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**The Relative Importance of Worker, Firm, and Market Characteristics for
Racial/ Ethnic Disparities in Employer Sponsored Health Insurance**

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Abstract

The characteristics of an individual, the local labor market, and the firm where an individual is employed may each be associated with racial/ethnic disparities in employer-sponsored insurance (ESI). We estimate two models to determine the relative effects of each of these three sets of characteristics on the likelihood a worker has a job with ESI. One model has two outcomes: the job comes with ESI or not. The other model has five possible insurance outcomes: not offered ESI and is uninsured; not offered ESI and is insured; offered ESI but turned it down and is uninsured; offered ESI but turned it down and is insured; offered ESI and accepts offer. Individual characteristics and firm characteristics are more likely to have significant and substantial effects on the probability a person has ESI, while the effects of market characteristics appear to be conveyed through firm characteristics. Being African American or Hispanic are not significantly associated with having ESI in the two-outcomes model, but in the five-outcomes model they are significantly associated with being uninsured either because the person was not offered ESI or declined offered coverage. Clearly, examining more nuanced outcomes is more informative about the role of race and ethnicity in why working people are uninsured.

The Relative Importance of Worker, Firm, and Market Characteristics for Racial/ Ethnic Disparities in Employer Sponsored Health Insurance

Health insurance is not part of the employment compensation package for many American workers. A substantial number of them have health insurance through a spouse or they may buy their own individual coverage – but more than 27 million working adults are without health insurance of any type (DeNavas-Walt, Proctor, and Hill Lee 2006). They account for 18.7 percent of the labor force and 72 percent of all uninsured adults. Policymakers looking to help working Americans gain health insurance have long noted that disproportionate shares of these uninsured workers are African American, Latino, and immigrants. A simple conclusion might be that discrimination against racial and ethnic minorities is behind these numbers. But uninsured workers also are more likely to be less-educated, employed in small firms, and concentrated among several occupations and industries, especially various service industries (Gabel, Ginsburg, and Hunt 1997; Hadley and Reschovsky 2002; Hoffman and Pohl 2002; Schur and Feldman 2001). These characteristics of the uninsured raise the question of why racial/ethnic minorities are more likely to be uninsured. Is it due to discrimination? Or could it be because they are less educated or live in areas where occupations or jobs that are open to them do not typically have health insurance as part of compensation?

Many of the observed simple relationships between employer-sponsored health insurance (ESI) and worker or firm characteristics are highly correlated, so it is often difficult to say whether the worker's or the firm's characteristics are most important in explaining why a worker is uninsured. Moreover, it is very likely that local labor market conditions interact with worker and firm characteristics in ways that affect the chances of a worker having ESI. We know, for

example, that in areas where unskilled labor is plentiful and few employment opportunities exist, employers often do not provide health insurance (Employer Health Benefits 2004 Annual Survey 2004). Yet in other areas where the supply and demand for unskilled labor is more evenly matched, health insurance is offered more often to unskilled workers.

To develop policies that will reduce the disparities in ESI coverage, policymakers need to understand how the characteristics of an individual, the characteristics of the local labor market, and the characteristics of the firm where a person works affect the probability that a person will have a job with ESI. Surprisingly, there is little information about the relative importance of each of these sets of factors. The complex relationships between workers, firms, and local labor markets suggest that more complete models are needed to explain racial and ethnic disparities in ESI offers and coverage.

In this paper, we sketch a conceptual framework for considering all three sets of factors simultaneously, and then estimate the relative importance of individual, employer, and neighborhood/labor market effects on who has ESI. The relative importance of these three sources of influence on who has ESI has potential implications for public policies to address racial and ethnic differences in ESI coverage. If the characteristics of the labor market not related to race/ethnicity, for example, were most important (perhaps a high percentage of adults with low educational attainment), policies aimed at increasing the skills and educational level of everyone in the labor market area would be needed to attract employers that are more likely to offer ESI. Such a finding also would have implications for how long it might take to reduce the number of people without health insurance if we rely on public policies directed primarily at underlying causes of differences in employment opportunities.

Background: Related Research and the Inherent Endogeneity Problem

Two different strands of research are relevant for our study. One consists of research on the effects of the local job and housing markets where one lives on various outcomes. A large body of research supports an association between segregation in the housing market and racial differences in socioeconomic status, which in turn is associated with racial/ethnic differences in health and healthcare (Williams and Collins 2001). As a result, sociologists and economists have developed hypotheses about how attributes of neighborhoods or markets and individual characteristics affect health outcomes (Cutler, Glaeser, and Vigdor 1997; Diez Roux et al. 2001; Haas et al. 2004; Hackbarth, Silvestri, and Cosper 1995; Kawachi 1999; LaVeist 1993; LaVeist and Wallace 2000; Yen and Kaplan 1999; Wen and Christakis 2005). Some of these papers have done a better job than others accounting for possible reverse causality where poorer health outcomes might lead to increased segregation, a topic we return to below.

A second body of research has focused on the link between health insurance and a person's place of work. This research has tried to explain why being employed is not a sufficient condition for having health insurance. In analyzing differences between workers with and without health insurance, the number of employees where a person works (size of firm) is a significant predictor of whether the firm offers ESI (Blumberg and Nichols 2001; Employer Health Benefits 2004 Annual Survey 2004; Nichols et al. 1997). Very few of these studies, however, observe the premiums workers actually pay or might face. As a result, the effect of the size of firm is not independent of the effect of the premium choice facing an individual since premiums are inversely related to firm size. The effect of the (unobserved) premium is being absorbed into the estimated effect of size of the firm.

Since most people with private health insurance have it through an employer (either their own or that of another family member), more attention has been paid within the last decade to decomposing the decision process that leads to ESI coverage. The decomposition assumes that having ESI is actually a two-part decision process. The first part is an employer's decision to offer ESI or not, and then if the employer offers coverage, the second part is the employee's decision to accept coverage. The analysis of the employee decision process to take up coverage is conditional on the employee being offered ESI (Blumberg and Nichols 2001; Cantor, Long, and Marquis 1995; Cooper and Schone 1997; Cunningham 1999b; Feldman et al. 1997; Gabel, Ginsburg, and Hunt 1997; Gruber 2001; Gruber and Lettau 2000; Hadley and Reschovsky 2002; Marquis and Long 1999; McLaughlin 1994, 1999; Monheit and Vistnes 2000a; Monheit and Vistnes 2000b; Schur and Feldman 2001; Shore-Sheppard, Buchmueller, and Jensen 2000; Swartz, Marcotte, and McBride 1993; Thorpe and Florence 1999). This two-part decision process ignores all the prior steps in a person's decision process that involve sorting to occupations or jobs that do or do not typically come with ESI. For example, the decision to be self-employed is assumed to occur exogenously to the decision to accept an offer of ESI; self-employed people are not included in the data for the empirical estimates of factors that affect the take-up decision precisely because including them would introduce bias into the estimates of the take-up decision.

Both strands of research – on the effects of neighborhoods/job market and on the factors that explain who has ESI – suffer from relying on cross-sectional data rather than longitudinal data. Cross-sectional data reflect neighborhood or job market characteristics at a point-in-time, but do not capture the flows of people and jobs over time that result in the observed cross-sectional distribution of characteristics. For example, if poor job prospects cause highly skilled

racial/ethnic minority individuals to leave a neighborhood, then it is not the case that segregated

neighborhoods lead to poor job prospects. Cross-sectional data do not permit us to sort out the

sequence of events that cause a neighborhood/job market to be more racially or ethnically

segregated than another. Similarly, cross-sectional data about employees with and without ESI

do not capture the sequence of events that cause different types of workers to sort to jobs with or

without health insurance. This means that although the decomposition approach is useful for

understanding the conditions under which employers offer ESI, it cannot address the endogeneity

of workers sorting themselves to jobs with and without health insurance.

Local labor market characteristics may affect workers' ability to sort to firms that do or

do not offer ESI if most firms in an area either all offer ESI or do not offer ESI. For example,

people living in very rural areas may have few job opportunities that offer ESI. A worker

wanting ESI in such an area would have to move away to find a job with ESI. This may be

particularly problematic for racial/ethnic minorities with strong ties to a homogeneous local

community with the same racial/ethnic characteristics; they may not have many employment

options with health insurance unless they move away from their communities. What we often

observe in cross-sectional data is a low prevalence of employers offering ESI in rural areas or in

some job market areas with high concentrations of racial/ethnic minorities – but like the earlier

example, this could be due to reverse causality. The people who want health insurance may have

sorted to other labor markets in order to obtain ESI.

Ideally, we need longitudinal data and randomized assignments to neighborhoods/job

markets to determine the effects of neighborhoods on workers' decisions to find jobs with ESI.

Since this is not possible, the endogeneity issue could be addressed with an instrumental

variable, the approach taken by others who have analyzed neighborhood or peer-group effects

(Cutler, Glaeser, and Vigdor 1997; Evans, Oates and Schwab 1992; Duncan, Connell and Klebanov 1997). In our case, we need an instrument that is highly correlated with the job market/area of residence but not with whether a person wants a job with ESI, and another instrument that is highly correlated with the type of firm a person chooses to work at but not with whether the person wants a job with ESI. Finding either instrument seems difficult if not impossible, and there are strong reasons for believing that a poor instrument would be worse than not using one (Bound, Jaeger and Baker 1995; Staiger and Stock 1997).

Our approach to the potential endogeneity problem recognizes that there may be selection bias in the effect of the job market on whether one has a job with ESI. Although we cannot address this problem directly, we try to mitigate its effects by including several variables that describe the job market and the individual's potential need for health care, as well as interaction effects between the job market and the individual's characteristics, and interaction effects between the job market and the firm's characteristics.[1]

In sum, the two strands of research point to the need for jointly considering the effects of a person's own characteristics, the characteristics of the firm where he or she works, and the characteristics of the local labor market where a person lives when trying to develop effective policies and programs to help people gain ESI. This is especially true if we suspect that a person's race or ethnicity interacts with employment options in his or her local labor market.

Conceptual Framework

Our approach to modeling whether a worker has a job that includes ESI considers both demand and supply factors in a reduced-form model. This enables us to determine empirically the relative importance of individual, job market, and firm characteristics on the likelihood a

person finds a job that offers ESI. We take this reduced-form approach because of the empirical

difficulty of estimating the corresponding two-part structural model and because there are serious

issues of interpretation with that model. As noted earlier, a structural model has two parts: the

supply of and demand for jobs that offer ESI, and the demand for ESI, conditional on having a

job that offers it.[2] Our approach combines these models into a single reduced-form framework.

We start with a conceptual framework where three sets of factors – individual, job

market, and firm– all affect the probability that a worker will find a job with ESI. Worker

heterogeneity is assumed to cause workers to have different preferences for jobs that offer ESI.

Personal characteristics may reflect an individual's needs and tastes for health care, as well as

expectations regarding what is in a wage-compensation package. People who earn higher

incomes, for example, may prefer jobs with ESI as part of the total compensation because they

face higher marginal tax rates and the value of the ESI is not taxed as income.

We assume that a worker's total compensation equals the worker's marginal product and

that there is a trade-off between wages and fringe benefits, which implies that if an employer

offers health insurance, the wages portion of the total compensation package will be lower.[3]

However, as noted above, we also expect that some workers who might desire health insurance

do not find jobs with ESI because there are transactions costs in finding out which firms offer

ESI or in moving to areas where employers offer health insurance. This suggests that people

who do not have a job with ESI may not have much opportunity to find a job with ESI. A

number of occupations – at the high-skill as well as the low-skill end of the spectrum – now

typically do not have ESI as part of the compensation package (Swartz 2006).

We also assume that a person's marital status has an impact on the trade-off between

wages and fringe benefits, although the direction of the effect is ambiguous. On the one hand,

having a spouse (especially one who is not working in the labor market) may increase a worker's desire to find a job with ESI, especially if there are children in the family. On the other hand, a married worker may have access to ESI from the spouse's employer if the spouse is also working for pay, and in that case the worker may not search for a job with ESI.

We expect that local market factors affect both a worker's search for a job with ESI and a firm's need to offer ESI to compete for the workers it wants in its labor force. There is evidence that rates of ESI vary substantially by region and state, as well as industry (Brown, Wyn, and Teleki 2000; Coburn et al. 1998). Counties with higher rates of ESI are characterized by stronger economic conditions (e.g., lower rates of unemployment) (Brown, Wyn, and Teleki 2000). We also expect that the observed geographic differences in ESI reflect different norms in individuals' expectations about being able to obtain ESI and their need for ESI. Such norms may be different particularly for Hispanics and African Americans. We further expect that there may be differences within racial/ethnic groups about expectations for obtaining jobs with ESI. Among working Hispanic males, for example, there are substantial regional differences in private health insurance coverage (Fronstin, Goldberg, and Robins 1997; Monheit and Vistnes 2000b). Similarly, with respect to immigrants, who tend to settle in areas with others from their country of origin (areas that are sometimes referred to as "ethnic enclaves"), there is evidence that earnings are affected by both how concentrated the ethnic population is and the quality of the area (Borjas 1995; Edin, Fredriksson, and Aslund 2003). Thus, we expect that the likelihood that someone obtains a job with ESI is affected by their community's racial/ethnic concentration. Workers' views about their need for ESI also may be affected by the availability of "safety net" resources in the area (Cunningham 1999a).

Lastly, a worker's search for a job with ESI is also affected by employer characteristics that affect a firm's decision to offer ESI. We expect that the size and industry of the firm are the most important employer characteristics in this regard (Nichols et al. 1997; Swartz 1989, 1992). As noted above, small firms are less likely to offer ESI and certain industries have high rates of uninsured workers (Gabel, Ginsburg, and Hunt 1997; Hadley and Reschovsky 2002; Hoffman and Pohl 2002; Schur and Feldman 2001).

Methods

Empirical Models

We are interested in two questions: Is discrimination or something else (worker characteristics, market characteristics, or firm characteristics) responsible for the racial/ethnic disparities we observe in ESI coverage? What is the relative importance of each of the sets of characteristics in explaining differences in ESI coverage? We also are interested in determining if there are any racial/ethnic differences in who declines offered coverage.

To answer these questions, it is useful to start by examining the simple differences in being offered ESI by race/ethnicity. Table 1, based on data from the Medical Expenditure Panel Survey (explained further below), shows the percentages of white, African American, and Hispanic workers who are offered ESI and then the percentages of each group with different characteristics. Almost two-thirds of whites and African Americans are offered ESI, suggesting that African Americans and whites do not differ in the simple probability of having jobs that offer ESI. But Hispanics are significantly less likely to have a job that comes with ESI – only half of our sample of Hispanics have jobs where ESI was offered. When we estimate a simple model of whether or not a person has a job that offers ESI, with race/ethnicity, age and age-

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squared, gender, and an intercept term as explanatory variables (results not shown), we find that these simple differences by race/ethnicity remain for Hispanics. When the time a person has been in the U.S. (for those who are not native-born) and whether or not a person has a chronic health condition are further added to the model, being African American becomes statistically significant. Being Hispanic remains significant rather than declining in significance when time in U.S. is accounted for.

Given these significant differences by race/ethnicity, we investigate whether the racial/ethnic differences in this relatively simple model persist when other characteristics are added as explanatory variables. Based on our conceptual framework, we estimate two models to determine the relative effects of individual, market, and employer characteristics that may explain racial/ethnic disparities in ESI coverage. The first is a reduced-form binary logit model of whether the worker has a job that offers ESI.

The second is a more nuanced model of job and insurance choices that reflects the full range of possible outcomes when a person takes a job: (1) ESI is offered and accepted, (2) ESI is offered and declined but person is insured elsewhere, (3) ESI is offered and declined and person is uninsured (perhaps because the worker's out-of-pocket premium cost is high), (4) ESI is not offered but person is insured elsewhere, or (5) ESI is not offered and person is uninsured. We estimate this model because we want to explore whether race and ethnicity are significantly associated with people turning down ESI. This "five outcomes" model was estimated as an unordered (n-chotomous) multinomial logit model.[4] Characteristics of workers, job markets, and firms are independent variables in both models. In both models, we correct for the clustering of people by county in our sample.[5] (Contrary to our expectations, interactions between individual

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and market level characteristics were not statistically significant and therefore are not included in the final models reported.)

We compare the goodness-of-fit measures of each of the models when they have different combinations of the sets of characteristics (Render et al 2003) to assess the relative impact of each of the three sets of characteristics (individual, market, and firm) on explaining the variance in who has a job that offers ESI. For each of the models, we estimated versions that include each set of characteristics individually; combinations of two of the three sets of characteristics; and the full model with all three sets of characteristics. The Pearson Chi-square, normalized for the degrees of freedom in each model, is used as the goodness-of-fit measure for the two-outcomes model and the pseudo R-square is used as the goodness-of-fit measure for the five-outcomes model.

Data

Our empirical analyses are based on data from the 1996 - 2000 Medical Expenditure Panel Survey Household Component (MEPS-HC), a nationally representative sample of the US civilian, non-institutionalized population (Cohen et al. 1996). The MEPS-HC contains extensive data on the demographic characteristics, health insurance coverage, health status and chronic conditions of individuals and their family members, and their employer. The MEPS over-sampled African-American and Hispanic households.

We merged 2000 Census data about the characteristics of each individual's county of residence with the MEPS data.[6] We use a person's county of residence as a proxy for the labor market in which that person might look for a job, assuming that the characteristics of a person's county of residence are highly correlated with the characteristics of the person's relevant labor

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market area. In some parts of the United States, a person's county of residence is not synonymous with the labor market area in which he or she might search for a job. Such places include the smaller counties, such as those in the New England states, where job market areas frequently are larger than one county, and multi-county metropolitan areas that cross state boundaries such as Washington, DC or Kansas City. We try to control for discrepancies between counties and labor market areas by including information about whether a county is considered urban versus rural and in which region of the U.S. the county is located.[7]

<u>Sample</u>

The analysis sample includes adults 18 to 64 years old who were employed at least part-time for some portion of the year and described their race/ethnicity as white, African American or Hispanic. We excluded adults between the ages of 18 and 25 who were full-time students, individuals who were insured by circumstances outside of the reporting household unit, and individuals whose occupation was described as "active military."

We also excluded individuals who were self-employed because of the added complexity of modeling the decision to be self-employed as part of the process of looking for a job. People who are married, for example, may find it more feasible to be self-employed if they have health insurance through the spouse's job; alternatively, people who are not married may find it feasible to be self-employed and not insured because they do not have to worry about a spouse or other family members. We believe that the self-employed are different in unobservable ways from people who work for firms and the unobservable variables could be causal factors in whether someone has ESI so we chose to omit the self-employed. Excluding them from our sample does not cause us to lose a significant number of people since among all workers in the labor force, only about 7% are self-employed (U.S. Department of Labor 2006).[8]

After excluding these groups of individuals, our sample consists of 26,813 adults for whom we have data on all of the individual and firm characteristics. This sample represents most working adults in the U.S.

<u>Independent Variables</u>

Characteristics of each worker, the county where the worker resides, and the firm where the worker is employed comprise the independent variables in our analyses (see Table 1). Individual characteristics include: age, gender, education (coded as high school or less, some college, college graduate or beyond), marital status (married, other), race/ethnicity (white, African American, Hispanic), time of residence in the US (native born, more than 10 years, 6 – 10 years, 5 years or less), whether there was another wage earner in the household, whether there were children in the household, household income (continuous), an indicator of chronic illness in a household member, the self-rated health status of the individual (poor or fair versus good, very good or excellent), whether the person had full-year versus part-year employment and full-time versus part-time employment, whether the individual was a salaried employee, union member, and occupation. Several other characteristics of workers that were included in preliminary models were removed because they were not significant. We also estimated models with interactions between time in U.S. and being Hispanic to determine if foreign-born Hispanics were particularly less likely to have jobs that offered ESI, but the interaction effects were not statistically significant.

County characteristics include separate dummy variables to indicate whether a county is segregated for African Americans or segregated for Hispanics. These indicators are based on the Index of Dissimilarity, which is a measure of residential segregation that measures the fraction of one racial/ ethnic group that would need to move from their census tract to another census tract

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in the county in order to attain perfect integration. The Index of Dissimilarity ranges from 0 (integrated) to 1 (segregated). Typically, counties are considered highly segregated if the index of dissimilarity is greater than or equal to 0.6 (Massey and Denton 1989). Because Hispanics are less segregated in the United States than African Americans, we used an index greater than 0.5 as an indicator that a county is highly segregated for Hispanics (Massey and Denton 1988). Other county characteristics include the percentages of residents who were foreign-born, unemployed, had a household income below the federal poverty level, and adults who had not graduated from high school.[9] We also control for whether the county of residence was in a Metropolitan Statistical Area (MSA), and which of four regions of the country the county is in (West, Midwest, South, or Northeast). Employer characteristics include firm size (1 – 9, 10 – 39, 40 – 99, 100 – 249, 250 – 499, and 500 or more employees), and the two-digit Standard Industrial Classification (SIC) codes for industry.

The data have several limitations. Because of the cross-sectional nature of these data, we cannot assume causality for any observed associations. For example, we do not have data about how long someone has lived in a market area or whether they moved to seek employment. We could not measure some market characteristics that may influence an individual's decision about ESI, such as the "safety net" resources that may be available (Herring 2005; Marquis, Rogowski, and Escarce 2004). We did explore the effect of whether a county is a designated primary care shortage area but it was not statistically significant and therefore was not included in the final models. County of residence also may not capture the relevant job market. Peer influences, for example, may operate at smaller areas that are not available in these data. However, counties have been used as the geographic unit in other research examining market level influences (Baker 1997, 1999). We would have preferred to identify specific MSAs where people lived

because some MSAs are more homogeneous than others in terms of the country of origin of immigrants (and Hispanics) (Kritz and Gurak 2004). We also would have liked to use identifiers for specific states because in the early 1990s most newly arrived immigrants lived in seven states (Farley 1997). However, the rules under which researchers are permitted access to county of residence data on the MEPS precludes identifying specific MSAs or states other than by region.

Characteristics of the sample

There is a substantial amount of variation in the independent variables among the three racial and ethnic groups in our sample (see Table 1). As we noted earlier, Hispanic workers were much less likely to be in jobs that offered ESI – only half of them were offered coverage compared to 65% of whites and African Americans. In data not shown in Table 1, among the 36% of all workers who were not offered ESI, half were uninsured and half were insured through another source. Of those who were offered ESI, 84.2% accepted the offered ESI, 10.8% declined the ESI but obtained insurance from another source, and 5.0% declined the ESI and were uninsured. This pattern is consistent with previous research on take-up rates among people offered ESI (Cunningham 1999b; Cooper and Schone 1997).

As can be seen in Table 1, the distributions of each of the worker, market and firm characteristics differ substantially for the white, African American, and Hispanic workers. Among the significant differences: White workers in the sample are older than the African American workers who in turn are older than the Hispanic workers. More than half of the African American workers are women while just 43% of the Hispanic workers are women. Although a majority of individuals in the sample are native-born, only 53% of Hispanic workers were born in the U.S. Even though the vast majority of workers in the sample lived in metropolitan areas, there are significant differences among the three groups in the degree to

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which they lived in counties that can be considered segregated by the Index of Dissimilarity. Among the African American workers, almost half lived in counties that were segregated for African Americans and two out of five lived in counties that were segregated for Hispanics. Among the Hispanic workers, 44% lived in counties that were segregated for Hispanics and 38% lived in counties that were segregated for African Americans. More than a fourth of the whites lived in the Midwest but only 8% of the Hispanics in our sample lived there. Even though the vast majority of the workers in the sample were not salaried employees, almost 30% of the white workers were salaried while only 18% of the Hispanics were. The differences in the distributions of occupational categories for the three groups are consistent with the differences in proportions who are salaried. The firms the three groups of workers worked for varied in size (with a much higher proportion of African Americans working in the largest firms) and industry.

Results

Since the MEPS sample was drawn using a multistage cluster sampling design with disproportionate stratification, person weights that account for this are used in estimating both models. Our estimation procedures also account for the clustering of individuals within counties.

Factors Associated with Having a Job that Offers Employer Sponsored Insurance

Given our interest in the impact of race and ethnicity on being in a job that offers ESI, the estimated coefficients for the model with just individuals' characteristics are consistent with the simple comparisons in Table 1. As can be seen in the left column of Table 2, when the model includes only individuals' characteristics, compared to whites, African Americans are more likely to have jobs that offer ESI and Hispanics are less likely. Other significant personal characteristics associated with an increased probability of having a job that offers ESI are: older

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age, greater educational attainment, being native born, not having children in the household, several occupations, and being a salaried employee, union member, and working full-time and full-year.

However, when market characteristics are included in the model (middle column of Table 2), being Hispanic is no longer a significant factor while the significance of most of the other individual characteristics does not change. Individuals who live in the Midwest and a county that is segregated for Hispanics are more likely to be offered ESI, while people who live in a county with more foreign-born residents are less likely to be offered ESI.

Adding firm characteristics to the model (right column of Table 2) eliminates the statistically significant association between being African American or Hispanic and having a job that offers ESI, and the only county characteristic that remains significant is the percentage who are foreign-born. The firm characteristics are themselves strongly associated with the likelihood a person has a job with ESI. Employees in the smallest firms are the least likely to be offered health coverage. Employment in agriculture, construction, repair services, personal services, or entertainment services companies significantly reduced a person's likelihood of being offered coverage relative to working in a professional services firm. By contrast, employment in a firm involved in mining, manufacturing or public administration significantly raised the likelihood that a person was offered ESI.

Using the Pearson Chi-square as a measure of the goodness of fit and comparing results among the variations of the model — that is, with only one set of characteristics (individual, market and firm) and then with combinations of two sets and finally with the full model – indicate that the individual characteristics and the firm characteristics are responsible for most of the explained variance in who has ESI (Table 3). By contrast, the market characteristics

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contribute very little to the explained variance. These comparisons and the result that the percent of the county population that is foreign-born remains the only significant county characteristic when the firm characteristics are included in the model implies that there is shared variance between the market and firm characteristics.

To illustrate the relative effects of the estimated coefficients of the full model, Table 4 provides the predicted probabilities of 12 prototypical people who vary in terms of the statistically significant characteristics. The three principal people have the mean or primary characteristics of the white, African American, and Hispanic workers in our sample. Statistically significant characteristics are then altered to show how some of the individual characteristics, county characteristics, and firm characteristics affect the predicted probabilities of having a job with ESI. The last two people have several characteristics that vary simultaneously to illustrate their joint effects on the probability of having a job with ESI. Changes in individual and firm characteristics have substantial effects while a change in the percent of the county population that is foreign-born alters the predicted probability only slightly.

Factors Associated with Five Outcomes Model

Table 5 presents the estimated coefficients for four of the outcomes in the expanded choice model relative to the reference outcome of having a job that offers ESI and accepting ESI coverage. (For simplicity, we show just the results with all three sets of characteristics included.) Given our primary interest in understanding the relative effects of race and ethnicity, the model with five outcomes suggests different and more complex results than the two-outcomes model, which did not find a significant associations between race/ethnicity and having a job that offers ESI Relative to whites, both African Americans and Hispanics are more likely to be uninsured – either because they had not been offered ESI or because they declined offered coverage.

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The results from the five-outcomes model for time in the U.S. and age are consistent with the two-outcomes model: immigrant workers are more likely not to be offered ESI and to be uninsured than native-born workers, and older workers are more likely to have a job that offers ESI and to accept such coverage. The effects of gender on having a job with ESI and insurance status are more nuanced in the five-outcomes model than the two-outcomes model. The results indicate that although gender is not significant in the two dominant outcomes of "no offer and uninsured" and "offered and accepted," when we examine the other three outcomes holding all else equal, men are significantly less likely to have coverage when the job does not have ESI and when they decline offered coverage. In marked contrast to the two-outcomes model, household income is significant in distinguishing between the five possible outcomes – higher income people are more likely to be offered and accept ESI or to have insurance coverage even if they have jobs where ESI is not offered or they decline offered coverage. Other significant individual characteristics can be seen in Table 5 and are consistent with what we found in the two-outcomes model.

Only a few market characteristics are significantly associated with the five different outcomes. As in the two-outcome model, workers who live in counties with more foreign-born residents are more likely to have jobs that do not offer ESI than workers who live in counties with fewer immigrants. Workers who live in counties with higher proportions of people living in poverty are more likely to be in the outcome of "uninsured because they were not offered ESI," but the poverty rate in the county is not significantly associated with any of the other four outcomes. Whether a county is segregated for African Americans or for Hispanics, the county unemployment rate, and the percent of adult residents in the county who did not graduate from high school are not significant in differentiating between the five outcomes.

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As with the two-outcomes model, firm size and industry are strongly associated with the five different insurance outcomes. As firm size increases, workers are more likely to be offered insurance. However, the firm-size effect is not significant for firms that have more than 100 employees other than for workers who have jobs that do not offer ESI but the workers are insured anyway. The industry of the firm where the individual works is also associated with whether an individual was offered ESI and then accepted or declined it. As we saw in the simple two-outcomes model, workers in firms in certain industries are more likely to be offered ESI.

Table 6 shows the goodness-of-fit measures (pseudo R-squares) for the five-outcomes model when each of the different variations of individual, market, and firm characteristics are included in the model. As in the two-outcomes model, the county characteristics contribute relatively little to the explained variance of the outcomes, reinforcing the conclusion that there appears to be shared variance between the county and firm characteristics.

To illustrate the effects of the different types of characteristics, Table 7 shows the estimated probabilities for the five outcomes for the 12 prototypical people in Table 4. As in Table 4, the first ten people have the mean or primary characteristics of the white, African American, and Hispanic workers in our sample. Statistically significant characteristics are altered to show how some of the individual characteristics, county characteristics, and firm characteristics affect the predicted probabilities for each of the five possible outcomes of having a job that does or does not have ESI and whether the person is insured. Prototypical individuals 4 and 5 have several characteristics that are simultaneously different to illustrate how the probabilities can vary when common sets of characteristics are present.

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To show the relative effect of being African American or Hispanic rather than white on the five outcomes, especially those that result in being uninsured, the bottom panel of Table 7 contains the outcomes' estimated probabilities for individuals 2 and 3 if they were white instead of African American and Hispanic. In both cases, the probability of not being offered ESI falls and the probability of being offered ESI and accepting it increases. In the case of the African American woman, if she were white the outcome with the highest predicted probability shifts from not being offered ESI and being uninsured to accepting offered ESI. Note, however, that the estimated probabilities for the other outcomes do not really change – showing that the significant coefficients for African American for the outcomes of "not offered ESI but insured" and "offered ESI, declined and uninsured" are swamped by other characteristics (most notably size of firm). In the case of the Hispanic man, if he were white the probability of being offered ESI and accepting it increases but not enough to dominate the outcome of "not offered ESI and uninsured." As with the shift from African American to white, the estimated probabilities for the three non-dominant outcomes do not really change when the Hispanic man becomes white. Overall, the examples in Table 7 illustrate that the probabilities of each of the five outcomes are most affected by the person's individual characteristics and the characteristics of the firm.

Discussion of Results and Policy Implications

Within the context of racial/ethnic disparities in workers having jobs with ESI, these results support the hypothesis that firm characteristics reduce the simple associations between racial/ethnic characteristics and the simple two-outcomes situation of whether a worker does or does not have a job with ESI. In particular, when the characteristics of the firm where a person works are accounted for, being either African American or Hispanic is not significantly

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associated with whether or not a person has a job with ESI. The results do not support the

hypothesis that market characteristics, measured at the county level, have an independent and

significant impact on a person obtaining a job with ESI. Instead, the results suggest that there is

shared variance between the market and firm characteristics: the market characteristics are

related indirectly to firm characteristics and it is the firm characteristics that are mediating the

effects of the market characteristics.

When a more complex model of five possible outcomes of insurance status is estimated,

we find that the two-outcome model masks significant differences by race and ethnicity.

Compared to whites, African Americans and Hispanics are more likely to have a job where ESI

was not offered and to be uninsured**;** and African Americans are less likely to have insurance

from another source if they have a job without ESI. This contradicts the finding from the two-

outcomes model that race/ethnicity is not significantly associated with having a job that offers

ESI. The results from the five-outcomes model also show that when African Americans and

Hispanics have a job with ESI, they are more likely than whites to decline the offered insurance

and be uninsured**.**   In other words, when we can go behind the two-outcome model to a more

complex set of ESI and insurance status outcomes, African Americans and Hispanics are more

likely than whites to have jobs without ESI, and to be uninsured because they are less likely to

have another type of insurance coverage to replace ESI coverage if it is either not offered or is

offered but declined. It should be noted that the race/ethnicity effects on declining offered

coverage are not large, however;[10] when we estimated the probabilities of the different outcomes

for prototypical people, the predicted probabilities for turning down offered ESI and being

uninsured did not change significantly when race/ethnicity was changed (see Table 7). Overall,

the magnitudes of the significant effects of race and ethnicity are relatively small and appear to be swamped by characteristics of the firm particularly.

Relative to being a native-born American, foreign-born workers' duration of residence is significantly related only to having a job where ESI is not offered and the worker is uninsured. Of the market characteristics, only the percent of the population who are foreign-born and the percent with incomes below the poverty level are associated with insurance status – and they are associated only with having a job that does not offer ESI. The results did not support the hypothesis that residential segregation was associated with any of the five outcomes.

Reducing racial and ethnic disparities in ESI may be one of the most direct ways of reducing disparities in health insurance coverage. The finding from the more nuanced and informative five-outcomes model that African Americans and Hispanics are more likely to be uninsured because they work for a firm that does not offer ESI or they decline ESI when it is offered does not provide a causal mechanism for reducing disparities in ESI. Although this finding remains after controlling for firm size and industry and job market characteristics, it is not clear why the firms where African Americans and Hispanics work do not offer ESI. The result that the market characteristics appear to be mediated by the characteristics of the firms suggests that firms less likely to offer ESI (that is, firms that are small or in certain industries) are in markets that have characteristics we would expect to be related to lower productivity – for example, higher rates of less educated adults.

Unfortunately, our approach cannot distinguish between apparent discrimination against African Americans or Hispanics in hiring and any cultural or social differences that might cause African Americans or Hispanics to value health insurance less than do whites. We cannot tell, for example, whether the negative coefficients for African American and Hispanic in the five-

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outcomes model outcome of no ESI offer means that, even after controlling for all the individual, county and firm characteristics that we have, African Americans and Hispanics are less likely to get jobs with offered ESI because they are discriminated against in the labor market or because they differ from whites in their preferences for cash wages or not wanting ESI. The fact that the race/ethnicity variables are significant for the outcome of "offered ESI, declined and uninsured" might be interpreted as African Americans and Hispanics not valuing ESI or not wanting (or not being able to afford) to pay the employee share of the premium. But because a job that comes with an offer of ESI is different from a job that does not, we should not conclude from the small numbers of people who decline offered coverage that African Americans and Hispanics do not value ESI. We also cannot differentiate between a situation where African Americans, for example, might prefer to live in counties with fewer job opportunities with ESI because of family ties to the counties (i.e., preferences for these relationships outweigh a desire for health insurance) and a situation where discrimination in housing markets prevents them from moving to other counties with better job opportunities. Moreover, although being African American or Hispanic are statistically significant characteristics for predicting the probability that someone will not be offered ESI and be uninsured, the relative impacts of the race/ethnicity categories are small. Any amount of education beyond high school or being a salaried employee or working in a larger firm or certain industries outweigh the association between race/ethnicity and a job without offered ESI.

Altogether, the results imply that public policies are needed to provide health insurance to low-income workers, who also are disproportionately less educated, recent immigrants, and African Americans and Hispanics. Tables 4 and 7 clearly illustrate the low odds facing low-income workers in smaller firms of obtaining ESI. Policies that either expand eligibility for

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public coverage, subsidize the cost of private insurance for low-income workers, or increase the

ability of small firms to offer more affordable coverage are needed to expand affordable health

insurance options for low-income workers. Such policies will not directly address racial and

ethnic disparities in insurance coverage but they will assist the disproportionate number of

African Americans and Hispanics who have low incomes and do not have jobs with ESI.

Table 1: Characteristics of the Sample (n = 26,813).

	White	African American	Hispanic
Total	17,991	3,435	5,387
Offered Health Insurance	65.2 %	64.6 %	50.7 %
Individual Characteristics:			
Mean age (years):	40.6	38.5	36.5
Sex:			
Female	47.6 %	53.7 %	42.9 %
Time in US			
<= 5 years	0.5 %	0.7 %	6.6 %
5 – 10 years	0.5 %	1.4 %	9.5 %
> 10 years	2.7 %	5.2 %	30.6 %
Native born	96.3 %	92.7 %	53.4 %
Education:			
High school	41.9 %	54.2 %	65.0 %
Some college	24.8 %	27.2 %	20.8 %
College graduate	33.3 %	18.6 %	14.3 %
Marital status:			
Married	64.1 %	41.9 %	58.1 %
Other wage earner:			
Yes	30.6 %	23.9 %	27.9 %
Children in household:			
Yes	40.4 %	45.9 %	53.3 %

Table 1 – continued	White	African American	Hispanic
Median household income:	$ 26,871	$ 17,500	$ 16,500
Salaried employee:			
Yes	28.9 %	20.8 %	17.9 %
Member of a union:			
Yes	12.5 %	15.7 %	10.6 %
Chronic illness:			
Yes	8.5 %	4.8 %	3.8 %
Occupation:			
Managerial/ administrative	18.1 %	10.3 %	8.7 %
Sales workers	11.2	7.4	9.5
Clerical	13.8	17.4	13.7
Craftsmen	10.8	9.3	13.2
Operatives	4.9	7.3	9.0
Transport operatives	4.2	6.6	5.1
Service workers	10.1	20.1	18.2
Laborers, not farming	3.1	5.9	7.3
Farm owners and managers	0.5	0.1	0.2
Farm laborers and foreman	1.1	0.9	3.9
Unknown/ other	0.3	0.9	1.1
Professional and technical	21.9	14.0	10.2

Table 1 – continued	White	African American	Hispanic
Market Characteristics:			
MSA:			
Yes	80.6 %	88.2 %	91.9 %
Midwest			
Yes	27.5 %	18.3 %	8.0 %
Segregated for African Americans:			
Yes	27.9 %	49.3 %	38.2 %
Segregated for Hispanics:			
Yes	23.9 %	40.2 %	44.2 %
Mean percent foreign-born in county	8.8	11.7	20.8
Mean percent unemployed in county	3.4	4.1	4.2
Mean percent below poverty level in county	11.0	14.4	16.0
Mean percent not high school graduates in county	18.3	21.5	25.7
Firm Characteristics:			
Number of employees			
1 – 9	25.7 %	16.4 %	25.8 %
10 – 39	22.5	19.8	26.6
40 – 99	14.4	14.3	13.6
100 – 249	12.0	13.5	11.3
250 – 499	9.1	10.2	8.3
500+	16.3	25.8	14.4

Table 1 – continued	White	African American	Hispanic
Industry:			
Agriculture, construction	9.0 %	5.1 %	12.2 %
Mining, manufacturing	16.4	14.6	17.1
Transportation, communication, utilities	7.2	10.9	7.0
Sales	17.6	14.2	21.1
Finance, insurance, real estate	7.2	6.4	5.2
Repair, personal services, entertainment	10.7	12.7	15.3
Public administration	26.8	28.2	17.6
Professional services	5.1	8.0	4.6

Table 2: Estimated Coefficients for Two-Outcomes Model: Effects of Individual, Market and Firm Characteristics on Probability of Having a Job with Employer-Sponsored Health Insurance

Characteristics	Individual			Individual + Market			Individual + Market + Firm		
	ß	SE		ß	SE		ß	SE	
Individual Characteristics:									
Race (reference: white):									
African American	0.173	0.061	*	0.212	0.065	**	0.028	0.073	
Hispanic	-0.153	0.067	*	-0.056	0.074		0.127	0.074	
Time in US (reference: US-born):									
<= 5 years	-0.582	0.181	**	-0.504	0.181	**	-0.427	0.191	*
5 – 10 years	-0.636	0.177	**	-0.576	0.175	**	-0.389	0.183	*
> 10 years	-0.256	0.078	**	-0.215	0.074	**	-0.209	0.080	*
Age:	0.104	0.012	**	0.105	0.012	**	0.112	0.013	**
Age Squared:	-0.001	.0001	**	-0.001	.0001	**	-0.001	.0002	**
Sex (reference: female):									
Male	-0.035	0.040		-0.035	0.040		0.075	0.044	
Education (reference: high school):									
Some college	0.196	0.047	**	0.205	0.048	**	0.173	0.053	**
College graduate	0.147	0.052	**	0.171	0.054	**	0.056	0.056	
Marital status (reference: not married):									
Married	0.072	0.047		0.063	.048		-0.033	0.052	
Children in household (reference: none):									
Yes	-0.127	0.043	**	-0.132	0.043	**	-0.125	0.047	**
Other wage earner in household (reference: none)									
Yes	-0.054	0.042		-0.058	0.042		-0.051	0.046	
Household income (income measured continuously and divided by 20,000):	0.017	0.010		0.016	0.011		0.016	0.011	
Salaried employee (reference: no):									
Yes	1.23	.052	**	1.248	0.052	**	1.093	0.056	**
Union member (reference: no):									
Yes	1.6	0.074	**	1.599	0.074	**	1.12	0.078	**
Full-Time worker (reference: no):									
Yes	1.754	0.052	**	1.763	0.053	**	1.657	0.056	**
Full-Year worker (reference: no):									
Yes	0.577	0.056	**	0.571	0.056	**	0.65	0.058	**
Poor or Fair Health (reference is excellent, very good or good health):									
Yes	0.057	0.074		0.04	0.075		0.06	0.079	
Chronic illness (reference: none):									
Yes	0.100	0.065		0.098	.066		0.063	.069	

Characteristics	Individual			Individual + County			Individual + County + Firm		
Table 2, continued:	**ß**	**SE**		**ß**	**SE**		**ß**	**SE**	
Occupation (reference: professional and technical):									
Managerial/ administrative	-0.217	0.067	**	-0.218	.068	**	0.067	.073	
Sales workers	-0.487	0.071	**	-0.496	.072	**	-0.196	.087	*
Clerical	0.265	0.070	**	0.265	.071	**	0.178	.079	*
Craftsmen	-0.319	0.078	**	-0.337	.078	**	0.032	.095	
Operatives	0.255	0.096	**	0.204	.098	*	-0.28	.115	*
Transport operatives	-0.345	0.110	**	-0.313	.11	*	-0.316	.124	*
Service workers	-0.481	0.079	**	-0.495	.08	**	-0.375	.085	**
Laborers, not farming	-0.411	0.109	**	-0.438	.109	**	-0.46	.131	**
Farm owners and managers	-2.053	0.262	**	-2.075	.266	**	-0.464	.290	
Farm laborers and foreman	-1.358	0.205	**	-1.361	.207	**	-0.585	.219	**
Unknown	-1.009	0.455	*	-0.993	.444	*	-0.95	.348	**
Market Characteristics:									
MSA (reference: non-MSA):				0.128	.067		0.065	.070	
Midwest (reference: other regions):				0.114	.053	*	0.083	.055	
Segregated (reference: not segregated):									
For African Americans				0.026	.048		0.028	.051	
For Hispanics				0.126	.048	*	0.064	.057	

	Individual			Individual + County			Individual + County + Firm		
Percent of County Population Foreign-born				-1.45	.252	**	-1.242	.301	**
Percent of County Population Unemployed				-2.062	2.723		-0.722	2.833	
Percent of County Population in Poverty				-0.014	.008		-0.010	.008	
Percent of County Adult Population Not High School Graduates				0.814	.435		0.258	.47	
Firm Characteristics:									
Number of employees (reference: ≥ 500):									
1 – 9							-2.080	.069	**
10 – 39							-0.853	.067	**
40 – 99							-0.472	.076	**
100 – 249							-0.256	.086	**
250 – 499							-0.193	.087	*
Industry (reference: professional):									
Agriculture, construction							-0.650	.084	**
Mining, manufacturing							0.248	.083	**
Transportation, communication, utilities							0.073	.090	
Sales							-0.078	.072	
Finance, insurance, real estate							0.098	.089	
Repair, personal services, entertainment							-0.485	.069	**
Public administration							0.765	.116	**

Table 2, continued:						
	Individual		Individual + County		Individual + County + Firm	
Characteristics	ß	SE	ß	SE	ß	SE
Intercept	-3.933	0.241 **	-3.889	0.271 **	-3.067	0.288 **
Pearson Chi-square value/DF	11948.318		11988.992		12147.672	

NOTES: N = 25,115 and 15,641 were offered ESI at their job.

       * $p \leq 0.05$ ** $p \leq 0.005$.

Table 3: Goodness-of-Fit Comparisons of Variations of the Two-Outcomes Model

Model Variation	Pearson Chi_Square/Degrees of Freedom
Individual characteristics only	11,948.318
Market characteristics only	11,677.067
Firm characteristics only	11,728.463
Individual and Market characteristics	11,988.992
Market and Firm characteristics	11,718.320
Individual and Firm characteristics	12,136.025
Full Model: Individual, Market and Firm characteristics	12,147.672

Table 4: Examples of Prototypical People and Their Predicted Probabilities of a Job With Employer-Sponsored Health Insurance

Characteristics of Prototype People	Predicted Probability of ESI
Person 1: white male (see note a for detailed characteristics)	0.48
Increase education to some college	0.52
Also increase % foreign born in county to 11.7% (from 8.8%)	0.51
Also increase firm size from 1-9 to 100-249 employees	0.87
Person 2: African American female (see note b for detailed characteristics)	0.50
Change occupation to clerical worker (from service worker)	0.63
Also increase firm size from 10-39 to 250-499 employees	0.77
Person 3: Hispanic male (see note c for detailed characteristics)	0.43
Change to foreign born and in US for 5–10 years	0.34
Also change occupation to craftsperson and industry to construction	0.39
Person 4: African American male (see note d for detailed characteristics)	0.87
Person 5: Hispanic male (see note e for detailed characteristics)	0.81

Predicted probabilities are based on the estimated model in Table 2.

a. 41 year-old white male, native born, high school grad, married, no children in household, no other wage earner in household, family income is $40,000, not a salaried employee, not a union member, in excellent-good health, no chronic illness in household, works full-time and full-year, occupation is a sales worker; Lives in MSA that is not in Midwest, county is not segregated, county foreign-born population = 8.8%, county unemployment rate = 3.4%, county poverty rate = 11%, county adult population who have not graduated from high school = 18.3%; Firm's number of employees is between 1 and 9, and firm is in manufacturing industry.

b. 38 year-old African American female, native born, high school grad, not married, no children in household, no other wage earner in household, annual income of $20,000, not a salaried employee, not a union member, in excellent-good health, no chronic illness, works full-time and full-year, occupation is a service worker; Lives in MSA that is not in the Midwest, county is segregated for African Americans, county foreign born population = 11.7%, county unemployment rate = 4.1%, county poverty rate = 14.4%, county adult population who have not graduated from high school = 21.5%; Firm's number of employees is between 10 and 39, and firm is in the personal services/entertainment industry.

c. 36 year-old Hispanic male, high school graduate, native born, married, children in household, no other wage earner in household, family income of $16,500, not a salaried employee, not a union member, in excellent-good health, no chronic illness in household, works full-time and full-year, occupation is a service worker; Lives in MSA that is not in Midwest, county is not segregated for Hispanics, county foreign-born population = 20.8%, county unemployment rate = 4.2%, county poverty rate = 16%, county adult population who have not graduated from high school = 25.7%; Firm's number of employees is between 10 and 39, and firm is in the personal services/entertainment industry.

d. 30 year-old African American male, some college, native born, married, children in household, in excellent-good health, no chronic illness in household, no other wage earner in the household, family income is $50,000, not a salaried employee, is a union member, works full-time and full-year, occupation is a craftsman; Lives in a non-MSA that is not in the Midwest, county is not segregated for African Americans, county foreign born population = 11.7%, county unemployment rate = 4.1%, county poverty rate = 14.4%, county adult population who have not graduated from high school = 21.5%; Firm has 10-39 employees, and firm is in transportation industry.

e. 36 year-old Hispanic male, same as 3(b) except he earns $20,000 and works for a government agency with at least 500 employees.

Table 5: Estimated Coefficients for Five Outcomes Model with All Three Sets of Characteristics

	Not Offered				Offered			
	Uninsured		Insured		Declined Uninsured		Declined Insured	
	ß	SE	ß	SE	ß	SE	ß	SE
Individual Characteristics:								
Race/ ethnicity (reference: white):								
African American	0.234	.101 *	-0.135	.084 *	0.385	.134 **	-0.136	.106
Hispanic	0.468	.095 **	-.210	.086	0.453	.154 **	-0.209	.125
Time in US (reference: US=born):								
<= 5 years	0.695	.230 **	0.172	.220	-0.128	.325	0.405	.336
5 – 10 years	0.727	.228 **	0.001	.222	0.462	.248	-0.299	.374
> 10 years	0.375	.115 **	0.012	.100	-0.116	.162	-0.197	.144
Age:	-0.050	.017 *	-0.176	.016 **	-0.036	.030	-0.111	.024 **
Age Squared:	0.0003	.0002	0.002	.0002 **	0.00006	.0004	0.001	.0003 **
Sex (reference: female):								
Male	0.019	.064	-0.350	.053 **	-0.034	.114	-0.827	.079 **

	Not Offered				Offered			
	Uninsured		Insured		Declined Uninsured		Declined Insured	
	ß	SE	ß	SE	ß	SE	ß	SE
Education (reference: high school):								
Some college	-0.414	.069 **	-0.059	.060	-0.362	.129 **	-0.035	.077
College graduate	-0.515	.098 **	0.055	.062	-0.902	.174 **	-0.188	.099
Marital status (reference: not married):								
Married	-0.441	.073 **	0.601	.064 **	0.110	.134	1.760	.107 **
Other wage earner (reference: none):								
Yes	0.093	.065	0.133	.056 *	0.049	.124	0.264	.068 **
Children in household (reference: none):								
Yes	0.029	.064	0.229	.055 **	-0.007	.113	0.159	.069 *
Household income (divided by 20,000):	-0.250	.030 **	0.046	.012 **	-0.285	.051 **	0.088	.014 **
Salaried employee (reference: no):								
Yes	-1.215	.087 **	-1.153	.067 **	-0.590	.137 **	-0.310	.071 **

	Not Offered				Offered			
	Uninsured			**Insured**			**Declined Uninsured**			**Declined Insured**		
	ß	**SE**		**ß**	**SE**		**ß**	**SE**		**ß**	**SE**	
Union member (reference: no):												
Yes	-1.819	.125	**	-1.031	.092	**	-0.892	.222	**	-0.865	.111	**
Chronic illness in HH (reference: no):												
Yes	-0.251	.110	*	-0.040	.077		-0.382	.206		-0.117	.111	
Health Status Fair or Poor (reference: Excellent, Very Good, or Good):												
Yes	-0.272	.091	*	0.163	.100		-0.159	.160		0.251	.140	
Full-Time Employee (reference: no)												
Yes	-1.852	.079	**	-2.045	.065	**	-1.014	.138	**	-1.073	.087	**
Full-Year Employee (reference: no)												
Yes	-1.016	.075	**	-0.661	.072	**	-0.707	.123	**	-0.491	.101	**
Occupation (reference: professional/ technical):												
Managerial/ administrative	-0.123	.127		-0.043	.083		-0.099	.237		0.007	.109	
Sales workers	0.083	.132		0.276	.097	**	-0.161	.281		0.135	.155	
Clerical	-0.398	.136	**	-0.050	.083		-0.058	.249		0.128	.112	
Craftsmen	0.008	.130		-0.102	.112	*	0.080	.270		-0.101	.142	
Operatives, farm laborers/ foreman, and unknown	0.335	.145		0.132	.129		0.053	.294		-0.145	.182	
Transport operatives	0.413	.160	*	0.210	.144		0.363	.311		-0.318	.240	
Service workers	0.559	.132	**	0.368	.096	**	0.423	.215	*	0.121	.133	

	Not Offered						Offered					
	Uninsured			Insured			Declined Uninsured			Declined Insured		
	ß	SE		ß	SE		ß	SE		ß	SE	
Laborers, not farming	0.443	.170	*	0.409	.160	*	-0.106	.316		0.253	.253	
Farm owners and managers	-0.472	.385		0.601	.345		-28.137	.389	**	-1.114	.780	
Market Characteristics:												
MSA (reference: non-MSA):	-0.114	.100		0	.074		-0.104	.151		0.208	.086	*
Midwest Region (reference: other regions)	-0.15	.083		0.009	.057		0.003	.130		0.233	.076	*
Segregated (reference: not segregated):												
For African Americans	-0.011	.078		-0.009	.057		0.052	.134		0.054	.083	
For Hispanics	-0.104	.081		-0.001	.065		-0.058	.145		0.132	.077	
Percent of County Population Foreign-born	1.369	.367	**	1.165	.360	**	0.518	.656		-0.473	.422	
Percent of County Population Unemployed	-4.221	3.995		4.165	3.287		0.306	6.579		0.869	4.442	
Percent of County Population in Poverty	0.03	.011	**	-0.001	.010		0.034	.017		-0.013	.013	
Percent of County Adult Population Not High School Graduates	0.076	.689		-0.771	.538		-1.388	1.027		-0.468	.761	

	Not Offered				Offered			
	Uninsured		Insured		Declined/ Uninsured		Declined/ Insured	
	ß	SE	ß	SE	ß	SE	ß	SE
Firm Characteristics:								
Number of employees (reference: ≥ 500)								
1 – 9	2.274	.116 **	2.167	.077 **	0.913	.172 **	0.443	.114 **
10 – 39	1.019	.114 **	0.952	.076 **	0.523	.162 **	0.592	.099 **
40 – 99	0.379	.119 **	0.611	.087 **	0.409	.190 *	0.357	.104 **
100 – 249	0.078	.141	0.347	.099 **	-0.201	.205	0.162	.126
250 – 499	0.081	.143	-0.219	.104 *	-0.032	.240	-0.058	.131
Industry (reference: professional):								
Agriculture, construction	1.127	.119 **	0.506	.101 **	0.3370	.243	0.023	.169
Mining, manufacturing	-0.179	.116	-0.326	.095 **	-0.384	.219 *	-0.317	.124 *
Transportation, communication, utilities	0.216	.134	-0.210	.102 *	-0.004	.238	-0.299	.155 *
Sales	0.424	.104 **	0.076	.079	0.577	.184 **	0.221	.110
Finance, insurance, real estate	-0.141	.146	-0.089	.104	-0.430	.251 *	0.015	.128
Repair, personal services, entertainment	0.898	.099 **	0.426	.084 **	0.446	.185 *	0.273	.126 *
Public administration	-0.719	.209 **	-0.827	.130 **	-0.364	.281	-0.441	.152 **

Pseudo R-square: 0.2567

Total N: 25,115				
Unweighted distribution of outcomes	17.7%	20.9%	2.9%	6.9%
Weighted distribution of outcomes	14.8%	21.5%	2.6%	7.3%

NOTES: $* p \leq 0.05$ $** p \leq 0.005$.

Table 6: Goodness-of-Fit Comparisons of Variations of the Five-Outcomes Model

Model Variation	Pseudo R-SquareValue
Individual characteristics only	0.1978
Market characteristics only	0.0100
Firm characteristics only	0.1035
Individual and Market characteristics	0.2018
Market and Firm characteristics	0.0907
Individual and Firm characteristics	0.2535
Full Model: Individual, Market and Firm characteristics	0.2567

Table 7: Examples of Prototypical People and Their Predicted Probabilities of Five Outcomes of Employer-Sponsored Health Insurance and Insurance Status *

Characteristics of Prototype People	Predicted Probability of No ESI Offered and Uninsured	Predicted Probability of No ESI Offered and Insured	Predicted Probability of ESI Offer Declined and Uninsured	Predicted Probability of ESI Offer Declined and Insured	Predicted Probability of ESI Offer Accepted
Person 1 (see note a for detailed characteristics)	0.20	0.32	0.02	0.03	0.44
Increase education to some college	0.14	0.33	0.02	0.03	0.48
Also increase % foreign born in county to 11.7%	0.15	0.34	0.02	0.01	0.48
Also increase firm size from 1-9 to 100-249	0.03	0.10	0.01	0.04	0.83
Person 2 (see note b for detailed characteristics)	0.56	0.09	0.07	0.01	0.27
Change occupation to clerical worker	0.36	0.09	0.08	0.02	0.45
Also increase firm size 10-39 to 250-499	0.20	0.06	0.07	0.01	0.66
Person 2 but change race to white	0.27	0.08	0.07	0.01	0.57
Person 3 (see note c for detailed characteristics)	0.98	0	0	0	0.01
Change to foreign born in US for 5 – 10 years	0.85	0.04	0.03	0.01	0.07
Also change occupation to craftsperson and industry to construction	0.84	0.04	0.03	0	0.09
Person 3 but change race to white	0.69	0.04	0.02	0.02	0.24
Person 4 (see note d for detailed characteristics)	0.03	0.08	0.03	0.03	0.84
Person 5 (see note e for detailed characteristics)	0.17	0.05	0.08	0.02	0.68

a. 41 year-old white male, native born, high school grad, married, no children in household, no other wage earner in household, family income is $40,000, not a salaried employee, not a union member, in excellent-good health, no chronic illness in household, works full-time and full-year, occupation is a sales worker; Lives in MSA that is not in Midwest, county is not segregated, county foreign-born population =

8.8%, county unemployment rate = 3.4%, county poverty rate = 11%, county adult population who have not graduated from high school = 18.3%; Firm's number of employees is between 1 and 9, and firm is in manufacturing industry.

b. 38 year-old African American female, native born, high school grad, not married, no children in household, no other wage earner in household, annual income of $20,000, not a salaried employee, not a union member, in excellent-good health, no chronic illness, works full-time and full-year, occupation is a service worker; Lives in MSA that is not in the Midwest, county is segregated for African Americans, county foreign born population = 11.7%, county unemployment rate = 4.1%, county poverty rate = 14.4%, county adult population who have not graduated from high school = 21.5%; Firm's number of employees is between 10 and 39, and firm is in the personal services/entertainment industry.

c. 36 year-old Hispanic male, high school graduate, native born, married, children in household, no other wage earner in household, family income of $16,500, not a salaried employee, not a union member, in excellent-good health, no chronic illness in household, works full-time and full-year, occupation is a service worker; Lives in MSA that is not in Midwest, county is not segregated for Hispanics, county foreign-born population = 20.8%, county unemployment rate = 4.2%, county poverty rate = 16%, county adult population who have not graduated from high school = 25.7%; Firm's number of employees is between 10 and 39, and firm is in the personal services/entertainment industry.

d. 30 year-old African American male, some college, native born, married, children in household, in excellent-good health, no chronic illness in household, no other wage earner in the household, family income is $50,000, not a salaried employee, is a union member, works full-time and full-year, occupation is a craftsman; Lives in a non-MSA that is not in the Midwest, county is not segregated for African Americans, county foreign born population = 11.7%, county unemployment rate = 4.1%, county poverty rate = 14.4%, county adult population who have not graduated from high school = 21.5%; Firm has 10-39 employees, and firm is in transportation industry.

e. 36 year-old Hispanic male, same as 3(b) except he earns $20,000 and works for a government agency with at least 500 employees.

* Predicted probabilities are based on the estimated model in Table 5. Some prototypical people's probabilities do not sum to 1.0 due to rounding errors.

References

Baker, L. C. 1997. The Effect of HMOs on Fee-for-Service Health Care Expenditures: Evidence from Medicare. *Journal of Health Economics* 16 (4): 453-81.

_____. 1999. Association of Managed Care Market Share and Health Expenditures for Fee-for-Service Medicare Patients. *JAMA* 281(5): 432-7.

Blumberg, L.J. and L. M. Nichols. 2001. Why Are So Many Americans Uninsured? A Conceptual Framework, Summary of the Evidence, and Delineation of the Gaps in Our Knowledge. in Health Policy and the Uninsured, edited by C.G. McLaughlin, Washington, DC: Urban Institute Press.

Borjas, G. 1995. Ethnicity, Neighborhoods, and Human Capital Externalities. *American Economic Review* 85 (3): 365-90.

Bound, J., D.A. Jaeger, and R.M. Baker. 1995. Problems with Instrumental Variables Estimation When the Correlation between the Instruments and the Endogenous Explanatory Variables Is Weak. *Journal of the American Statistical Association* 90(430): 443-450.

Brown, E.R., R. Wyn, and S. Teleki. 2000. Disparities in Health Insurance and Access to Care for Residents Across US cities. Los Angeles: University of California.

Cantor, J. C., S. H. Long, and M. S. Marquis. 1995. Private Employment-based Health Insurance in Ten States. *Health Affairs* 14 (2): 199-211.

Coburn, A. F., E. H. Kilbreth, S. H. Long, and M. S. Marquis. 1998. Urban-Rural Differences in Employer-based Health Insurance Coverage of Workers. *Medical Care Research and Review* 55 (4): 484-96.

Cohen, J. W., A. C. Monheit, K. M. Beauregard, S. B. Cohen, D. C. Lefkowitz, D. E. Potter, J. P. Sommers, A. K. Taylor, and R. H. Arnett, 3rd. 1996. The Medical Expenditure Panel Survey: A National Health Information Resource. *Inquiry* 33 (4): 373-89.

Cooper, P.F. and B.S. Schone. 1997. More Offers, Fewer Takers for Employment-based Health Insurance: 1987 and 1996. *Health Affairs* 16 (6): 142-49.

Cunningham, P. J. 1999a. Pressures on Safety Net Access: The Level of Managed Care Penetration and Uninsurance Rate in a Community. *Health Services Research* 34 (1) Pt 2: 255-70.

Cunningham, P.J. 1999b. Choosing to be Uninsured: Determinants and Consequences of the Decision to Decline Employer-Sponsored Health Insurance. Washington, DC: Center for Studying Health System Change.

Cutler, D.M., E.L. Glaeser, and J.L. Vigdor. 1997. Are Ghettos Good or Bad? *Quarterly Journal of Economics* 112 (3): 827-72.

DeNavas-Walt, C., B.D. Proctor, and C. Hill Lee. 2006. *Income, Poverty, and Health Insurance Coverage in the United States: 2005*. Current Population Reports P60-231. Bureau of the Census. Washington, DC: U.S. Government Printing Office.

Diez Roux, A. V., S. S. Merkin, D. Arnett, L. Chambless, M. Massing, F. J. Nieto, P. Sorlie, M. Szklo, H. A. Tyroler, and R. L. Watson. 2001. Neighborhood of Residence and Incidence of Coronary Heart Disease. *New England Journal of Medicine* 345 (2): 99-106.

Duncan, G. J., J. P. Connell, and P.K. Klebanov. 1997. Conceptual and Methodological Issues in Estimating Causal Effects of Neighborhoods and Family Conditions on Individual Development. Ch 9 in Neighborhood Poverty, Volume I: Context and Consequences for Children, edited by J. Brooks-Gunn, G.J. Duncan, and J.L. Aber, New York: Russell Sage Foundation.

Edin, P., P. Fredriksson, and O. Aslund. 2003. Ethnic Enclaves and the Economic Success of Immigrants: Evidence from a Natural Experiment. *Quarterly Journal of Economics* 118 (1): 329-57.

Employer Health Benefits 2004 Annual Survey. 2004. Menlo Park, CA: Henry J. Kaiser Family Foundation.

Evans, W.N., W.E. Oates, and R.M. Schwab. 1992. Measuring Peer Group Effects: A Study of Teenage Behavior. *Journal of Political Economy* 100 (5): 966-91.

Farley, R. 1997. The New American Reality: Who We Are, How We Got Here, Where We Are Going. New York: Russell Sage Foundation.

Feldman, R., B. Dowd, S. Leitz, and L.A. Blewett. 1997. The effect of Premium on the Small Firm's Decision to Offer Health Insurance. *Journal of Human Resources* 34 (4): 635-58.

Fronstin, P., L. G. Goldberg, and P. K. Robins. 1997. Differences in Private Health Insurance Coverage for Working Male Hispanics. *Inquiry* 34 (2): 171-80.

Gabel, J. R., P. B. Ginsburg, and K. A. Hunt. 1997. Small Employers and Their Health Benefits, 1988-1996: An Awkward Adolescence. *Health Affairs* 16 (5): 103-10.

Gruber, J. 2001. The Impact of the Tax System on Health Insurance Coverage. *International Journal of Health Care Finance and Economics* 1: 293-304.

Gruber, J. and M. Lettau. 2000. How Elastic Is the Firm's Demand for Health Insurance? Cambridge, MA: NBER Working Paper 8021.

Haas, J. S., K. A. Phillips, D. Sonneborn, C. E. McCulloch, L. C. Baker, C. P. Kaplan, E. J. Perez-Stable, and S. Y. Liang. 2004. Variation in Access to Health Care for Different Racial/ Ethnic Groups by the Racial/Ethnic Composition of an Individual's County of Residence. *Medical Care* 42 (7): 707-14.

Hackbarth, D. P., B. Silvestri, and W. Cosper. 1995. Tobacco and Alcohol Billboards in 50 Chicago Neighborhoods: Market Segmentation to Sell Dangerous Products to the Poor. *Journal of Public Health Policy* 16 (2): 213-30.

Hadley, J. and J.D. Reschovsky. 2002. Small firms' Demand for Health Insurance: The Decision to Offer Insurance. *Inquiry* 39 (2): 118-37.

Hamermesh, D.S. 1999. Changing Inequality in Markets for Workplace Amenities. *Quarterly Journal of Economics* 114 (4): 1085-1123.

Herring, B. 2005. The Effect of the Availability of Charity Care to the Uninsured on the Demand for Private Health Insurance. *Journal of Health Economics* 24 (2): 225-52.

Hoffman, C. and M.B. Pohl. 2002. Health Insurance Coverage in America: 2000 Data Update. Menlo Park, CA: Kaiser Family Foundation.

Kawachi, I. 1999. Social Capital and Community Effects on Population and Individual Health. *Annals of the New York Academy of Science* 896: 120-30.

Kritz., M.M. and D.T. Gurak. 2004. Immigration and a Changing America. New York and Washington, DC: Russell Sage Foundation and Population Reference Bureau.

Krueger, A. B. and U. E. Reinhardt. 1994. The Economics of Employer versus Individual Mandates. *Health Affairs* 13 (2): 34-53.

LaVeist, T. A. 1993. Segregation, Poverty, and Empowerment: Health Consequences for African Americans. *Milbank Quarterly* 71 (1): 41-64.

LaVeist, T. A. and J. M. Wallace, Jr. 2000. Health Risk and Inequitable Distribution of Liquor Stores in African American Neighborhood. *Social Science and Medicine* 51 (4): 613-7.

Marquis, M. S. and S. H. Long. 1999. Recent Trends in Self-Insured Employer Health Plans. *Health Affairs* 18 (3): 161-6.

Marquis, M. S., J. A. Rogowski, and J. J. Escarce. 2004. Recent Trends and Geographic Variation in the Safety Net. *Medical Care* 42 (5): 408-15.

Massey, D.S. and N.A. Denton. 1988. The Dimensions of Residential Segregation. *Social Forces* 67 (2): 281-315.

_____. 1989. Hypersegregation in U.S. Metropolitan Areas: Black and Hispanic Segregation Along Five Dimensions. *Demography* 26 (August): 373-93.

McLaughlin, C.G. 1994. *Small Businesses and Health Care Reform: Understanding the Barriers to Employee Coverage and Implications for Workable Solutions*. Ann Arbor, MI: University of Michigan Press.

_____. 1999. Health Care Consumers: Choices and Constraints. *Medical Care Research and Review* 56 (Supp 1): 24-59.

Monheit, A. C. and J. P. Vistnes. 2000a. Race/ethnicity and Health Insurance Status: 1987 and 1996. *Medical Care Research and Review* 57 (1, Supp l): 11-35.

Monheit, A.C. and J.P. Vistnes. 2000b. Health Insurance Availability at the Workplace: How Important Are Worker Preferences? *Journal of Human Resources* 34 (4): 771-85.

Nichols, L.M.., Blumberg L.J., G.P. Acs, C.E. Uccelllo, and J.A. Marsteller. 1997. Small Employers: Their Diversity and Health Insurance. Washington, DC: The Urban Institute.

Render, M. L., H. M. Kim, D. E. Welsh, S. Timmons, J. Johnston, S. Hui, A. F. Connors, Jr., D. Wagner, J. Daley, and T. P. Hofer. 2003. Automated Intensive Care Unit Risk Adjustment: Results from a National Veterans Affairs Study. *Critical Care Medicine* 31 (6): 1638-46.

Schur, C.L. and J. Feldman. 2001. Running in Place: How Job Characteristics, Immigrant Status, and Family Structure Keep Hispanics Uninsured. New York: The Commonwealth Fund.

Shore-Sheppard, L., T.C. Buchmueller, and G.A. Jensen. 2000. Medicaid and Crowding Out of Private Insurance: A Re-examination Using Firm Level Data. *Journal of Health Economics* 19 (1): 61-91.

Staiger, D. and J. Stock. 1997. Instrumental Variables Regression with Weak Instruments. *Econometrica* 65 (3): 557-86.

Swartz, K. 1989. *The Medically Uninsured: Special Focus on Workers*. Washington, DC: The Urban Institute.

_____. 1992. Characteristics of Workers without Employer-Group Health Insurance. in *Trends in Health Benefits*, edited by D. Bellar, W. Wiatrowski and J. Turner. Washington, DC: U.S. Department of Labor, Government Printing Office.

_____. 2006. *Reinsuring Health: Why More Middle-Class People Are Uninsured and What Government Can Do*. New York: Russell Sage Foundation.

Swartz, K., J. Marcotte, and T. D. McBride. 1993. Personal Characteristics and Spells Without Health Insurance. *Inquiry* 30 (1): 64-76.

Thorpe, K. E. and C. S. Florence. 1999. Why Are Workers Uninsured? Employer-Sponsored Health Insurance in 1997. *Health Affairs* 18 (2): 213-8.

Wen, M. and N.A. Christakis. 2005. Neighborhood Effects on Posthospitalization Mortality: A Population-based Cohort Study of the Elderly in Chicago. *Health Services Research* 40 (4):1108-1127.

Williams, D. R. and C. Collins. 2001. Racial Residential Segregation: A Fundamental Cause of Racial Disparities in Health. *Public Health Report* 116 (5): 404-16.

Yen, I. H. and G. A. Kaplan. 1999. Neighborhood Social Environment and Risk of Death: Multilevel Evidence from the Alameda County Study. *American Journal of Epidemiology* 149 (10): 898-907.

Endnotes

[1] Through this strategy, we have attempted to minimize the possible endogenous effects surrounding obtaining a job with ESI.

[2] From a worker's perspective, however, the decision is whether to find a job at a firm that offers ESI in the first place. Very few people who are offered ESI turn it down and remain uninsured (Cooper and Schone 1997; Cunningham 1999b). Among the adults in our sample, 63.6% were offered coverage at their job, and 84% of these people accepted the offer. Just one in four of the people who turned down offered coverage remained uninsured – so only a little more than 4% of the people who are offered ESI turn it down and remain uninsured. Modeling the decision process as an accept/reject decision conditional on ESI being offered obscures the sorting behavior of workers. If we believe that workers who have a preference for health insurance try to sort themselves to firms that offer ESI, then what do we make of someone who does not accept the offered ESI? A person who does not accept ESI is not necessarily evidence of bad job sorting. What could appear to be bad job-sorting might be the result of any of a variety of transactions costs, frictions or information problems in the labor market. For example, the cost of searching for a job that has the right mix of salary and fringe benefits can be very high. Someone might choose to accept a job that offers a high wage and simply let slip the deadline for signing up for health insurance. Or as an anonymous reviewer suggested, someone might want the option of enrolling in the group health insurance policy in the future and therefore will look for a job at a large employer that has an annual open enrollment period. (We thank the reviewer for reminding us of this possibility. In many states, however, this scenario only can happen when at least 70% of the workers in the firm are enrolled in health insurance offered by the firm.)

[3] The corollary of this is that employees pay the full amount of the premium because they are paid lower wages than they would if they did not have ESI (Gruber and Lettau 2000; Krueger and Reinhardt 1994).

[4] Estimating the model with multinomial logit requires the assumption that the five alternative choices are independent and irrelevant alternatives for people. Even though it may seem that the primary choice is between having a job that does or does not offer ESI, we see the nuanced five choices as being separate and independent.

That is, as we explained in the conceptual framework section, people may search for a job that offers ESI because generally firms that offer ESI also pay higher wages – and they may decide a priori that they will not accept offered coverage either because they already have insurance (perhaps through a spouse) or they do not want to pay the premium share required of employees. Other people prefer a job or occupation that does not usually have ESI as part of the compensation package because they already have insurance through a spouse. We do not think that people make nested decisions within the simple 2-outcomes of offered or not offered ESI.

[5] We used a Generalized Estimating Equation (GEE) estimator for the binary logit model in order to correct for the clustering of people by county. The GEE was performed within SAS (Cary, NC). The multinomial logit model was estimated using Stata (College Station, TX) and also controlled for the stratified sample design within MEPS and the clustering of people by county.

[6] MEPS county identifiers are available at the Agency for Healthcare Research and Quality (AHRQ) data center, which is where we conducted the estimations reported here. The AHRQ data center merged county data that we provided to the center with the MEPS file; the arrangements for using the data then preclude our identifying results by county or state.

[7] We also did not want to restrict our analysis to people living in MSAs since many people without ESI live in rural areas.

[8] See www.bls.gov/cps/wlf-table35-2006.pdf (accessed February 23, 2007).

[9] Nationally, 15.8% of the population 18 years of age and older had not completed high school in 2004 (Census: www.census.gov/population/socdemo/education/cps2004/tab11-01.pdf)

[10] As we said in note 2 above, only a little more than 4% of the people who are offered ESI turn it down and remain uninsured in our sample. Although race/ethnicity is significant in predicting this outcome, without knowing more about why people are uninsured in spite of having jobs where ESI is offered, we can only speculate about why race and ethnicity might be factors.