

The Likelihood of Having Employer-Sponsored Health Insurance

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This article analyzes data on different types of workers to determine the likelihood of being covered by employer-sponsored health insurance. Such coverage generally increases with age, although it decreases somewhat for older workers. Coverage was less likely for Hispanics; single parents; persons in households with income below \$100,000; self-employed workers; part-time workers; employees of small firms; and those who work in service, construction, production, and in farming, forestry, and fishing occupations. Members of unions were more likely to have employer-provided health insurance than nonmembers.

Introduction

According to data from the Bureau of Labor Statistics [National Compensation Survey \(NCS\)](#), in March 2006, 71 percent of private industry workers had access to employer-sponsored medical care plans and 52 percent participated in such plans.¹ In the NCS, employees are described as having access to a benefit plan if it is available to them for their use. Employees are considered as participating in contributory plans if they have paid the required contributions and fulfilled any requisite service requirements. Employees in noncontributory plans are described as participating whether or not they have fulfilled any applicable service requirements. The term "take-up rate" refers to an estimate of the percentage of workers with access to a benefit plan who participate in the plan. The term "incidence" can refer to either rates of access to or rates of participation in a benefit plan.

NCS data for March 2006 show that access to and participation in benefit plans for workers in private industry varied by occupational group, full- and part-time status, union membership or representation, and earnings.² White-collar workers, full-time workers, union workers, and workers who earn at least \$15 per hour were more likely to be covered by benefits. The data also show that the incidence of benefits (access or participation) varied by industry, establishment size, and location. Benefits were more commonly offered to workers in goods-producing industries than in service-producing industries, and in medium-sized and large private sector establishments (those employing 100 or more employees) than in smaller establishments. Workers in metropolitan areas had higher rates of access to benefits than those in nonmetropolitan areas.

Most employees place a high value on benefits, especially benefits such as medical, life, and disability insurance. Firms employing large number of employees generally can negotiate lower group insurance rates and better coverage than individual employees are able to negotiate in the open market.³ In order to compete for workers in the labor market, employers might offer an insurance plan as part of an employee's overall compensation package. In addition, the Federal government promotes employer insurance arrangements by allowing the employer to pay the premiums for the employees and immediately deduct the cost for income tax purposes without requiring employees to include the premium cost in their taxable income. At the same time, however, employers often find it difficult to measure the full costs of providing health insurance.⁴ The costs can vary for different firms, depending on the characteristics of the workers who participate in the plan, the number of employees covered by the plan, State health insurance regulations, and the extent to which employees utilize their healthcare plans.

This study uses data from the 2004 Survey of Consumer Finances (SCF) to examine employer-sponsored health insurance among households in which the head of household was working at the time the survey was conducted. The SCF, which surveys a large sample of U.S. households, was used to develop a conceptual model of the likelihood of workers having employer-sponsored health insurance.⁵ The SCF provides demographic data that are not available in the NCS, which is an establishment-based or employer survey. Summary statistics from the SCF are reported and multivariate regression analysis is conducted to determine how likely workers are to have employer-sponsored health insurance. In this article, "having employer-sponsored health insurance" is defined as participation in such a plan. All of the results of the study are discussed in comparison to hypothetical outcomes.

Data And Methodology

As mentioned previously, the data used in this study were drawn from the 2004 Survey of Consumer Finances, which is sponsored by the Board of Governors of the Federal Reserve in cooperation with the Department of Treasury. Since 1989, the data have been collected every 3 years by the National Opinion Research Center at the University of Chicago. The purpose of this national survey is to provide detailed information about the financial activity and attitudes of households in the United States. The SCF employs a dual frame sample design: one part is a standard multistage area probability sample, and the second part is a sample of high-income households from Internal Revenue Service tax files. The 2004 SCF sample consists of 4,519 households. The sample used for this study, however, includes only households in which the head of household was working (part time or full time). This restriction reduced the sample size to 3,478 households.

Note that in the 2004 SCF, a multiple imputation technique was used to handle missing and incomplete data. This results in five imputates of the data set. Instead of providing just one estimate for a piece of missing data, multiple responses are provided for each case to represent the likely range of responses for the particular respondent. In this study, only the first implicate is used. The only financial variable used in this analysis was household income, which was coded as a categorical variable.

Dependent variable. The dependent variable was derived from the following question: Are you (Is anyone here) covered by any (other) type of health plan such as head's employer, head's former employer, spouse/partner's employer, spouse/partner's former employer, employer of another person in the household, employer of a person outside the household, or deceased spouse's former employer? A household population weight variable was applied to the data to make it more representative of the U.S. population. In the 2004 SCF, nearly two-thirds of households responded that they had employer-sponsored health insurance. For those who responded yes to head's employer or spouse/partner's employer, the dependent variable was coded "1" for employer-sponsored health coverage and "0" otherwise. The present analysis used logistic regression because the dependent variable was dichotomous.

Independent variables. The independent variables included socioeconomic and work-related factors. The socioeconomic factors consisted of household income, age, race, and family type. The work-related factors included self-employment, full- or part-time work, size of employer, occupation, and union membership. The SCF refers to the head of the household as the single person in a single household, the male in a mixed-sex couple, or the older individual in a same-sex couple. Thus, age, race, self-employment, full- or part-time work, occupation, and union membership refer to the head of household. The remaining paragraphs in this section present support for the variables in the model and explain how the variables are coded in the analysis.

Earnings. Those who earn higher incomes are more likely than low-income workers to be eligible for health benefits and also to participate in health insurance plans when they are offered. Data from the 2001 Survey of Income and Program Participation (SIPP), for example, show that 30.8 percent of workers who earned less than \$10,000 per year were eligible for employer-sponsored health benefits in 2002, compared with 92.4 percent of workers earning \$50,000 or more per year. Workers whose employers offer health benefits have "access" and can participate or be "covered," provided they meet certain requirements ("eligible"), such as not being a contract or part-time worker. Also, 91.8 percent of workers in the 2001 SIPP who earned \$50,000 or more per year took coverage when it was offered, compared to 65.5 percent of workers who earned less than \$10,000 per year.⁶

The present study tests the hypothesis that those with higher income will be more likely to have employer-sponsored health insurance than those with lower income. For the analysis, annual household income was categorized as follows: less than \$25,000; \$25,000 to \$49,999; \$50,000 to \$74,999; \$75,000 to \$99,999, and \$100,000 or more.

Age. As age increases, eligibility and coverage rates for employer-based health benefits generally increase as well. Data from the 2001 SIPP, for example, show that 29.1 percent of persons aged 18 to 20 years had access to healthcare benefits, while 76.5 percent of those aged 55 to 64 years had access to such benefits. The participation rates for the same age

categories were 16.0 percent and 67.4 percent, respectively. The highest rates of eligibility (80.1 percent) and participation (69.3 percent) were for workers aged 45 to 54.⁷

The present study tests the hypothesis that younger and older workers are less likely to have access to employer-sponsored health insurance than are middle-aged workers. Age-squared is included in the regression analysis. If the coefficient for age-squared is negative, then the likelihood of having employer-sponsored health insurance eventually decreases as age increases.

Race. Data from the 2003 Current Population Survey Annual Social and Economic Supplement show that 32.4 percent of Hispanics did not have health insurance in 2002 (employer provided or otherwise), compared with 20.2 percent of blacks who reported a single race, 18.7 percent of Asians who reported a single race, and 10.7 percent of non-Hispanic whites who reported a single race.⁸

The present study tests the hypothesis that, upon controlling for income difference, racial and ethnic minorities are less likely than whites to participate in employer-sponsored health insurance. Racial or ethnic background is categorized in the SCF as non-Hispanic white, black, Hispanic, and "other," which includes Asian Americans, Pacific Islanders, and Native Americans.

Family type. Most uninsured children are in families whose income is below 200 percent of the official poverty level, the head of the household is unemployed, or the head is working either full time or part time but still is not eligible for health insurance. Children's access to health insurance coverage in the private sector is usually determined by whether their parents work for employers who provide family health insurance coverage.⁹

In the case of family type, the hypothesis tested is that single parents will be less likely to have employer-sponsored health insurance than couples (married or not). This is because couples are more likely to be part of a two-earner family. Family type measures marital status of the head of household and whether there are children in the household. For the analysis, the family types were categorized as follows: couples with children, couples with no children, single parent, and single individual.

Self-employment. Many self-employed workers forgo medical care and rely on public resources or emergency room care.¹⁰ Some workers who are self-employed rely on their spouse's health insurance. Thus, with respect to self-employment, the tested hypothesis is that those who are self-employed are less likely to have employer-sponsored health insurance than those who work for someone else. Self-employment is measured by the response to the question that asks if respondents are self-employed or working for someone else.

Current work status. Data from the 2001 SIPP show that as the number of hours worked increased, the percentage of workers who reported that they were not eligible for health benefits declined.¹¹ Thus, for this variable, the tested hypothesis is that part-time workers are less likely to have employer-sponsored health insurance than full-time workers. The variable is measured by the response to the question about whether respondents are working full or part time or not working.

Size of employer. Data from the 2001 SIPP also show that sponsorship rates of health insurance increased with firm size.¹² Thus, it is hypothesized that workers in small firms are less likely to have employer-sponsored health insurance than those who work for larger firms. Size of employer is measured by the number of employees in the establishment at which the head of household is employed. The size of employer was defined as small if there were 100 or fewer employees.

Occupation and union membership. White-collar workers are more likely to be insured than blue-collar workers. However, workers who are members of a union are more likely to be covered by health insurance than nonunion workers.¹³ For these variables, two hypotheses are tested: 1) that blue-collar workers are less likely than professional and managerial workers to have employer-sponsored health insurance; and 2) that union members are more likely than nonunion members to have employer-sponsored health insurance.

Occupation was measured using the six major occupational Census codes in the Survey of Consumer Finances. The categories were as follows: (a) managerial or professional, (b) sales and office workers, (c) service occupations, (d) construction, extraction and maintenance, (e) production, transportation, and material moving, and (f) farming, forestry, and fishing. Union membership was coded as 1 for union members and 0 for others. (See table 1 for the coding of the variables.)

Summary Statistics From The 2004 Survey Of Consumer Finances

The average age of the respondents in the survey was 43.6. The majority were non-Hispanic whites (72.8 percent). In addition, 12.7 percent were Black, 10.4 percent were Hispanic, and 4.1 percent were in the "other" category, which includes Asian Americans, Pacific Islanders, and Native Americans. About one-third of the sample was a member of a couple with children, one-fifth of the sample was a member of a couple with no children, 16.9 percent were single parents, and 28.7 percent were single individuals. The household income distribution showed that 19.5 percent earned less than \$25,000; 30.1 percent earned between \$25,000 and \$49,999; 19.8 percent earned between \$50,000 and \$74,999; 11.1 percent earned between \$75,000 and \$99,999; and 19.5 percent earned \$100,000 or more in 2003.

Sixteen percent of the respondents were self-employed. Eighty-seven percent worked full time and the remainder worked part time. Less than half (44.9 percent) worked for a small firm. Thirty-nine percent had managerial or professional jobs; 18.2 percent had sales jobs; 12.5 percent had service jobs; 17.6 percent had construction jobs; 11.2 percent were in production; and 1.3 percent worked in farming, forestry, and fishing occupations. Fifteen percent of the respondents were members of a union. (See table 1.)

Results

The results of the logistic regression shown in table 2 indicate that most hypotheses were supported. As hypothesized, the likelihood of health insurance coverage increased with age, but coverage decreased at older ages. Also, Hispanics; single parents; those with household income below \$100,000; the self-employed; part-time workers; employees of small firms; those in service, construction, and production occupations; and those in farming, forestry, and fishing occupations were less likely to have employer-sponsored health insurance. Finally, union members were more likely to have health insurance than nonunion members.

The logistic regression is interpreted in terms of the odds ratio. This compares the relative odds of the head or spouse having employer-sponsored health insurance versus being uninsured. If the odds of being insured versus not insured are equal for each independent variable, the odds ratio is equal to 1.0. When the odds ratio is greater than 1.0, it means that the comparison group has the higher odds of being insured. When the odds ratio is less than 1.0, it means that the comparison group has the lower odds of having insurance and the reference group has the higher odds.¹⁴

The logistic regression showed that the likelihood of having employer-sponsored health insurance increased as age increased. However, at age 45, the likelihood of having employer-sponsored health insurance begins to decline. The highest rates of eligibility and participation in the 2001 SIPP were in the age category between 45 and 54. The difference shown here might be a result of declines in health insurance availability between the collection of data in the SIPP in 2001 and the Survey of Consumer Finances in 2004, or it might be due to differences in data collection or modeling.

Compared with non-Hispanic whites, Hispanics were 46 percent less likely to have employer-sponsored health insurance. However, the results of the regression showed that there was no difference in the likelihood of health insurance coverage between non-Hispanic whites, blacks, and the "other" category. These results are consistent with data from the 2002 Census that showed that Hispanics have the highest uninsured rates compared with the other race/ethnic groups.

Compared with couples with children, single parents were 29 percent less likely to be insured through their employers. This result was consistent with the hypothesis. However, there was no difference in the likelihood of having health insurance between single individuals and all couples, with or without children.

Workers with household income of \$100,000 or more were more likely than workers with household income of less than \$100,000 to be covered by employer-sponsored health insurance. Those with household income of less than \$25,000 were 90 percent less likely to be insured, those with income between \$25,000 and \$49,999 were 68 percent less likely, those with income between \$50,000 and \$74,999 were 49 percent less likely, and those with income between \$75,000 and \$99,999 were 44 percent less likely than workers with household income of greater than \$100,000 to have health insurance

sponsored by their employers. In other words, as household income increased toward \$100,000 (the reference category), the likelihood of having employer health insurance increased. This was consistent with the hypothesis for income.

Self-employed workers were 63 percent less likely to have health insurance through either their employer or their spouse's employer, if they were married. This was consistent with the hypothesis and with previous research in regard to health insurance coverage of the self-employed. Part-time workers were 74 percent less likely to be insured than full-time workers. This is consistent with the hypothesis. It also is comparable to data from the 2006 NCS that show that 22 percent of part-time workers and 85 percent of full-time workers had access to medical care benefits.

Those who worked in small firms were 60 percent less likely to be insured than those who worked for large employers. The 2006 National Compensation Survey showed that 84 percent of workers in firms with 100 or more employees had access to medical care benefits, compared with 59 percent of workers in firms with 1 to 99 employees.

Compared with managerial and professional workers, all of the other occupations except sales and office workers were less likely to have health insurance. Specifically, farming, forestry and fishing workers were 63 percent less likely to be covered. In addition, service workers were 61 percent less likely, construction workers were 40 percent less likely, and production workers were 37 percent less likely to be covered than were managerial and professional workers.

The logistic regression showed that union members were 69 percent more likely to have health insurance than nonunion members. The 2006 NCS shows that 89 percent of union members had access to healthcare benefits, and 80 percent were participants in medical care plans. In contrast, 68 percent of nonunion members had access and 49 percent were participants in medical care plans.

Conclusion

If the magnitude of the odds ratios is used as an indicator of the most influential factors in determining likelihood of having employer-sponsored health insurance, household income less than \$50,000, being self-employed, being employed by a small firm, and being a part-time worker are significant predictors of those who are likely to be uninsured. This may give employers insight into the health insurance status of comparable firms and workers. They may use this information to consider whether it would be advantageous for them to offer health insurance if they are not already doing so or to change their eligibility requirements if they are currently offering health insurance to only a portion of their employees.

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Notes

¹ *National Compensation Survey: Employee Benefits in Private Industry in the United States, March 2006*, Summary 06-05 (Bureau of Labor Statistics, August 2006), available on the Internet at <http://www.bls.gov/ncs/ebs/sp/ebsm0004.pdf>.

² Ibid.

³ Michael A. Dalton, "Employee benefits: Group benefits," in *Retirement Planning and Employee Benefits for Financial Planners*, 3rd ed. (St. Rose, LA, Money Education, 2005), pp. 633-64.

⁴ Deborah Natvig and Sam Tolbert, "The Financial Implications of Employer-Sponsored Health Insurance," *Journal of Health Care Finance*, December 22, 2005, pp. 8-18.

⁵ Arthur B. Kennickell, *Codebook for the 2004 Survey of Consumer Finances* (Washington, DC, Board of Governors of the Federal Reserve System, 2006).

⁶ Paul Fronstin, "Employment-Based Health Benefits: Trends in Access and Coverage," EBRI Issue Brief No. 284 (Employee Benefit Research Institute, August 2005), pp. 1-27.

- 7 Ibid.
- 8 *Health Insurance Coverage in the United States: 2002*, Current Population Reports, Series P60-223 (U.S. Census Bureau, 2003), available on the Internet at <http://www.census.gov/prod/2003pubs/p60-223.pdf>.
- 9 Paul Fronstin, *Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 2004 Current Population Survey*, EBRI Issue Brief No. 276 (Employee Benefits Research Institute, December 2004), pp. 1-31.
- 10 Derek Hunter, "Counting the Uninsured: Why Congress Should Look Beyond the Census Figures," Issues in Brief 2004 (The Heritage Foundation, August 26, 2004); Sara Horowitz and Stephanie Buchanan, "Educated, Employed and Uninsured-How Independent Workers Fall Out of the Social Safety Net," *Health Insurance Affordability Report* (Working Today, 2004), pp. 1-7.
- 11 Fronstin, "Employment-Based Health Benefits."
- 12 Ibid.
- 13 Paul Fronstin, "Workers and Access to Health Care: Consequences of Being Uninsured," in Paul Fronstin, ed., *The Economic Costs of the Uninsured: Implications for Business and Government* (Washington, DC, Employee Benefits Research Institute, 2000), pp. 3-18.
- 14 Paul D. Allison, *Logistic Regression Using the SAS System: Theory and Application* (Cary, NC, SAS Institute Inc, 1999).

Table 1. Coding of variables and weighted descriptive statistics for 2004 Survey of Consumer Finances for working households (N=3,478)

Variable	Coding	Mean	%
Dependent variable:			
Employer-sponsored health coverage	1=yes		65.74
(reference group: no coverage)	0=no		34.26
Independent variables:			
Age	Years	43.6	
Race:			
White non-Hispanic (reference group)	1=yes, 0=no		72.82
Black	1=yes, 0=no		12.7
Hispanic	1=yes, 0=no		10.41
Other	1=yes, 0=no		4.07
Family type:			
Couples with children (reference group)	1=yes, 0=no		35.3
Couples without children	1=yes, 0=no		19.05
Single parents	1=yes, 0=no		16.99
Singles	1=yes, 0=no		28.67
Income:			
Less than \$25,000	1=yes, 0=no		19.52
\$25,000-\$49,999	1=yes, 0=no		30.09

Variable	Coding	Mean	%
\$50,000-\$74,999	1=yes, 0=no		19.8
\$75,000-\$99,999	1=yes, 0=no		11.06
\$100,000 plus (reference group)	1=yes, 0=no		19.54
Self-employed (reference group: not self-employed)	1=yes, 0=no		16.37
Current work:			
Full time work (reference group)	1=yes, 0=no		87.37
Part time work	1=yes, 0=no		12.63
Firm size of employer: Small (<=100) (reference group: larger firms)	1=yes, 0=no		44.87
Occupation:			
Managerial and professional (reference group)	1=yes, 0=no		39.18
Sales	1=yes, 0=no		18.18
Service	1=yes, 0=no		12.53
Construction	1=yes, 0=no		17.61
Production	1=yes, 0=no		11.21
Farming, forestry, & fishing	1=yes, 0=no		1.29
Union membership (reference group: non-union members)	1=yes, 0=no		15.46

Table 2. Logistic regression predicting employer-sponsored health coverage based on head of household or spouse/partner among workers in the 2004 Survey of Consumer Finances (N=3,478)

Variable	Parameter estimate	P-value	Odds ratio
Age	0.1272	<.0001***	1.136
Age-squared	-0.0014	<.0001***	0.999
Race:			
White non-Hispanic (reference group)	-	-	-
Black	-0.1568	0.3033	0.855
Hispanic	-0.6244	<.0001***	0.536
Other	-0.1021	0.651	0.903
Family type:			

Note: * p<.05; ** p<.01; *** p<.001 Percent concordant: 82.3%

Variable	Parameter estimate	P-value	Odds ratio
Couples with children (reference group)	-	-	-
Couples without children	0.0271	0.8315	1.027
Single parents	-0.3455	0.0197*	0.708
Singles	-0.1872	0.144	0.829
Income:			
Less than \$25,000	-2.2558	<.0001***	0.105
\$25,000-\$49,999	-1.1237	<.0001***	0.325
\$50,000-\$74,999	-0.6793	<.0001***	0.507
\$75,000-\$99,999	-0.5856	0.0011**	0.557
\$100,000 plus (reference group)	-	-	-
Self-employed (reference group: not self-employed)	-0.9925	<.0001***	0.371
Current work:			
Full time work (reference group)	-	-	-
Part time work	-1.3494	<.0001***	0.259
Small firm employer (<=100) (reference group: large firms)	-0.9151	<.0001***	0.4
Occupation:			
Managerial and professional (reference group)	-	-	-
Sales	-0.2143	0.0965	0.807
Service	-0.9388	<.0001***	0.391
Construction	-0.5646	0.0001**	0.569
Production	-0.4625	0.0070**	0.63
Farming, Forestry, & Fishing	-1.003	0.0098**	0.367
Union membership (reference group non-union members)	0.527	0.0012**	1.694

Note: * p<.05; ** p<.01; *** p<.001 Percent concordant: 82.3%