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**Offers or Take-Up: Explaining
Minorities' Lower Health Insurance Coverage**

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Coverage under employment-based health insurance has declined overall in the U.S. over the last two decades. Coverage rates of minorities, lower than those of whites at the beginning of the period, have fallen more sharply, even among full-time workers. At greater risk of incurring health shocks and less able to bear the financial burden of medical care, minority workers find themselves increasingly excluded from the primary source of health insurance in the U.S.

A critical question in understanding white-minority differences in health insurance coverage is whether minorities' coverage is lower because they are less likely to receive health insurance offers or less likely to elect offered coverage. This issue is important because the policy implications differ. If minorities are more likely to be in jobs that do not offer health benefits, tax incentives to employers to offer coverage or public facilitation of insurance purchasing pools, especially for small firms, may be effective policy measures. If minority workers are less likely to take up offered coverage, a focus on insurance cost containment, tax incentives to workers for the purchase of insurance, and redesign of benefit packages for low-wage workers may be better-targeted measures.

We examine offer and take-up rates of non-Hispanic white, non-Hispanic black, Asian, and Hispanic full-time private-sector workers. We find significant differences between whites and minorities in the likelihood of being offered health insurance but not in the likelihood of electing coverage. We also find that within minority groups, the likelihood of being in a job offering insurance differs by marital status, gender, nativity, and by number

of workers in the household. Aggregating across minority groups, we find important structural differences between the offer functions of minorities and whites in all household configurations. We also find that the proportion of the white-minority differential in offer rates explained by differences in observed job and demographic characteristics varies by household composition and by gender of worker. Our data are taken from the 1996 Panel of the Survey of Income and Program Participation (SIPP).

I. Changes in employment-based health insurance coverage, 1988-2001

We begin by documenting the decline in coverage of minorities relative to whites in recent years. We examine changes over time using the Current Population Survey (CPS) May 1988 and April 1993 Employee Benefits Supplements and the 1995-2001 February Contingent Work Supplements, which provide information on own-employer health benefits.¹ Table 1 reports unadjusted mean coverage rates for private sector, full-time wage and salaried workers by race, ethnicity, and gender.² Among men, coverage rates of both non-Hispanic white (thereafter white) and of minority workers overall declined over this period. Among women, only minorities experienced a decline in coverage. By 2001, coverage rates of minority men were 13 percentage points lower than those of white men and rates of minority women were six points lower than those of white women.³

Patterns differ substantially among the three minority groups. Differences between non-Hispanic black (thereafter black) and Hispanic workers are particularly striking. Among

¹ The latter were discontinued after 2001. Previous studies examining changes in overall coverage include Cooper and Schone (1997) and Farber and Levy (2000).

² We focus on the private sector because the important changes in employment-based insurance coverage have occurred in this sector and subsequent policy measures are likely to be directed toward private-sector employers and workers.

³ Differences in coverage rates between white and minority workers are significant at the 1 percent level in all years with the exception of rates of women in 1988 (5 percent) and in 1997 (not significant).

black men and women there were no significant declines in coverage over this period. Rates of black women were in fact nearly identical to those of white women throughout. Rates of black men were significantly lower than those of whites in 1988, but the difference narrowed over the period (.69 compared to .77 among whites by 2001).

The coverage rate of Hispanic men, in contrast, declined 8 points from 1988 to 2001, increasing the gap between Hispanics and whites from 17 to 21 points (rates in 2001 of .56 and .77, respectively). Rates of Hispanic women declined comparably. By 2001, only 55 percent of Hispanic women working full-time in the private sector were covered by their own employment-based insurance, compared to 70 percent of white women. Changes in coverage rates of non-Hispanic “other” races (primarily Asians)⁴ were not statistically significant.⁵

We now turn to the underlying question raised by these differences: Is coverage of minorities lower because they are less likely to receive offers or less likely to elect offered coverage?⁶

II. Racial and ethnic differences in household offer and take-up rates

Following the broader literature on health insurance coverage, previous research examining racial and ethnic differences focused on the decisions of workers rather than households.⁷ The early literature reporting unadjusted mean differences in coverage and/or

⁴ The 1988 Employee Benefits Supplement data do not distinguish Asians as a separate category. Asians comprised 69 percent of “other” races in 1993 and 82 percent in 2001.

⁵ Rates of “other” men declined between 1988 and 1999 (significant at the 5 percent level) but appear to have increased from 1999 to 2001.

⁶ Unfortunately, CPS data cannot be used to examine changes in offers and take-up after 1993. In the 1995-2001 February Supplements, only workers covered under some form of insurance were asked whether their employers offered coverage.

⁷ This choice was dictated in large part by the unavailability of survey information on other workers in the household and on their options for coverage.

offers and take-up of workers is surveyed in Crow, Harrington and McLaughlin (2002).⁸

Multivariate analyses of racial and ethnic differences in coverage include Fronstin, Goldberg, and Robins (1997), Hall, Collins and Glied (1999), Institute of Medicine (2001), Ku and Matani (2001), Shi (2000, 2001), and Waidmann and Rajan (2000).

Monheit and Vistnes (2000) analyze changes from the mid-1980s to mid-1990s in offers, take-up, and coverage by race, ethnicity, and gender of full- and part-time workers using data from the 1987 National Medical Expenditure Survey and the 1996 Medical Expenditure Panel Survey. They find significant declines in coverage rates over this period for all racial/ethnic groups except black men and white women. In contrast to other minority groups, the decline in coverage of Hispanic men resulted from changes in their observed characteristics rather than from structural shifts (captured by changes in regression coefficients). In particular, declines in union membership and in the likelihood of being married reduced potential sources of coverage among Hispanic males. While take-up rates were found to decline for all demographic groups except black men, Hispanic men were the only group to also experience a significant decline in offer rates.

Waidmann, Garrett, and Hadley (2004) estimate the joint probabilities of having a worker in the family, the worker having an offer, and the family electing coverage on a sample of persons in households with at least one adult taken from the 1999 and 2002 rounds of the National Survey of America's Families. They do not find important racial/ethnic differences in the probability that families have at least one worker present. However, relative to non-Hispanic whites, Hispanic families are found to have both lower offer and take-up rates and black families are found to have lower take-up rates.

⁸ See also Brown and Yu (2002).

In contrast to this literature, we use a general model of health insurance offer and take-up that allows us to examine separately the decisions of single workers, married workers in single-earner households, and dual-earners (now the modal married household in the U.S.). We thus provide for the possibility that differences between whites and minorities in the likelihood of being in a job offering health benefits and in the decision to elect offered coverage may vary by household composition due to both observable and unobservable characteristics of workers and households. White-minority differentials in educational attainment or wealth, for example, may differ between married and single households. Hiring decisions of employers offering health coverage, moreover, may be influenced by larger perceived productivity differences between white and minority single applicants than married applicants. Among married workers, minorities may differ from whites in their taste for insurance due to greater health care needs and therefore be more likely to have working spouses to insure adequate health coverage.⁹

Our data are taken from Wave 5 of the 1996 Survey of Income and Program Participation (SIPP). The SIPP is conducted by the U.S. Bureau of the Census on a nationally representative sample of the civilian non-institutionalized population.¹⁰ All household members are interviewed at four-month intervals over a four-year period and are asked a series of core demographic and economic questions. Demographic information includes race, ethnicity, education, age, health status, and family characteristics including income, home ownership, and number of children; job-related characteristics include occupation, industry,

⁹ Including simple indicator variables for marital status (or a second worker in the household) in a sample aggregating across all household configurations controls only for the average effect of marital status across race/ethnic groups on offer and take-up probabilities but does not capture race and ethnic differences by marital status. These differences remain in the error term and thus bias the coefficients of the race/ethnicity indicators. Policy measures that may be effective in reducing minority-white differences for a particular type of household, moreover, may not be revealed in a pooled sample.

¹⁰ The 1996 Panel contains 40,188 households and 95,402 individuals.

firm size, region, and urban location. In addition, topical modules (waves) focus on specific areas of interest. The Wave 5 module contains information from all workers in a household on their employers' offers of insurance, their eligibility, and their participation. Additional information includes the out-of-pocket premium and the availability of employer-provided alternatives to coverage such as employer contributions to 401(k) plans or tax-free medical spending accounts.¹¹ Wave 2 contains information on nativity.

Table 2 reports unadjusted mean offer and take-up rates of full-time private sector wage and salaried workers in 1996 by race, ethnicity, gender, and household structure.¹² The top panel summarizes offer and take-up rates of workers across all households. Focusing first on offers, the top two rows indicate that offer rates of black men and women are nearly identical to those of whites. Rates of Hispanic men and women, however, are significantly lower than those of whites, as are rates of Asian women.¹³ Aggregating across all minority groups, offer rates of minority men and women are significantly lower than those of whites. By contrast, there are no significant differences in unadjusted take-up rates between whites and either individual racial/ethnic groups or minorities overall.

The lower panels report unadjusted offer and take-up rates by household composition. The only significant difference in offer rates between white and black workers is among dual-earner men (10 percentage points). By contrast, offer rates of Hispanic men are lower than those of whites in every household configuration. The largest difference (22 points) is among married men whose wives do not work. Among women, the largest difference is

¹¹ Information on the out-of-pocket premium is not available in the National Survey of America's Families, and reported for only 15 percent of the sample in the merged Medical Expenditure Panel Surveys. By contrast, the response rate on out-of-pocket premiums in the SIPP is 81 percent. This information is potentially important because price elasticities may differ between whites and minorities.

¹² Offer is defined as offered and eligible for coverage by own employer.

¹³ Asians are identified as a separate racial group in the SIPP.

between white and Asian single workers (14 points). Rates of Hispanic single workers and those in dual-earner households are also lower than those of whites. Although not a focus of this study, it is interesting that gender differences in offer rates are observed only in white households.¹⁴

There are relatively few significant differences between whites and minorities in unadjusted take-up rates and those that exist are small compared to disparities in offers. Take-up of Hispanic married men whose wives are not employed and of single Hispanic women is lower than that of whites; by contrast, take-up among single Asian men is higher than that of whites. Gender differences in take-up occur in all dual-earner households except Asian households and in white one-earner married households. In all cases, take-up is lower among women.

To summarize, the above evidence in unadjusted means suggests that white-minority differences in offers and, in a few cases, in take-up, vary by household composition. We next outline a model that allows us to examine these differences in a multivariate framework.

III. Household offer and take-up probabilities

We first consider the demand for insurance by a single worker or a married worker who is the sole earner in the household. Let TU_i be the probability that a worker i elects offered insurance coverage, which is a function of a vector of worker characteristics X_i , price P_i , and unobservables ε_i including tastes for insurance:

$$TU_i = \alpha_0 + X_i\alpha_1 + \alpha_2P_i + \varepsilon_i \quad (1)$$

¹⁴ Rates of women are lower than those of men in all household configurations. *P*-values of the differences between male and female rates are reported in square brackets below offer rates.

The parameters of this demand equation estimated on workers offered health insurance are biased if workers select into jobs offering health insurance based on their unobserved preferences for insurance. We thus estimate insurance take-up in a sample-selection framework:

$$\begin{aligned} \text{TU}_i &= \alpha_0 + \mathbf{X}_i\alpha_1 + \alpha_2\mathbf{P}_i + \varepsilon_{1i} \\ \text{Off}_i &= \beta_0 + \mathbf{X}_i\beta_1 + \mathbf{Z}_i\beta_2 + \varepsilon_{2i} \end{aligned} \quad (2)$$

where Off_i is the probability of worker i receiving an offer, \mathbf{X}_i is the vector of individual characteristics, \mathbf{Z}_i is a vector of job characteristics, and the ε_i 's are error terms. If job sorting is an important aspect of worker behavior, then $\text{Cov}(\varepsilon_1, \varepsilon_2) > 0$.¹⁵ For single workers and married workers who are the sole earners in their households, we estimate offer and take-up jointly, as in (2) above.

Estimation of insurance demand in the case of a worker in a dual-earner household is more complex because of the option of coverage under a spouse's employment-based plan. Assuming that dual-earner households maximize household rather than individual utility, the couple may decide whether to select into jobs with offers of insurance coverage, which member should do so if not both and, based on offer outcomes, who should elect coverage if there is more than one offer.

The wife's take-up, shown below, may thus be jointly determined with both her own and her husband's offer:

$$\begin{aligned} \text{TU}_{wi} &= \alpha_0 + \mathbf{X}_{wi}\alpha_1 + \alpha_2\mathbf{P}_{wi} + \alpha_3\text{Off}_{hi} + \varepsilon_{1i} \\ \text{Off}_{wi} &= \beta_0 + \mathbf{X}_{wi}\beta_1 + \mathbf{Z}_{wi}\beta_2 + \beta_3\text{Off}_{hi} + \varepsilon_{2i} \\ \text{Off}_{hi} &= \gamma_0 + \mathbf{X}_{hi}\gamma_1 + \mathbf{Z}_{hi}\gamma_2 + \gamma_3\text{Off}_{wi} + \varepsilon_{3i} \end{aligned} \quad (3)$$

¹⁵ If workers also sort along the dimension of price, \mathbf{P}_i is endogenous to take-up. A full discussion of the model and estimation methods may be found in Honig and Dushi (2004).

The husband's take-up is determined similarly:

$$\begin{aligned}
 TU_{hi} &= \alpha_0 + X_{hi}\alpha_1 + \alpha_2 P_{hi} + \alpha_3 \text{Off}_{wi} + \varepsilon_{1i} \\
 \text{Off}_{hi} &= \beta_0 + X_{hi}\beta_1 + Z_{hi}\beta_2 + \beta_3 \text{Off}_{wi} + \varepsilon_{2i} \\
 \text{Off}_{wi} &= \gamma_0 + X_{wi}\gamma_1 + Z_{wi}\gamma_2 + \gamma_3 \text{Off}_{hi} + \varepsilon_{3i}
 \end{aligned} \tag{3'}$$

Estimating demand for health insurance by dual-earner households is complicated because the offer decisions of the two partners are jointly determined. Estimating Model (3) for the wife, for example, contains elements of both a structural model of household offers, Off_{wi} and Off_{hi} (each partner's offer is endogenous to the other's offer) and a sample selection model (wife's offer, Off_{wi} , and her take-up, TU_{wi}).

We thus estimate Off_{hi} separately and include its predicted value in both equations, Off_{wi} and TU_{wi} , of her selection model. Specifically, we estimate a reduced-form probit equation of the probability that her spouse has an offer as a function of his own individual and job characteristics, as well as those of his wife (instead of including his wife's offer, Off_{wi} , as in simultaneous estimation). We then include the fitted value of her husband's offer as a regressor in both the wife's offer and take-up equations.¹⁶ Off_{wi} and TU_{wi} are then estimated jointly using a standard Heckman selection procedure.¹⁷

We next examine racial and ethnic differences controlling for the covariates that are likely to influence whether household members are in jobs offering health benefits and whether the offered coverage is elected.

¹⁶ This approach is similar to 3SLS estimation, which we would use if our interest were solely in estimating the two offer equations. In contrast to our approach, 3SLS estimates are consistent and efficient, as they are obtained using the covariance matrix of the equation disturbances. Our estimates, while not efficient, are consistent. To test the robustness of our offer equation parameters, we estimated a structural model of the two offers by 3SLS. The signs and significance levels of the coefficients of spouse's offer in the offer equations, as well as of other explanatory variables, were nearly identical in the two approaches.

¹⁷ The husband's offer and take-up equations, Off_{hi} and TU_{hi} , are estimated similarly.

A. Offer and take-up probabilities: Dual-earner households

Columns 1-4 of Table 3 report estimated marginal effects of race, ethnicity, and nativity (foreign birth) on the probabilities that workers in dual-earner households receive offers of insurance coverage from their employers and elect coverage.¹⁸ We include nativity in Table 3 because of interest among researchers and policymakers in its role in explaining ethnic and racial differences in a number of socio-economic outcomes, including health insurance coverage.¹⁹ We use a matched sample of wives and husbands in 1,068 households.²⁰

Looking first at offers, differences between white and both black and Hispanic dual-earner husbands observed in the unadjusted means in Table 2 remain after controlling for job-related and other demographic characteristics (col. 1). An interesting pattern emerges for black dual-earner husbands. The unadjusted mean offer rate of blacks is 10 percentage points lower than that of whites; the marginal effect indicates an 11 point lower rate. Differences in observed characteristics, that is, do not explain the discrepancy in offers between white and black dual-earner husbands.

By contrast, the difference in adjusted offer rates of white and Hispanic husbands is only 6.5 percentage points, compared to the 13 point gap in unadjusted means. One-half of the difference in offer rates between whites and Hispanics, in other words, can be explained by differences in observed characteristics. Interestingly, the marginal effect is 8.9 points when nativity is excluded from the control variables. Differing proportions of foreign-born

¹⁸ Marginal effects are defined as the change in offer or take-up probabilities in response to a discrete change from 0 to 1 in the indicator variable. Additional control variables are listed in notes to the table.

¹⁹ Fronstin (2005) provides evidence that immigrants are more likely to be uninsured. The proportion of foreign-born workers, moreover, varies by race and ethnicity.

²⁰ The sample is identical to that used in calculating unadjusted mean offer and take-up rates in Table 2.

workers, whose offer rates among dual-earner husbands overall are 10.5 points lower, thus account for slightly more than one-third of the white-Hispanic difference in offers explained by job and demographic characteristics.

Among dual-earner wives (col. 3), the offer rate of Hispanic wives does not differ from that of whites, compared to the 10 point difference in unadjusted means reported in Table 2. Exclusion of the nativity control variable results in a significant marginal effect of 6.8 points, however, suggesting that foreign birth contributes about two-thirds of the difference in offers explained by the job and demographic characteristics. The insignificant marginal effects for black and Asian dual-earner women are consistent with the findings in Table 2. Finally, foreign-born dual-earner wives overall are 10.5 points less likely to be in jobs offering health benefits, identical to the difference among dual-earner husbands. With respect to take-up (cols. 2 and 4), there are no significant effects of foreign birth or race/ethnicity, the latter consistent with the findings on unadjusted rates reported in Table 2.

We now turn to other covariates that influence offer and take-up probabilities in dual-earner households (not reported in Table 3). Among husbands, the probability of being offered health benefits increases with the wage rate, home ownership, firm size and employment in the south (compared to the northeast), and decreases with poor health and employment in technical and service occupations and in goods-producing industries. Among dual-earner wives, the offer probability increases with wages, firm size and employment in the south, and decreases with offers received by spouses, the presence of children, urban location, union membership and employment in service occupations. The out-of-pocket premium, alternatives to health coverage (such as employer contributions to 401(k) plans and tax-free medical spending accounts), spouses with insurance offers, and

residence in urban areas all have statistically important negative effects on take-up for both husbands and wives. Coefficients on the out-of-pocket premium indicate price elasticities of .08 for husbands and .19 for wives, estimates within the range found in previous studies. Our estimates also indicate that job sorting is an important aspect of the health insurance decision in dual-earner households and that it is engaged in only by wives.²¹

B. Offer and take-up probabilities: One-earner married households and single workers

As reported in Table 2, the unadjusted offer rate of black married men with non-working wives does not differ from that of whites.²² After controlling for job-related and other demographic characteristics, however, being black is associated with a 6.2 point *higher* offer rate (col. 5, Table 3). This somewhat surprising difference suggests that while black men have less favorable observable characteristics than whites, these are offset in the unadjusted mean by more favorable unobserved attributes that increase the probability of their being in jobs offering insurance.

Hispanic husbands who are the sole earners in their households have a six percentage point lower offer rate than that of whites (similar to the difference observed among Hispanic dual-earner husbands). This difference is considerably smaller than the 22 point gap in the unadjusted means reported in Table 2, however, and indicates that observed characteristics account for a large share of the offer differential. Surprisingly, excluding nativity has no effect on the coefficient of the Hispanic indicator, in contrast to the pattern observed among

²¹ The covariance of the error terms in the offer and take-up equations of wives is positive and significant (p -value is .07).

²² We report estimates for male workers only in one-earner households. The sample of married households in which the wife is the sole earner is insufficient for selection model estimation.

dual-earner men and women.²³ Lastly, there are no significant white-minority differences in take-up among single-earner married men, in contrast to the significantly lower rate observed for Hispanic men in the unadjusted means.

Among married men in one-earner households overall, the probability of an offer increases with the wage, age, employment in the south, urban location, higher educational level, employment in larger firms, in professional and technical occupations, and union membership, and decreases with poor health. Interestingly, take-up of employment-based insurance is influenced only by wages and home ownership. Neither the characteristics of the offered plan -- its price or whether alternatives are available -- nor demographic characteristics of workers influence take-up decisions in these households. We also find no evidence of job sorting among married men in one-earner households.

We turn now to estimates of the offer probabilities of single male and female workers (cols. 7 and 9). While there are no differences in unadjusted means between whites and blacks, some differences emerge after controlling for observed characteristics. The offer rate of black men is 4.6 points *higher* than that of white men, indicating that black single men, like black married men with non-working spouses, have favorable unobservable attributes that increase the probability of their being in jobs offering insurance. By contrast, the offer rate of black women is 3.6 points lower than that of whites, suggesting that black single women have less favorable unobservable characteristics than whites (offset in the unadjusted mean by more favorable observed attributes).

Neither of the marginal effects for Hispanic men or women is significant, in contrast to the large differences in offer rates observed in unadjusted means. Differences in

²³ Among single-earner married men overall, foreign birth has no effect on offer rates.

demographic and job-related characteristics, that is, fully account for observed differences in offers. Similar to the findings on Hispanic married men with non-working wives, exclusion of the foreign-born indicator does not affect coefficients on Hispanic indicators for either men or women.

The 14 point difference in unadjusted means observed between white and Asian women persists after controlling for observable characteristics (a marginal effect of 15.4 points), suggesting that, similar to single black women, Asians have lower offer probabilities due to less favorable unobserved factors. Lastly, among single men overall, foreign birth significantly reduces the probability of being in a job offering health insurance.

Findings on the effects of race and ethnicity on insurance take-up by single men and women (cols. 8 and 10) deviate in one respect from results for other household configurations: take-up of Asian men is significantly different from that of whites. The rate for Asians is six points *higher*, consistent with the pattern observed in unadjusted rates. Differences in unadjusted take-up rates between white and Hispanic single women, however, are no longer evident once observed characteristics are controlled for.

In Table 4, we report differences in offer probabilities by race/ethnicity and foreign birth.²⁴ The first four rows report differences in offer rates of foreign-born workers relative to natives for each race/ethnic group. The next three rows report differences between native-born minorities and native whites, and the last rows report differences between foreign-born minorities and native-born whites.

²⁴ Reported marginal effects are calculated from a model that includes race/ethnicity and foreign-born indicators, as well as interaction terms, in addition to the control variables listed in Table 3. The effect of being foreign-born versus native-born, for example, is the linear combination of the respective race/ethnicity indicator and the interaction term. Due to small cell sizes for some interactions, bootstrapping was used to estimate the magnitude of bias in estimated coefficients; “a” in Table 4 indicates cells for which the bias was greater than 25 percent of the standard error.

Among whites, only workers in dual-earner households are disadvantaged by being foreign-born; offer probabilities are about 15 percentage points lower than those of native-born dual-earners. Among Hispanics, foreign birth is associated with lower offer probabilities only among single women (by 14 points). Offer rates of Asian foreign-born workers are lower than those of Asian natives only among single men (by 19 points).

Foreign birth does not affect the offer probabilities of black workers. However, black native-born dual-earner husbands are 16 points less likely to be in jobs offering health benefits than white native-born dual-earners. Asian native-born single men have lower offer probabilities than white native-born single men. Offer probabilities of Hispanic foreign-born dual-earner husbands and single women are significantly lower than those of their white native-born counterparts (by 19 and 14 points, respectively), and probabilities of Asian foreign-born single women are 13 points lower than those of white native-born women.

C. Explaining white/minority differences in offer probabilities

The evidence thus far reveals important differences in offer rates between white and minority workers that vary by household composition. To understand the underlying causes of these differences, we estimate offer probabilities separately for whites and minorities within each household configuration and calculate the offer rate differential (row 1, Table 5).²⁵ This difference is defined as

$$\overline{Off}_M - \overline{Off}_W = [(\bar{X}_M - \bar{X}_W)\hat{\beta}_M] + [(\hat{\beta}_M - \hat{\beta}_W)\bar{X}_W],$$

²⁵ We use a standard linear technique (Blinder 1973; Oaxaca 1973). Weighted sample means and regression coefficients for all households are reported in Appendix Tables 1 and 2. In Appendix Table 2, “+” next to coefficients in columns for minorities indicates that coefficients are significantly different from those of whites.

where the first term measures the difference in rates attributable to differences in the mean characteristics of the two groups (reported in row 2),²⁶ and the second term measures the difference due to unobservable factors (row 3) arising either from differences in how employers evaluate identical observed characteristics (the coefficients of the offer functions) or from remaining differences captured in the constant terms.

Table 5 summarizes the findings from this decomposition. Of the 11 percentage point difference in the offer rates of white and minority dual-earner husbands, only 22 percent can be accounted for by the less favorable job and personal attributes of minority husbands (see Appendix Table 1). Interestingly, differences in coefficients of the two offer equations result in a 130 point *advantage* for minority husbands, who gain more in terms of offer probabilities than whites from being employed in the south and west (relative to the northeast) and from employment in mid-size firms (see Appendix Table 2). These advantages are offset, however, by a 140 point disadvantage in unobservable factors reflected in the constant terms.

By contrast, 71 percent of the three point offer rate differential of dual-earner wives is explained by minorities' less advantageous observed characteristics. Minority wives are more than twice as likely to be foreign-born, less likely to be high school or college graduates, and more likely to work as laborers or in service occupations. The remainder of the offer differential is accounted for by minority wives' less favorable unobserved attributes. These are only partially offset by their larger gains relative to whites (revealed in the

²⁶ This differential varies with the choice of the reference group (the index number problem). Appendix Table 2 reports results using the coefficients of minorities; estimates using whites as the reference group are available on request.

coefficients) from high school and college graduation and, interestingly, their smaller losses from being foreign born.

Among married men in one-earner households, nearly all the 15 point differential in offer rates is accounted for by minorities' less favorable job and demographic characteristics. Minorities earn lower wages and are four times more likely to be high school dropouts. They gain more than whites from jobs with higher wages (a 10 percent increase in their wage is associated with a 1.4 percentage point increase in the probability of being in a job offering health benefits compared to a .5 percentage point increase for whites), but this advantage is offset by their less favorable unobservable characteristics.

Among single men, the 5 point offer disadvantage of minorities results from their less favorable observed characteristics. Single minority men earn lower wages than whites, are twice as likely to be foreign born and work in service occupations, and three times as likely to be high school dropouts. These inferior endowments are partially offset by favorable unobserved factors, however. Nearly all of this unexplained advantage results from relatively more favorable unobserved characteristics (reflected in the intercepts) rather than from larger returns from observed attributes.²⁷

By contrast, roughly 40 percent of the 8 point offer differential among single women is explained by minorities' less favorable job and personal attributes. Minority women earn lower wages, are more likely to be foreign born, and are three times as likely as white women to be high school drop-outs. Of the 60 percent of the differential that remains unexplained, minorities' less favorable unobserved characteristics are partially offset by larger returns

²⁷ In Heckman selection estimates of offer and take-up for whites and minorities (not reported), the correlation of the residuals is negative and significant for white single men but insignificant for minority single men. White men employed in jobs offering health benefits, that is, are less likely than minorities to elect coverage due to taste differences or other unobservable factors. Single white men, perhaps more optimistic about their future prospects, may be relatively greater risk takers and therefore unwilling to bear the costs of coverage.

from observed attributes. Single minority women gain more from being older, for example, which may indicate longer job tenure.

IV. Conclusion

Coverage under employment-based health insurance has fallen in recent years. This trend is a matter of policy concern, especially because the decline has been greater for minority workers. Our evidence indicates that the gap in coverage between white and minority workers reflects disparities in employer offers rather than differences in household decisions regarding the take-up of offered coverage.

We examine separately the offer outcomes of single workers, married workers in one-earner households, and dual-earners. We thus provide for the possibility that white-minority differences in the likelihood of being in a job offering health benefits may vary by household composition and that the underlying causes of these differences may also vary across households. Disaggregation by household composition has revealed a number of important causal factors, some with policy implications, which would otherwise have been obscured in a pooled sample. Foreign birth, for example, lowers the offer probabilities of minorities relative to whites among male and female single workers, but not among those in other households. Because foreign-born workers are more likely to be in small firms, public facilitation of insurance purchasing pools for small firms, especially those hiring single workers, is likely to target a significant portion of uninsured minorities.

Decomposition of differences in offer probabilities between white and minority workers indicates that disparities between white and minority women in dual-earner households, married men with non-working wives and single men can largely be explained

by observed differences in demographic and job-related characteristics. Policies aimed at increasing the educational endowment of minorities and providing tax incentives to firms employing low-skilled labor may be particularly effective in narrowing the minority-white offer gap for these groups. By contrast, a large portion of the offer difference between whites and minorities remains unexplained for men in dual-earner households and for single women. This unexplained portion may be due to differences in tastes or cultural norms and thus best addressed by informational efforts regarding the value of preventive health care directed to specific minority groups. Overall, our findings suggest that a single policy response is unlikely to be effective in dealing with the growing disparity in private health insurance coverage.

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Table 1. EBHI coverage rates (%) of full-time private sector workers by race/ethnicity and gender, 1988-2001

	<i>Male</i>					<i>Female</i>						
	1988	1993	1995	1997	2001	1988	1993	1995	1997	2001		
All race/ethnic groups	78 (.01)	75 (.01)	75 (.00)	73 (.01)	74 (.01)	73 ^{***} (.01)	71 (.01)	67 (.01)	70 (.01)	67 (.01)	68 (.01)	68 ^{***} (.01)
White	81 (.01)	78 (.01)	78 (.00)	76 (.01)	77 (.01)	77 ^{***} (.01)	72 (.01)	68 (.01)	71 (.01)	67 (.01)	69 (.01)	70 (.01)
All minority groups	69 (.02)	65 (.02)	66 (.01)	63 (.01)	63 (.01)	64 ^{***} (.01)	67 (.02)	64 (.02)	66 (.01)	66 (.01)	65 (.01)	64 [*] (.01)
Black	70 (.02)	74 (.03)	72 (.02)	70 (.02)	69 (.02)	69 (.02)	72 (.02)	66 (.03)	71 (.02)	72 (.02)	67 (.02)	69 (.02)
Hispanic	64 (.03)	51 (.02)	57 (.02)	56 (.02)	56 (.02)	56 ^{***} (.02)	62 (.04)	59 (.03)	59 (.02)	56 (.02)	62 (.02)	55 [*] (.02)
Other^a	81 (.04)	78 (.03)	76 (.02)	72 (.02)	71 (.03)	76 (.02)	60 (.05)	64 (.04)	62 (.03)	68 (.03)	67 (.03)	66 (.03)

Notes : Coverage rates are authors' tabulations from the May 1988 and April 1993 Employee Benefits Supplement and February (1995-2001) CPS Contingent Work Supplements. Standard errors are in parentheses. The sample is private sector full-time wage and salaried workers ages 20-64. Sample means are weighted using CPS supplement weights. The significance of the difference between 1988 and 2001 is denoted by asterisks (^{***} $p < .01$, ^{**} $p < .05$, ^{*} $p < .10$). Differences in coverage rates between non-Hispanic whites and minorities overall (rows 2 and 3) are significant at the 1% level in all years, with the exception of females in 1988 (5%) and 1997 (not significant). ^a Primarily Asian.

Table 2. Mean offer and take-up rates of full-time wage and salaried workers in the private sector, ages 20-64, by race/ethnicity, gender, and household type, 1996

	White	Black	Hispanics	Asian	All Minorities
All Households					
Offer					
Male	0.70 (0.01)	0.67 (0.03)	0.55 ^{***} (0.02)	0.65 (0.04)	0.60 ^{***} (0.02)
Female	0.67 (0.01)	0.64 (0.02)	0.55 ^{***} (0.03)	0.59 [*] (0.04)	0.60 ^{***} (0.02)
<i>Male/Female Diff. (p-value)</i>	<i>[0.013]</i>	<i>[0.413]</i>	<i>[0.865]</i>	<i>[0.292]</i>	<i>[0.986]</i>
Take-up					
Male	0.84 (0.01)	0.83 (0.03)	0.82 (0.02)	0.84 (0.04)	0.83 (0.02)
Female	0.78 (0.01)	0.79 (0.02)	0.75 (0.03)	0.83 (0.04)	0.79 (0.02)
<i>Male/Female Diff. (p-value)</i>	<i>[0.000]</i>	<i>[0.303]</i>	<i>[0.100]</i>	<i>[0.944]</i>	<i>[0.089]</i>
Dual-earner Married Households					
Offer					
Male	0.75 (0.02)	0.65 [*] (0.06)	0.62 ^{**} (0.06)	0.68 (0.08)	0.64 ^{***} (0.04)
Female	0.67 (0.02)	0.67 (0.06)	0.57 [*] (0.06)	0.72 (0.07)	0.63 (0.04)
<i>Male/Female Diff. (p-value)</i>	<i>[0.000]</i>	<i>[0.854]</i>	<i>[0.518]</i>	<i>[0.695]</i>	<i>[0.842]</i>
Take-up					
Male	0.78 (0.02)	0.82 (0.06)	0.83 (0.06)	0.69 (0.09)	0.80 (0.04)
Female	0.63 (0.02)	0.56 (0.08)	0.65 (0.07)	0.72 (0.08)	0.64 (0.05)
<i>Male/Female Diff. (p-value)</i>	<i>[0.000]</i>	<i>[0.012]</i>	<i>[0.045]</i>	<i>[0.802]</i>	<i>[0.009]</i>

Table 2 (cont.)

	White	Black	Hispanics	Asian	All Minorities
One-earner Married Households					
Offer					
Male	0.76 (0.01)	0.73 (0.06)	0.54*** (0.04)	0.73 (0.06)	0.61*** (0.03)
Female	0.65 (0.04)	0.63 (0.09)	0.51 (0.10)	0.54 (0.12)	0.56 (0.06)
<i>Male/Female Diff.</i> <i>(p-value)</i>	[0.007]	[0.360]	[0.742]	[0.154]	[0.443]
Take-up					
Male	0.86 (0.01)	0.86 (0.06)	0.78** (0.04)	0.80 (0.07)	0.80** (0.03)
Female	0.76 (0.04)	0.74 (0.11)	0.82 (0.10)	-- ¹	0.84 (0.06)
<i>Male/Female Diff.</i> <i>(p-value)</i>	[0.018]	[0.384]	[0.721]	--	[0.584]
Single-person Households					
Offer					
Male	0.64 (0.01)	0.66 (0.03)	0.53*** (0.04)	0.58 (0.06)	0.59** (0.02)
Female	0.67 (0.01)	0.64 (0.03)	0.55*** (0.04)	0.53** (0.06)	0.60*** (0.02)
<i>Male/Female Diff.</i> <i>(p-value)</i>	[0.116]	[0.559]	[0.647]	[0.514]	[0.757]
Take-up					
Male	0.85 (0.01)	0.83 (0.03)	0.85 (0.03)	0.94** (0.04)	0.85 (0.02)
Female	0.86 (0.01)	0.83 (0.03)	0.79* (0.04)	0.87 (0.05)	0.82* (0.02)
<i>Male/Female Diff.</i> <i>(p-value)</i>	[0.506]	[0.936]	[0.285]	[0.301]	[0.382]

Notes. Source: Wave 5 of 1996 panel of SIPP. Sample sizes for offers are 2,136 workers in dual-earner households, 1,479 in one-earner households, and 4,530 single-person households. Respective sample sizes for take-up (conditional on being offered and eligible) are 1,498, 1,031, and 2,904. The table reports means and standard errors in parentheses; *p*-values associated with a t-test of the significance of the difference between men and women within each race/ethnicity category are in brackets. The significance of the difference between whites and other race/ethnic categories is denoted by asterisks (*** $p < .01$, ** $p < .05$, * $p < .10$). Sample means are weighted using SIPP person weights.

¹ Sample insufficient.

Table 3. Marginal effects of race, ethnicity and nativity on the probabilities of receiving a health insurance offer from own-employer and of electing coverage, by household type and gender

	Dual-earner households				One-earner households				Single-person households			
	Husbands		Wives		Male		Male		Male		Female	
	Offer	Take-up	Offer	Take-up	Offer	Take-up	Offer	Take-up	Offer	Take-up	Offer	Take-up
Black	-0.111*** (0.041)	0.004 (0.085)	-0.038 (0.043)	-0.086 (0.064)	0.062* (0.032)	0.049 (0.048)	0.046** (0.022)	-0.019 (0.025)	-0.036* (0.019)	-0.019 (0.020)		
Hispanic	-0.065* (0.037)	-0.016 (0.088)	-0.056 (0.041)	-0.038 (0.065)	-0.060** (0.023)	-0.040 (0.049)	0.028 (0.027)	0.012 (0.024)	-0.035 (0.027)	-0.021 (0.027)		
Asian	-0.015 (0.042)	-0.104 (0.109)	0.075 (0.046)	0.119 (0.094)	0.009 (0.037)	-0.026 (0.066)	0.026 (0.040)	0.061** (0.027)	-0.154*** (0.040)	0.030 (0.031)		
Foreign born	-0.105*** (0.032)	0.016 (0.077)	-0.105*** (0.038)	-0.043 (0.066)	0.017 (0.022)	-0.015 (0.039)	-0.049** (0.023)	0.023 (0.020)	-0.011 (0.022)	-0.012 (0.021)		
Sample means	0.74	0.78	0.66	0.63	0.71	0.85	0.63	0.85	0.65	0.86		
N	1,068	792	1,068	706	1,205	860	2,177	1,376	2,353	1,528		

Notes. Source: Wave 5 of 1996 panel of SIPP. Sample: Full-time wage and salaried workers in the private sector ages 20-64. Dependent variables: Offer = 1 if individual is offered health insurance by own employer and eligible for benefits; Take-up = 1 if individual elects coverage. Reported estimates (marginal effects and standard errors) are calculated from Heckman selection estimates. Omitted racial category is white. Control variables in the offer equation, not reported here, include firm size, occupation, industry, union membership and education in addition to variables included in the take-up equation. Control variables in take-up equation include age, region, health, presence of children, weekly earnings, home ownership, spouse offer, out-of-pocket premium, and health insurance alternatives. All estimates are weighted using SIPP person weights.

*** $p < .01$, ** $p < .05$, and * $p < .1$

Table 4. Differences in offer probabilities by race/ethnicity and foreign birth

	Dual-earner households		One-earner households		Single-person households	
	Husbands	Wives	Male	Female	Male	Female
White foreign-born vs. white native	-0.139 ^{**} (0.067)	-0.151 ^{**} (0.069)	-0.010 (0.047)		-0.011 (0.038)	0.017 (0.037)
Hispanic foreign-born vs. Hispanic native	-0.137 (0.098)	--- ^a	0.043 (0.055)		-0.057 (0.071)	-0.140 ^{**} (0.070)
Black foreign-born vs. black native	--- ^a	--- ^a	--- ^a		--- ^a	-0.024 (0.078)
Asian foreign-born vs. Asian native	--- ^a	--- ^a	--- ^a		-0.190 ^{**} (0.094)	0.005 (0.092)
Hispanic natives vs. white native	-0.053 (0.069)	-0.062 (0.059)	-0.066 (0.045)		0.033 (0.032)	-0.0003 (0.032)
Black natives vs. white native	-0.161 ^{**} (0.069)	-0.043 (0.063)	0.040 (0.057)		0.051 (0.041)	-0.027 (0.027)
Asian natives vs. white native	-0.005 (0.082)	-0.070 (0.075)	0.003 (0.083)		0.068 (0.062)	-0.136 ^{**} (0.062)
Hispanic foreign-born vs. white native	-0.190 ^{**} (0.094)	--- ^a	-0.023 (0.062)		-0.024 (0.069)	-0.140 ^{**} (0.065)
Black foreign-born vs. white native	--- ^a	--- ^a	--- ^a		--- ^a	-0.051 (0.074)
Asian foreign-born vs. white native	--- ^a	--- ^a	--- ^a		-0.123 (0.085)	-0.131 [*] (0.080)

Notes: Marginal effects and standard errors are reported. Marginal effects are calculated from a model that includes race/ethnicity and foreign birth indicators, as well as interaction terms, in addition to the control variables listed in Table 3. Bootstrapping is used to estimate standard errors of marginal effects.

^a Not reported due to small samples (see ft.24 in text).

Table 5. Decomposition of differences in offer probabilities of white and minority workers, by household type and gender

	Dual-earner households		One-earner households		Single-person households					
	Husbands	Wives	Male	Female	Male	Female				
Raw Difference	-0.113 ^{****}	-0.034	100%	100%	-0.148 ^{***}	100%	-0.049 ^{**}	100%	-0.082 ^{***}	100%
Explained by job and demographic characteristics	-0.025	-0.024	(-22%)	(-71%)	-0.147	(-99%)	-0.100	(-204%)	-0.032	(-39%)
Unexplained	-0.088	-0.010	(-78%)	(-29%)	-0.001	(-1%)	0.051	(+104%)	-0.050	(-61%)
Due to coefficients	1.297	0.233			1.148		0.007		0.709	
Due to intercepts	-1.385	-0.243			-1.149		0.044		-0.759	

Notes. Source: Wave 5 of 1996 panel of SIPP. Decomposition results are derived from separate OLS estimates of offer probabilities; raw differences reflect differences in offer probabilities between minorities and whites. The significance of the raw difference in offer probabilities is denoted by asterisks (*** p < .01, ** p < .05, * p < .10).

Appendix Table 1. Weighted sample means¹

	Dual-earner households				One-earner households				Single-person households			
	Husbands		Wives		Male		Female		Male		Female	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
Take-up ^a	.78	.80	.63	.64	.86	.80	.85	.85	.85	.85	.86	.82
Offer	.75	.64	.67	.63	.76	.61	.64	.59	.67	.67	.67	.60
<i>Explanatory variables</i>												
Out-of-pocket premium ^b	225.73 (0.95)	220.72 (1.83)	226.96 (0.90)	226.48 (2.05)	197.84 (1.78)	189.63 (3.18)	95.45 (0.38)	94.43 (0.76)	92.91 (0.36)	92.91 (0.36)	89.62 (0.61)	89.62 (0.61)
Log weekly wage	6.40 (.02)	6.14 (.05)	5.99 (.03)	5.91 (.04)	6.57 (.03)	6.15 (.04)	6.12 (.02)	5.85 (.03)	5.97 (.02)	5.97 (.02)	5.81 (.03)	5.81 (.03)
Age	40.46 (.34)	37.93 (.66)	38.44 (.33)	36.30 (.65)	42.28 (.36)	39.29 (.60)	33.47 (.25)	32.49 (.42)	36.45 (.29)	36.45 (.29)	35.43 (.42)	35.43 (.42)
Foreign born	.08	.25	.09	.21	.10	.28	.11	.21	.11	.11	.16	.16
Home ownership	.85	.64	.85	.62	.80	.57	.60	.44	.58	.58	.43	.43
Children present	.50	.66	.51	.62	.64	.71	.12	.22	.24	.24	.42	.42
Poor/fair health	.05	.08	.05	.09	.07	.09	.05	.04	.06	.06	.07	.07
Northeast	.18	.13	.18	.13	.19	.16	.20	.13	.23	.23	.17	.17
Midwest	.33	.17	.33	.17	.30	.14	.30	.13	.29	.29	.16	.16
South	.33	.39	.33	.39	.37	.30	.31	.40	.28	.28	.47	.47
West	.16	.31	.16	.31	.14	.40	.19	.34	.19	.19	.19	.19
MSA	.55	.69	.55	.69	.57	.67	.53	.67	.58	.58	.69	.69
High school dropout	.07	.16	.16	.16	.10	.41	.09	.23	.06	.06	.16	.16
High school graduate	.36	.34	.36	.28	.31	.25	.35	.35	.31	.31	.27	.27
Some college	.31	.32	.34	.39	.27	.22	.32	.30	.37	.37	.41	.41
College graduate	.26	.18	.24	.17	.32	.13	.24	.12	.25	.25	.15	.15

Appendix Table 1 (cont.)

	Dual-earner households				One-earner households				Single-person households			
	Husbands		Wives		Male		Female		Male		Female	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
Firm size												
1-24	.20	.18	.24	.16	.15	.25	.25	.27	.22	.18		
25-99	.13	.13	.11	.18	.14	.20	.20	.17	.13	.12		
100+	.67	.69	.65	.66	.71	.54	.54	.56	.65	.70		
Union member	.14	.15	.07	.10	.17	.16	.16	.11	.07	.09		
Occupation												
Laborer	.23	.34	.09	.18	.21	.42	.42	.33	.10	.16		
Professional	.29	.17	.35	.26	.34	.09	.09	.13	.30	.19		
Technical	.23	.24	.43	.37	.19	.19	.19	.19	.45	.42		
Service	.03	.08	.10	.15	.02	.13	.13	.17	.13	.19		
Prod./craft/repair	.22	.17	.03	.04	.24	.17	.17	.17	.02	.04		
Goods-producing industry	.44	.42	.20	.25	.49	.50	.50	.36	.19	.19		
Spouse has offer ^c	.83	.68	.98	.80	---	---	---	---	---	---		
N	880	188	881	187	878	327	327	541	1,656	697		

Notes. In dual-earner households, mean values of household variables such as home ownership or children vary slightly between husbands and wives due to a small number of bi-racial couples.

¹ Standard errors < 0.03 unless reported. ^a Take-up conditional on being offered and eligible. ^b Imputed, and conditional on being offered and eligible. ^c Treated as endogenous.

Appendix Table 2. Ordinary least square estimates of the probabilities of receiving a health insurance offer among white and minority workers, by household types and gender

Independent variables	Dual-earner households						One-earner households						Single-person households						
	Husbands			Wives			Male			Female			Male			Female			
	White	Minority		White	Minority		White	Minority		White	Minority		White	Minority		White	Minority		
Constant	0.291 (0.272)	-1.095 ⁺⁺⁺⁺ (0.610)	-0.344 (0.288)	-0.587 (0.772)	-0.250 (0.259)	-1.399 ⁺⁺⁺⁺ (0.417)	-0.635 ^{***} (0.157)	-0.590 ^{**} (0.260)	-0.512 ^{***} (0.159)	-0.590 ^{**} (0.260)	-0.512 ^{***} (0.159)	-0.590 ^{**} (0.260)	-0.512 ^{***} (0.159)	-0.590 ^{**} (0.260)	-0.512 ^{***} (0.159)	-0.590 ^{**} (0.260)	-0.512 ^{***} (0.159)	-0.590 ^{**} (0.260)	-0.512 ^{***} (0.159)
Foreign born	-0.129 ^{**} (0.062)	0.014 (0.080)	-0.153 ^{***} (0.060)	0.076 ⁺⁺ (0.088)	-0.013 (0.049)	0.061 (0.060)	-0.012 (0.039)	-0.101 ^{**} (0.050)	0.023 (0.037)	-0.101 ^{**} (0.050)	0.023 (0.037)	-0.101 ^{**} (0.050)	0.023 (0.037)	-0.101 ^{**} (0.050)	0.023 (0.037)	-0.101 ^{**} (0.050)	0.023 (0.037)	-0.101 ^{**} (0.050)	0.023 (0.037)
Log weekly wage	0.097 ^{***} (0.026)	0.124 ^{**} (0.051)	0.164 ^{***} (0.021)	0.153 ^{**} (0.078)	0.053 ^{***} (0.019)	0.142 ^{***} (0.044)	0.118 ^{***} (0.018)	0.107 ^{***} (0.028)	0.103 ^{***} (0.020)	0.107 ^{***} (0.028)	0.103 ^{***} (0.020)	0.107 ^{***} (0.028)	0.103 ^{***} (0.020)	0.107 ^{***} (0.028)	0.103 ^{***} (0.020)	0.107 ^{***} (0.028)	0.103 ^{***} (0.020)	0.107 ^{***} (0.028)	0.103 ^{***} (0.020)
Home ownership	0.035 (0.044)	0.051 (0.080)	-0.019 (0.044)	0.055 (0.090)	0.009 (0.039)	-0.044 (0.056)	-0.028 (0.025)	0.036 ⁺⁺ (0.041)	-0.024 (0.024)	0.036 ⁺⁺ (0.041)	-0.024 (0.024)	0.036 ⁺⁺ (0.041)	-0.024 (0.024)	0.036 ⁺⁺ (0.041)	-0.024 (0.024)	0.036 ⁺⁺ (0.041)	-0.024 (0.024)	0.036 ⁺⁺ (0.041)	-0.024 (0.024)
Children ^a	0.016 (0.031)	-0.122 ⁺ (0.080)	-0.118 ^{***} (0.034)	-0.105 (0.090)	-0.032 (0.039)	0.087 (0.076)	-0.030 (0.035)	-0.067 ^{**} (0.047)	-0.079 ^{***} (0.028)	-0.067 ^{**} (0.047)	-0.079 ^{***} (0.028)	-0.067 ^{**} (0.047)	-0.079 ^{***} (0.028)	-0.067 ^{**} (0.047)	-0.079 ^{***} (0.028)	-0.067 ^{**} (0.047)	-0.079 ^{***} (0.028)	-0.067 ^{**} (0.047)	-0.079 ^{***} (0.028)
Poor/fair health	-0.120 [*] (0.072)	-0.160 (0.134)	-0.028 (0.074)	-0.001 (0.130)	-0.047 (0.061)	-0.153 (0.102)	0.0009 (0.051)	-0.051 (0.115)	-0.038 (0.050)	-0.051 (0.115)	-0.038 (0.050)	-0.051 (0.115)	-0.038 (0.050)	-0.051 (0.115)	-0.038 (0.050)	-0.051 (0.115)	-0.038 (0.050)	-0.051 (0.115)	-0.038 (0.050)
Age	-0.013 (0.012)	0.024 (0.030)	0.005 (0.014)	0.013 (0.032)	0.013 (0.012)	0.031 (0.021)	0.019 ^{**} (0.008)	0.005 (0.013)	0.017 ^{**} (0.007)	0.005 (0.013)	0.017 ^{**} (0.007)	0.005 (0.013)	0.017 ^{**} (0.007)	0.005 (0.013)	0.017 ^{**} (0.007)	0.005 (0.013)	0.017 ^{**} (0.007)	0.005 (0.013)	0.017 ^{**} (0.007)
Age ²	0.0001 (0.000)	-0.0003 (0.000)	-0.0001 (0.000)	-0.0003 (0.000)	-0.0002 (0.000)	-0.0003 (0.000)	-0.0002 (0.000)	0.0001 (0.000)	-0.0002 (0.000)	0.0001 (0.000)	-0.0002 (0.000)	0.0001 (0.000)	-0.0002 (0.000)	0.0001 (0.000)	-0.0002 (0.000)	0.0001 (0.000)	-0.0002 (0.000)	0.0001 (0.000)	-0.0002 (0.000)
High school graduate	0.012 (0.062)	0.026 (0.105)	0.014 (0.083)	0.259 ^{***} (0.124)	0.167 ^{***} (0.059)	0.158 ^{**} (0.065)	0.106 ^{**} (0.046)	0.094 [*] (0.057)	0.098 [*] (0.052)	0.094 [*] (0.057)	0.098 [*] (0.052)	0.094 [*] (0.057)	0.098 [*] (0.052)	0.094 [*] (0.057)	0.098 [*] (0.052)	0.094 [*] (0.057)	0.098 [*] (0.052)	0.094 [*] (0.057)	0.098 [*] (0.052)
Some college	0.021 (0.064)	0.015 (0.122)	0.056 (0.087)	0.186 (0.124)	0.186 ^{***} (0.063)	0.045 (0.079)	0.007 (0.048)	0.066 (0.058)	0.077 (0.053)	0.066 (0.058)	0.077 (0.053)	0.066 (0.058)	0.077 (0.053)	0.066 (0.058)	0.077 (0.053)	0.066 (0.058)	0.077 (0.053)	0.066 (0.058)	0.077 (0.053)
College graduate	-0.045 (0.070)	0.160 (0.135)	0.033 (0.094)	0.390 ^{***} (0.156)	0.120 [*] (0.069)	-0.061 (0.121)	0.005 (0.055)	0.124 (0.076)	0.070 (0.080)	0.124 (0.076)	0.070 (0.080)	0.124 (0.076)	0.070 (0.080)	0.124 (0.076)	0.070 (0.080)	0.124 (0.076)	0.070 (0.080)	0.124 (0.076)	0.070 (0.080)
Midwest	-0.052 (0.043)	0.235 ⁺ (0.149)	0.021 (0.046)	0.140 (0.157)	0.009 (0.044)	0.088 (0.105)	0.031 (0.034)	0.160 ^{**} (0.078)	0.083 ^{***} (0.032)	0.160 ^{**} (0.078)	0.083 ^{***} (0.032)	0.160 ^{**} (0.078)	0.083 ^{***} (0.032)	0.160 ^{**} (0.078)	0.083 ^{***} (0.032)	0.160 ^{**} (0.078)	0.083 ^{***} (0.032)	0.160 ^{**} (0.078)	0.083 ^{***} (0.032)
South	-0.043 (0.044)	0.450 ⁺⁺⁺⁺ (0.132)	0.085 [*] (0.044)	0.261 ^{**} (0.133)	0.053 (0.040)	0.166 [*] (0.096)	-0.014 (0.034)	0.126 ^{***} (0.064)	0.094 ^{***} (0.033)	0.126 ^{***} (0.064)	0.094 ^{***} (0.033)	0.126 ^{***} (0.064)	0.094 ^{***} (0.033)	0.126 ^{***} (0.064)	0.094 ^{***} (0.033)	0.126 ^{***} (0.064)	0.094 ^{***} (0.033)	0.126 ^{***} (0.064)	0.094 ^{***} (0.033)
West	-0.030 (0.049)	0.333 ^{***} (0.136)	0.078 (0.053)	0.021 (0.130)	0.010 (0.052)	-0.001 (0.089)	-0.097 ^{**} (0.039)	0.081 ⁺⁺ (0.066)	0.050 (0.036)	-0.097 ^{**} (0.039)	0.081 ⁺⁺ (0.066)	0.050 (0.036)	-0.097 ^{**} (0.036)	0.081 ⁺⁺ (0.066)	0.050 (0.036)	-0.097 ^{**} (0.036)	0.081 ⁺⁺ (0.066)	0.050 (0.036)	-0.097 ^{**} (0.036)

Appendix Table 2 (cont.)

Independent variables	Dual-earner households				One-earner households				Single-person households			
	Husbands		Wives		Male		Female		Male		Female	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
MSA	-0.006 (0.031)	-0.082 (0.072)	-0.096*** (0.031)	-0.012 (0.081)	0.059** (0.030)	-0.024 (0.054)	0.044* (0.025)	0.032 (0.044)	-0.005 (0.024)	-0.034 (0.040)		
Firm size 25-99	0.134** (0.058)	0.409*** (0.130)	0.262*** (0.056)	0.049 (0.129)	0.179*** (0.057)	0.178** (0.088)	0.115*** (0.041)	0.283*** (0.066)	0.168*** (0.041)	0.190*** (0.068)		
Firm size 100+	0.263*** (0.042)	0.417*** (0.093)	0.255*** (0.041)	0.112 (0.104)	0.208*** (0.045)	0.295*** (0.077)	0.205*** (0.030)	0.337*** (0.053)	0.154*** (0.031)	0.194*** (0.051)		
Union member	-0.007 (0.043)	-0.011 (0.101)	-0.083 (0.065)	-0.012 (0.130)	0.057 (0.043)	0.061 (0.072)	-0.025 (0.039)	0.008 (0.062)	0.015 (0.047)	-0.003 (0.062)		
Professional occupation	-0.020 (0.051)	-0.163 (0.114)	-0.044 (0.072)	-0.144 (0.170)	0.091* (0.053)	0.103 (0.141)	0.022 (0.043)	0.117* (0.065)	0.059 (0.046)	0.013 (0.081)		
Technical occupation	-0.078 (0.051)	0.012 (0.088)	-0.012 (0.066)	-0.041 (0.152)	0.035 (0.055)	0.082 (0.077)	0.072* (0.039)	-0.054+ (0.064)	0.018 (0.044)	0.027 (0.067)		
Service occupation	-0.140 (0.099)	-0.107 (0.121)	-0.158** (0.077)	-0.189 (0.170)	-0.108 (0.112)	0.035 (0.094)	-0.103** (0.048)	-0.087* (0.068)	-0.208*** (0.053)	-0.103 (0.072)		
Prod./craft/repair occupation	0.006 (0.044)	0.001 (0.116)	0.007 (0.095)	0.140 (0.203)	0.040 (0.045)	-0.021 (0.081)	0.063* (0.037)	0.076 (0.062)	0.077 (0.067)	0.205** (0.090)		
Goods-producing industry ^b	-0.061* (0.032)	-0.027 (0.080)	-0.029 (0.050)	-0.036 (0.162)	-0.033 (0.030)	-0.006 (0.061)	0.011 (0.028)	-0.015 (0.047)	0.088*** (0.031)	0.071 (0.059)		
Spouse has offer ^c	0.010 (0.036)	-0.090 (0.086)	-0.063 (0.044)	-0.119 (0.091)	---	---	---	---	---	---		
Sample means	0.75	0.64	0.67	0.63	0.76	0.61	0.64	0.59	0.67	0.60		
N	880	188	881	187	878	327	1,636	541	1,656	697		

Notes. Source: Wave 5 of 1996 panel of SIPP. Sample: Full-time wage and salaried workers in the private sector ages 20-64. Dependent variables: Offer = 1 if individual offered health insurance by employer and eligible. Reported estimates are coefficients and robust standard errors. Omitted education, region, firm size and occupational categories are high school dropout, northeast, firm size < 25, and laborers, respectively. All estimates are weighted using SIPP person weights. The "+," sign indicates significant difference in coefficients between minorities and whites.

^a Children = 1 if children present in household.

^b Industry = 1 if agriculture, mining, construction or manufacturing, 0 if transportation, utilities, trade or services.

^c Treated as endogenous.

*** $p < .01$, ** $p < .05$, and * $p < .1$; +++ $p < .01$, ++ $p < .05$, and + $p < .1$

