<i>Take-up of employer health insurance (N = 8,072)</i>					
Sample mean = 0.798					
Native mean = 0.799					
Immigrant	9.03	– 0.008 (0.016)	—	—	—
Naturalized citizen	4.52	—	0.008 (0.021)	0.009 (0.022)	0.011 (0.021)
Noncitizen	4.51	—	– 0.024 (0.022)	– 0.002 (0.023)	– 0.006 (0.022)
Control variables					
Demographic, human capital		N	N	Y	Y
Job characteristics		N	N	N	Y

Note: Data from 2001 SIPP. Marginal probability effects calculated at the mean of the independent variables. Robust standard errors displayed in parentheses. Regression model include population weights. All statistical tests performed using two-sided t-tests. Model 1 includes only an immigrant versus nonimmigrant indicator. Model 2 includes only naturalized citizen and noncitizen indicators. Model 3 includes citizenship indicators (naturalized+noncitizens), age, age-squared, male dummy, married dummy, married $\times$ male, education dummies (less high school, 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 for-profit, private not-for-profit, local/state government, federal government), firm size dummies (Under 25, 25 to 99, 100+).

SIPP, Survey of Income and Program Participation.

*** $p < .01$; ** $.05 < p < .01$; * $.10 < p < .05$.

eligible for coverage. These differences are small, though, and generally not statistically significant. In contrast, foreign-born adults who are not U.S. citizens have substantially lower rates of ESI coverage than native or foreign-born citizens.

How should this difference between naturalized citizens and noncitizens be interpreted? One recent study suggests 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 examples. 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 noncitizens 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. Noncitizens are younger, less educated, and are employed in different types of jobs. Foreign-born citizens and noncitizens 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, 1995; Card, DiNardo, and Estes 2000; Lubotsky 2000). In addition, there are numerous difficult to observe differences between immigrant subgroups. For example, given the differing political and economic context of migration for Asian and Hispanic immigrants, one could expect differences in coverage and take-up rates between these groups. However, the most critical unobserved characteristic in virtually all large datasets is undocumented status. This could plausibly explain much of the difference between naturalized citizens and noncitizens. 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 percent of the difference in ESI coverage between natives and noncitizens comes from differences in the

probability of working for a firm that offers health benefits. Differences between natives and foreign-born noncitizens 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, noncitizens 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. Among workers who are offered ESI, the decision to take up coverage will depend on the level of benefits provided by offered plans and the premium contributions required. Unfortunately, because the SIPP lacks information on these variables we cannot examine their relative importance in explaining take-up. However, the finding that the take-up rates are so similar between immigrants and natives suggests that these variables and the responses of workers to them are not an important determinant of the native/immigrant gap in ESI coverage.

Third, our results suggest that differences between native-born U.S. citizens and foreign-born noncitizens in ESI offers 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/nonnative 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. Because 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. Subsequent addition of job characteristics to the regression reduces the unexplained difference between natives and noncitizens by another 20 percent. Note that job characteristics and human capital variables are correlated, hence there is overlap in the explanatory power of these covariates. Adding job characteristics before adding human capital variables would clearly explain more than 20 percent of the difference between natives and noncitizens.

A fourth important result is that we find interesting differences by gender. The unadjusted native/noncitizen 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/noncitizen gap in employer offers is less than 3 percentage points for women compared with 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). Although 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 the 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 U.S., and Card, DiNardo, and Estes (2000) find that the children of immigrants close 50 percent to 60 percent 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 noncitizens. 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 noncitizen 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 (House et al. 1990; Stephen et al. 1994). 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.

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NOTES

1. 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.
2. We provide more details on the SIPP data below.
3. See Buchmueller et al. (2005) for a recent review.
4. Several studies report on the private health insurance coverage of specific demographic subgroups or immigrants living in certain geographic areas (Capps et al. 2002; Prentice, Pebley, and Sastry 2005; Goldman, Smith, and Sood 2005; Ponce, Nordyke, and Hirota 2005).
5. 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 nonunion workers has different sources, depending on firm size.
6. 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). Because it is typical for firms to limit eligibility to full-time employees, SB2 would have expanded eligibility within firms that offer health benefits.
7. Detailed information on the SIPP can be found at U.S. Census Bureau (2001).
8. 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.

9. 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 with 82.9 percent for those who responded in both Waves 2 and 5.
10. 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.
11. Because cash wages and ESI coverage are simultaneously determined, income is an endogenous regressor. The presence of such a clearly endogenous regressor could lead to bias of unknown direction and magnitude in coefficient estimates. Therefore, we exclude it from our models.
12. 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/nonunion differences in coverage. Heckman and Smith (2004) use this type of empirical approach to examine the determinants of participation in job training programs.
13. Details of this approach are available in a brief technical appendix available upon request of the authors.

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