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HEALTH INSURANCE AND LESS SKILLED WORKERS

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ABSTRACT

We begin this research with the belief that low and declining levels of private-employer sponsored health insurance were a continuing problem, especially among less skilled workers. Our analysis, however, paints a more complex picture. Using data from the March CPS, the SIP, and CPS benefits surveys, we find that while many less skilled workers remain uncovered, the decline in private employer-sponsored health insurance coverage has slowed recently and may even have reversed.

Neither crowdout nor a deterioration in the quality of jobs available to the less skilled seems likely to fully explain these time-series trends in health insurance coverage. A simple explanation that has been largely overlooked is that rising health care costs have driven much of the reduction in private insurance coverage, but it is more difficult to test this hypothesis given the available data.

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Introduction

Most non-elderly Americans get their health insurance through either their own employment, or the employment of family members. Thus, evidence that rates of private health insurance coverage have fallen over time have caused great concern. For example, Table 1 (from Farber and Levy (1998) Table 13) shows that the fraction of private sector workers aged 20 to 65 who were covered by their own employer's insurance fell from 72 to 65% between 1979 and 1997. The decline was much more dramatic among workers without a high school education; among these workers coverage fell from 67 to 50%.

A closer inspection of Table 1 suggests however, that the decline in private health insurance coverage slowed to a halt between 1993 and 1997. This paper provides additional confirmation of this finding. Using data from three different sources, we find that in contrast to the preceding two decades, there has been little overall decline in private health insurance coverage in the 1990s. This finding holds even for less-educated single mothers, a group of particular concern to policy makers in this era of welfare reform.

The paper begins with some theoretical considerations regarding the reasons why health insurance is provided by employers. We continue with an overview of the available data for the period 1987 to 1997, and with a discussion of trends in health insurance coverage over that period. Finally, we offer some observations about three hypotheses which may be used to explain the earlier decline in health insurance coverage, as well as the

to identify a definitive explanation for either the decline or its reversal, we conclude that neither the crowding out of private insurance by public insurance, nor a worsening in job "quality" are likely to be complete explanations. It seems more likely that trends in health care costs underlie the patterns we see, though the data necessary for a definitive test of this hypothesis is lacking.

1. Theoretical Considerations

Before discussing the trends in employer-sponsored health insurance, it is helpful to ask why most Americans are covered by employer-sponsored policies to begin with.[1] The main reason that most workers purchase health insurance through their employers is likely to be that employers are able to offer insurance at a lower cost than employees can purchase it in the market. Given this cost advantage, employer-sponsored health insurance can make employees better off, even if employers do not offer the optimal wage/benefits bundle for each employee.

There are several reasons for employers' cost advantage. First, a 1943 Internal Revenue Service ruling made compensation in the form of health insurance (and pensions) excludable from taxable income. In contrast, an employee who purchased an individual

[1] This discussion is drawn from Currie and Madrian (1998).

policy would be taxed on the income used to pay for it.[2] Gruber and Poterba (1996) calculate that the tax-induced reduction in the "price" of employer-provided health insurance averages about 27%.

A second factor creating a wedge between employee and employer costs is selection into the labor force. Poor health increases medical costs and reduces the probability of employment. Thus, the employed are likely to be healthier and cost less to insure than the unemployed. Moreover, large groups can reduce adverse selection and lower administrative expenses through pooling. These two factors can reduce the cost of providing health insurance in large firms relative to small firms by as much as 35% (Congressional Research Service, 1988).

This simple cost-based model of employer-sponsored health insurance suggests several reasons why not all workers will be covered by their own employer-sponsored insurance, and why less skilled workers will be the least likely to be insured:

a) If health insurance is a normal good then poor people will demand less of it. In the event of medical catastrophe, indigent care exists even for those who are not insured. Thus, what health insurance buys is routine well care and better quality sick care. Lower income people may forgo these as luxuries. In terms of the tradeoff between wages and health benefits, they are at an "all wages" corner solution.

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[2] Although expenditures on insurance and medical expenses in excess of 7.5% of adjusted gross income are tax deductible.

b) For some workers, such as women who are covered by a spouse's plan, or those who have access to public insurance programs, the value of employer-sponsored medical insurance may be small or zero. These workers will also be at the "all wages" corner solution.

c) Given heterogeneity in tastes, there will be some workers who would like to purchase a different bundle of health insurance than the one that is offered by their employer. These workers may choose to consume no health insurance rather than purchasing a sub-optimal bundle.

d) Given a progressive tax schedule, the tax savings involved in receiving compensation in the form of benefits are smaller for low-income than for high-income workers.

e) Small companies are less able to take advantage of risk pooling, and thus are less likely to offer insurance. In fact, in 1993 94.3% of companies with over 50 employees offered health insurance to at least some of their employees, compared to only 42.2% of companies with less than 50 employees (NCHS, 1997). Less-skilled people are more likely to work for small companies--73.7% of firms with fewer than 10 employees report that over half of their employees earned less than $5 per hour or less than $10,000 per year. The comparable figure for firms with over 50 employees was only 11.1% (NCHS, 1997).

Selection effects may also account for the fact many firms exclude part-time workers from coverage and that in the past, waiting periods for health insurance on new employees were common. In 1994, 74% of establishments had minimum work hours requirements for health insurance eligibility and 70.6% had waiting periods for new employees. The average waiting period was 91 days (NCHS, 1997). The Health Insurance Portability and Accountability Act of 1996 guarantees access to an individual health insurance plan without waiting periods if the employee had 18 months of continuous coverage previously. It does not however, limit the price that carriers can charge for this coverage so it is not clear what effect the law is likely to have on the availability of affordable employer-provided coverage (GAO, 1997).

In summary, less-skilled workers are less likely to have employer provided health insurance than other workers because they are less likely to be offered insurance by their employers; because they are less likely to purchase health insurance that is offered; and because they are more likely to have access to public insurance.

2. Data

Our analysis of the recent evolution of health insurance coverage will rely on data from three sources: The annual March Current Population Surveys (CPS) from 1988 to 1997; CPS Benefits Supplements that were conducted in May 1988, and April 1993 as well as the CPS Survey of Contingent Work Supplements conducted in

February 1995 and February 1997; and the Survey of Income and Program Participation (SIPP) covering the years 1989 to 1995.

These data sets have various strengths and weaknesses. The March CPS are one of the main sources of information about changes in health insurance over time, since they have included questions about health insurance coverage since 1980. However there are several issues that complicate analysis of these data. First, while the questions pertain to health insurance over the past 12 months, many analysts have concluded that people tend to answer them as if they referred to contemporaneous or more recent health insurance status. For example, Shore-Sheppard (1996) compares data from the 1988 and 1994 waves of the survey to information from the 1987 National Medical Expenditure Survey and the CPS 1993 Benefits supplement and concludes that the March CPS coverage data can be interpreted as point-in-time coverage rates as of a window between December and March.

A more serious problem is that the insurance questions have been overhauled twice recently, once in 1988 and once in 1995. Swartz (1997) provides a detailed discussion of the 1995 changes (as well as some discussion of the 1988 changes). Briefly, the wording of the questions changed, the ordering of the questions changed, and new questions about coverage by someone outside the household were added.[3] Swartz argues that the various changes to

[3] In addition, Swartz emphasizes the fact that the sampling frame of the CPS is changed every 10 years to reflect results from the most recent Census and that this change also occurred in 1995. However, since the weights are constantly updated, it seems unlikely that this change would have a large effect. In fact, the

the questionnaire are likely to have caused more people to respond that they had private insurance coverage, Medicaid coverage, or military health care (CHAMPUS). Since the number of people without health insurance is calculated as a residual, these changes would have caused a reduction in the number of uninsured, other things being equal.

Trends in health insurance coverage for the entire population calculated using data from the March CPS are shown in the top part of Table 2 for 1987 to 1996. The first column shows the fraction of the population with health insurance coverage from any source. These figures indicate a very gradual increase in the fraction of people without insurance coverage. The next column shows the fraction with any private coverage, while the third shows the fraction with employer-provided health insurance. The difference between these two columns reflects privately purchased insurance policies such as Blue Cross/Blue Shield. The fourth and fifth columns show the fraction of the population covered by their own employer's health insurance and by a spouse's health insurance, respectively. Those who have employer-based coverage which is not their own or their spouses are virtually all children covered under parent's policies.

These figures indicate that much of the decline in private health insurance coverage came from declines in privately purchased policies, declines in coverage under spousal policies, and

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fraction of the population in each state showed only very small changes between 1994, 1995, and 1996.

reductions in the coverage of other dependents. These CPS figures suggest that the fraction of workers covered by insurance from their own employers actually increased slightly over this period. Finally, the last column shows a 50% increase in the fraction of the population covered by Medicaid, the public health insurance program for low-income women and children.

The 1995 changes to the CPS would have been expected to affect the numbers calculated for 1994. Table 2 indicates that between 1993 and 1994 the number of people with employer-sponsored health insurance actually rose 3.4 percentage points, reversing the 1988 to 1993 trend. Although these numbers are not shown here, Swartz comments that the CPS also shows increases in the number of people with military coverage despite a decrease in the number of armed forces personnel. It is likely that these anomalies are due at least in part to the questionnaire changes.

Further changes to the March CPS health insurance questions, which affected the 1995 coverage numbers, took effect in 1996. These included a) the addition of separate questions for privately purchased, non-employer health insurance such as Blue Cross, b) questions designed to identify multiple, concurrent sources of coverage, and c) new questions about health insurance coverage in the current week. Although the addition of these questions represents a potentially large improvement in our knowledge of health insurance coverage, it could have changed respondent's answers to the old questions in unknown ways. Swartz notes for example, that according to the CPS, (and as shown in Table 2), the

fraction of the population covered by Medicaid showed no growth between 1994 and 1995 even though administrative records show continuing growth in the caseload.

In view of the potential difficulties involved in establishing trends using the CPS data, we have also analyzed data from the SIPP. This survey is similar in terms of size and representativeness to the March CPS, and the health insurance questions have not changed since 1990. The SIPP is a panel survey in which a new panel is introduced each year. Each household in the SIPP is interviewed at four month intervals (known as "waves") for approximately 32 months. We use all the waves from the 1990, 1991, 1992, and 1993 SIPP panels which cover the period from October 1989 to October 1995. These 4 panels interviewed approximately 14,300, 14,000, 19,600, and 19,890 households, respectively. Regression models discussed below correct the standard errors for the fact that there are repeated observations on the same households.

The SIPP provides information on the economic, demographic, and social situation of surveyed household members. Although the SIPP asks about private health insurance coverage and Medicaid coverage in every month, it is well known that many respondents tend to give the same answer for every month within a 4 month interval (c.f. Blank and Ruggles, 1996). Thus we examine responses from January, April, July, and October.

Although the SIPP questions are not as comprehensive as the latest March CPS questions, they are potentially more useful for

detecting trends because they remained constant. The SIPP survey instrument (and data set) contain information about a) whether the respondent was the primary policy holder of a policy, or was covered by a policy in someone else's name, b) whether the coverage was through a current employer or union, former employer, or other source (such as the military), c) whether the health plan was an individual or family policy, and d) whether the respondent was covered by government programs such as Medicaid or Medicare.

These questions on insurance coverage were linked to the work history topical module (asked in waves 1 or 2 during our sample period). This module allows us to construct measures of industry, occupation, job tenure, firm size (we use firm size at "all locations"), and union coverage. Tenure and firm size are measured inconsistently over time in the March CPS, and the CPS supplements do not ask about union coverage in a consistent way.

The second half of Table 2 shows population trends in health insurance coverage calculated using the SIPP. Compared to the March CPS, the SIPP shows an even more modest decline in rates of private health insurance coverage and employer provided health insurance coverage from 1989 to 1993. There is also no sign of the upswing in coverage after 1993 that was evident in the CPS numbers, lending support to the idea that this upswing is an artifact of the changes in the CPS questionnaire. The SIPP shows persistently higher rates of private health insurance coverage than the CPS, although the two series become closer after 1993. Thus, to the extent that the changes in the CPS are thought to have improved

accuracy, Table 2 suggests that the pre-1994 SIPP numbers are more accurate than the pre-1994 CPS numbers, although the discrepancies are generally small.

Since the focus of this paper is on "workers" we have also recalculated the figures shown in Table 2 for two groups: all adults age 25 to 64, and all adult workers aged 25 to 64. We restrict the sample to workers aged 25 to 64 in order to abstract from college students who may still be covered by their parent's health insurance. Given the periodicity of the data, workers are defined differently in the CPS and the SIPP. In the former, a worker is someone who has worked at least one week in the past year. In the latter, a worker is someone who has worked in the past month. The first part of Table 3 indicates that when we examine all adults, the rates of insurance coverage are quite similar in the CPS and the SIPP, especially in 1994 and 1995. However, rates of private health insurance coverage are consistently higher in the SIPP, while rates of Medicaid coverage are lower.

The second half of Table 3 shows that the definition of "worker" is also important. The CPS definition includes more people with weak labor force attachments, low probabilities of health insurance coverage, and high probabilities of being covered by Medicaid. Rates of private health insurance coverage are 4 to 5 percentage points higher in the SIPP and rates of Medicaid coverage are often 50% lower.

The main message of these tables however, is that one finds

much less evidence of a decline in private health insurance coverage in the SIPP than in the March CPS, and that there is little evidence of decline in either data set after 1993.

The CPS supplements offer a third source of information. The supplements ask about employer-provided health insurance in the survey week. They first ask whether the employer offered insurance to anyone in the firm, and then whether the employee is covered. If the employee is not covered, he or she is asked the reason. Employees are also asked about other benefits such as pensions. In fact, the questions about pension coverage are very similar to those about health insurance. These supplements include information about tenure on the job, but like the March CPS, they suffer from inconsistency in the firm size questions.

A comparison of the numbers in Table 1 with those in Table 3, suggests that estimates of the fraction of adult workers covered by their own employer's health insurance are quite similar in the SIPP and in the supplements, and that both of these sources yield higher estimates than the March CPS.

A potential drawback to the use of the benefits supplements is that the 1988 supplement differs slightly from the 1993 supplement, which in turn is quite different from the 1995 and 1997 supplements. In particular, the 1988 and 1993 supplements first ask whether a person's employer offered health insurance, then whether the person was covered (and if not, why not), and finally whether the person had health insurance from other sources. Beginning in 1995, the sequence of questions was changed so that

employees were first asked whether they had any health insurance, and then whether it was through their employer. If they did not have insurance through their employer, they were asked whether the employer offered insurance, whether they were eligible, and why they were not covered.[4] Question wording also varied from year to year. It is not clear what the net effect of these changes is likely to have been, but they suggest that one must be cautious about using these Supplements for trend analyses. The fact that the trends appear to similar to those in the SIPP offers some reassurance, however.

The first three panels of Table 4 use the CPS supplements to explore the reasons for lack of insurance coverage in more detail. People may be uncovered because they work for an employer who does not offer coverage to any employees; because they are not eligible for the coverage that their employer does offer; or because they do not purchase coverage that they are eligible for.

This discussion follows Farber and Levy (1998) in dividing

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[4] In 1988 and 1993 workers were asked: Does your employer offer a health insurance plan to any of its employees? Are you covered by this plan? Why are you not covered by this plan? In 1993, workers were offered more reasons for not being covered and were also asked: Why were you ineligible or denied coverage? Are you covered by any health insurance plan not provided by your employer? Beginning in 1995, workers were asked the following sequence of questions: Do you have health insurance from any source? Do you receive this health insurance through your employer? Does the employer pay for all, part, or none of the insurance premium? If they did not obtain insurance through their employer they were asked: How did you obtain your health insurance? Does your employer offer health insurance to any of its employees? Could you be in this plan if you wanted to? Why aren't you in this plan? The range of possible responses to the questions about the reasons for not being in the plan also varied from previous years.

workers by education level, but we extend their analysis by also examining men and women separately. Previous research (c.f. Currie and Chaykowski, 1995 and Currie, 1997) indicates that gender is an important determinant of benefits coverage. As Table 4 shows, there are large gender differences in benefit "offers" and even greater differences in propensities to take up benefits. Women also make up the bulk of the part-time workforce, suggesting that it is useful to distinguish between men and women when analyzing the effects of part-time status as we will do below.

Table 4 confirms that there have been modest declines in health insurance coverage among both men and women in the past decade, and that these declines are slightly larger among less skilled workers than among skilled workers.[5] The declines in coverage among less skilled workers appear to be due to changes in both "takeup" and eligibility, while among more skilled workers the changes primarily reflect reductions in takeup.

3. Bad Jobs Getting Worse

In this section, we consider the hypothesis that the declines in private health insurance coverage among less skilled workers reflect "Bad Jobs Getting Worse". The literature on wage inequality suggests one method of operationalizing the concept of

[5] Our figures for "All" do not match those in Table 1 largely because we use the 25 to 64 age range while Farber and Levy use all workers over 20. If we use the same age range as they do, we calculate that 68.6, 64.3, and 66.5 percent of workers had own-employer sponsored health insurance in 1988, 1993, and 1997 respectively.

a "bad job". This literature finds that among both men and women, wages for the least skilled workers have been falling in real terms, while those for the most skilled workers have been increasing (c.f. Juhn, Murphy, and Pierce, 1993; Bernstein and Mishel, 1997). Moreover, although wives earnings tend to reduce income inequality, family income inequality has also been increasing over time with increases in female headship and higher returns to college education playing key roles (Cancian and Reed, 1997; Bradbury, 1996). Thus, bad jobs have been getting worse in the sense that they now pay lower wages than they used to.

As discussed above, if health insurance is a normal good, people will demand less of it when they are poorer and more of it when they are richer. Therefore, trends in wages and income suggest that one might expect to see reductions in private health insurance coverage among less skilled workers as bad jobs become worse, but increases in health insurance coverage among more skilled workers as their good jobs become even better. Instead, the figures in Table 1 (which were computed by Farber and Levy using the CPS Supplements) showed that among workers, the decline in rates of own employer-provided health insurance coverage between 1988 and 1997 was almost as great among college graduates as among high school dropouts.

If changes in coverage were driven solely by income effects, then one might also expect to see similar patterns for other benefits that are purchased through employers. In Table 4, we compare trends in own-employer-sponsored health insurance coverage

to trends in pension coverage for workers with at least some college education and those without. We focus on this comparison for two reasons: First, along with health insurance, pension coverage is one of the costliest and most common components of benefits packages. Second, people obtain pension coverage through employers for some of the same reasons that they obtain health coverage that way--favorable tax treatment, and risk pooling.

In contrast to the trends in health insurance coverage, there have been increases in the fraction of workers in establishments that offer pension coverage (except among low-skilled men), and in the fraction of workers covered. These gains have been particularly pronounced among college-educated workers. These trends suggest that changes in health insurance coverage are not primarily driven by income effects (although changes in pension coverage may be).

Farber and Levy (1998) interpret "bad jobs" not as jobs held by less skilled workers but as either part-time or low-tenure jobs. They break down the overall decline in employer-sponsored health insurance coverage into 12 components: First they define four groups of workers: "old" full-time, "new" full-time, old part-time, and new part-time. Old workers are those who have been in their jobs for over a year, while full-time refers to those who usually work more than 35 hours per week. For each group of workers, they calculate the share of the decline associated with changes in the fraction of workers in establishments that offer insurance to some workers; changes in the fraction of workers in such establishments

who are eligible for coverage; and changes in the fraction of these workers who take up coverage. The employment-share weighted sum of these components over the groups is equal to the overall decline in insurance coverage.

Using this technique, and the fact that they find virtually no change in the fraction of workers who are low-tenure or part-time over the sample period, they calculate that half of the decline in own-employer-sponsored health insurance coverage is due to changes in takeup among old full-time workers. Most of the rest is due to changes in eligibility for insurance among part-time and new workers, although these reductions in eligibility appear to be partially offset by increases in the fraction of such workers in firms that offer insurance.

The decomposition suggested by Farber and Levy does not allow us to test the statistical significance of the hypothesized changes in the effects of worker characteristics on insurance coverage. Table 5 offers a different look at the effects of low tenure and full-time status. Part 1 of this table shows coefficient estimates from regressions of private health insurance variables on demographic characteristics, indicators for low tenure and fulltime status, and industry and occupation dummies.

Estimates are shown for each of the four gender/education groups. Data from the 1988 and 1997 supplements have been pooled, and interactions are included between the dependent variables and a dummy variable for 1997. This specification allows us to test for changes in the coefficients on full-time and low tenure over

time. Since "bad jobs" may also have been getting worse in terms of other benefits, we also include coefficients from regressions with pension coverage as the dependent variable.

Table 5 confirms that as Farber and Levy suggest, people who are working part-time and/or have tenure less than one year are much less likely to work in places that offer health insurance coverage. They are also less likely to be eligible for coverage if their employer has it and are ultimately less likely to have private health insurance coverage. It is worth noting that low tenure has almost as great a negative effect on probability of health insurance coverage as it has on pension coverage.

There is little evidence in Table 5 that the penalty associated with being a new worker has changed over time. None of the estimated coefficients on interactions with "low tenure" are statistically significant. There have been changes in the importance of full-time employment however.

Among less educated men, there is a significant positive interaction between full-time and the 1997 dummy for both health insurance coverage and pension coverage. Among less-educated women, the advantage of being full-time in terms of health insurance coverage has actually fallen over time. The relative improvement in the position of less-educated part-time women appears to be associated with an increased probability of working at a firm that offers health insurance coverage. Among more highly educated women, there have been increases in the probability of being eligible for health insurance coverage that are associated

with full-time status. But these changes in eligibility do not seem to have translated into any change in the probability of coverage among full-time relative to part-time college-educated women workers.

Because of our concerns about conducting trend analyses using the CPS supplements, we have extended this analysis using the SIPP. Part 5 of Table 5 shows estimates from linear probability models in which own-employer health insurance coverage is a function of the variables described above. In addition, we include indicators for firm size less than 100 workers and union coverage. Being in a large firm and having union coverage can be viewed as additional indicators of a "good job". These variables are interacted with a dummy variable equal to one if the year is 1993 or greater.

The main effects of low tenure and fulltime status are qualitatively similar to those reported above, although the effects of low tenure are much weaker. Being in a larger firm and having union coverage have large positive effects on the probability of health insurance coverage. However, very few of the interactions are statistically significant. The effect of low tenure decreases slightly over time for more educated men, while the positive effect of union coverage increases among less educated men and women.

In summary, we find that bad jobs are indeed less likely to have benefits coverage. However, we find little evidence that bad jobs are getting worse, at least in this respect. It is striking that private employer-sponsored health insurance coverage declined in the late 1980s and early 1990s while the fraction of workers in

establishments that offer health insurance coverage did not. The underlying message for policy makers may be that many poor people will not purchase health insurance coverage even at the subsidized rate that employers typically offer, and that the cost of health insurance (which is in turn driven by health care costs), rather than just whether it is offered or not, is an important factor determining insurance coverage.

Moreover, while it is often the focus of policy discussions, it is not clear how meaningful the distinction between offers and takeup of insurance is from an economic point of view. If the majority of an employer's workers decline offered coverage, then the employer may eventually cease to offer the coverage. On the other hand, if the majority of employees in a firm want health health insurance coverage *and are willing to pay at least the employer's cost of providing it in the form of reduced wages*, then employer's may begin to offer the benefit. The real question is not whether employees want health insurance coverage in the abstract, but whether, given their budget constraint, they demand health insurance at the price that the employer is willing to provide it.

4. Crowdout

Table 2 showed that much of the decline in private health insurance coverage was coming from declines in the number of people purchasing non-employment based health insurance and reductions in the coverage of spouses and dependents under employer-provided

policies. Table 4 suggested that fewer people were taking up offered coverage than in the late 1980s.

A possible reason for these trends is that public health insurance for women and children under the Medicaid program became much more generous over this period. As discussed above, people will be less likely to purchase health insurance through their employers when alternative sources of health insurance become more attractive. The period of greatest expansion of the Medicaid program corresponds with the period of most rapid decline of employer-based health insurance coverage (as shown in Table 1). Thus, it is natural to suspect that the two phenomena are linked, and that public insurance has crowded out private health insurance.

The Medicaid expansions have been discussed extensively elsewhere (c.f. Yelowitz, 1995; Currie and Gruber, 1996a; Currie and Gruber, 1996b; Cutler and Gruber, 1996). Briefly, a series of federal laws first gave states the option, and then required them to raise the income-eligibility thresholds for Medicaid coverage of pregnant women, and various age-groups of children. Because states started with very different levels of generosity to begin with and took up these federal options at different rates, there was a great deal of variation in income cutoffs both across states and within states over time which can be used to identify the effects of the expansions. By April 1990, states were required to cover children up to age six in families with incomes up to 133% of the federal poverty line. Moreover, effective July 1991, states were required to cover all children under age 19 (born after Sept. 30, 1983)

whose family incomes were less than 100% of poverty. By 1992, states were also required to cover all pregnant women (from the date of verification of pregnancy) with incomes less than 133% of poverty. Many states have also chosen to extend coverage of these groups further, using state-only funds.

As Tables 2 and 3 showed, Medicaid coverage has increased while the prevalence of employer-sponsored health insurance coverage has fallen. While these figures are suggestive, they do not prove that the relationship between increases in Medicaid coverage and decreases in private health insurance coverage was causal. We have already observed that the declining trend in private health insurance coverage predates the Medicaid expansions. Shore-Sheppard (1996) observes that there were increases in reported Medicaid coverage, and decreases in private health insurance coverage even among single, childless males, a group that one would not expect to have been greatly affected by the Medicaid expansions to pregnant women and children.

Nevertheless, most observers agree that crowdout exists, although the magnitude of the measured effect has been the subject of debate (c.f. Cutler and Gruber, 1996, 1997; Shore-Sheppard, 1996, 1997; Dubay and Kenney, 1997; Yazici and Kaestner, 1998). The measured effect of crowdout depends on several factors:

a) *How crowdout is defined.* Cutler and Gruber (1996) conclude that 3.5 million people gained public coverage and 1.7 million lost private health insurance coverage as a direct result of Medicaid

expansions that occurred between 1987 and 1992. Dubay and Kenney calculate that the reduction in private insurance coverage as a share of the total increase in Medicaid enrollments was 22%. This number is lower than Cutler and Gruber's estimate because much of the increase in Medicaid coverage over the period was among people who would have been eligible even in the absence of the Medicaid expansions. Shore-Sheppard (1996) asks what fraction of the total decline in private insurance coverage over the 1987 to 1992 period resulted from the Medicaid expansions? Since employer-sponsored insurance coverage was declining even among those who were ineligible for the expansions, this figure is only 15%. All of these studies were based on data from the March CPS.

b) *What period crowdout is measured over.* In a revision of her earlier work, Shore-Sheppard (1997) finds that adding the years 1994 to 1996 to her time period doubles her estimate of the extent of crowdout from 15 to 30%. One should expect estimates of crowdout to be sensitive to the sample period for several reasons. First, as the generosity of public insurance increases, the composition of newly eligible households changes. Covering the poorest households will not cause crowdout because most of these families do not have the option of purchasing private employer-sponsored health insurance to begin with. At the other end of the spectrum, relatively well-off families with insurance that is superior to Medicaid will be unlikely to make the switch.

A second related issue is that families who do not know that

they are eligible for Medicaid will not drop private health insurance coverage in order to take up public coverage. The evidence suggests that although in 1994 and 1995, 39% of births were paid for by Medicaid, many women did not take advantage of the free prenatal care provided by the program (NGA, 1997; Ellwood and Kenney, 1995). A possible reason is that they did not learn of their eligibility until they arrived at the hospital to deliver.

c) *The Data Source.* Most of the work on crowdout to date has been conducted using the March CPS. Given that both the levels and the trends in health insurance coverage are sensitive to the way these questions are asked, it is not surprising that the use of slightly different extracts from the CPS generate different answers.

Part 6 of Table 5 shows coefficients from models of the probability of Medicaid coverage estimated using SIPP data.[6] The models follow the same format as the others in Table 5. These estimates show that the probability of Medicaid coverage is higher for part-time, low tenure, non-union workers. Firm size has a significant effect for less-educated women. The interactions indicate that full-time status had a less negative effect on coverage among less educated male and female workers over time, while the effect of being a low tenure worker grew among less

[6] We did not conduct this analysis using the CPS supplements because we were unable to calculate reasonable looking trends in Medicaid coverage using these data (i.e. coverage fell between 1988 and 1993 instead of increasing).

educated workers and female workers with over 12 years of education.

These patterns suggest that among both men and women, more low tenure and full-time workers were becoming covered by Medicaid over time. The finding that men as well as women were gaining Medicaid coverage replicates Shore-Sheppard's results and suggests that the Medicaid expansions to women and children may have been accompanied by other (so far unremarked) measures that made Medicaid coverage more accessible to men.

We also use the regressions underlying Table 5 to test for whether the coefficients on marital status, the number of children, and the presence of children of different age groups in the household have changed over time in a manner consistent with the crowdout hypothesis. The coefficients from regressions with coverage as the dependent variable are shown in Table 6. As in Table 5, the first part of the table shows estimates from regressions based on the CPS supplements, while the second part shows estimates based on the SIPP.

The first part of the table contains one suggestive finding for less educated women: In 1988, these women were 14% more likely to have health insurance coverage through their employers if they had an infant in the household. By 1997, however, this effect had been entirely wiped out. This finding is echoed in the models estimated using SIPP data, although the size of the effects is much smaller. Given that infants whose deliveries are paid for by the Medicaid program are covered for one year after delivery, and that

40% of births are now paid for by Medicaid, we might expect the strongest crowding out among infants of less skilled workers.

In the CPS supplements, the negative effect of marital status on the probability of health insurance coverage became more negative over time for all four groups, but the coefficients are larger for the more educated than for the less educated. Hence, this finding is more suggestive of households economizing by eliminating duplicative coverage than of crowdout. In the SIPP, the effects of marriage are qualitatively similar, but the interaction terms are not statistically significant except for college-educated men.

These considerations suggest that while crowdout is important, it obviously cannot account for the entire downward trend in private employer-sponsored health insurance coverage over the past two decades.

5. Changes in the Price of Health Insurance

The simplest economic explanation for a decline in the number of people purchasing a product is that its price has gone up. Cutler and Sheiner (1997, page 1) note that "After decades of double-digit increases, health insurance cost growth has essentially ground to a halt". Data on costs of health insurance by region is available from private surveys produced by Foster Higgins and Co., Inc. and more recently by William M. Mercer, Inc.

(see the description in Meyer and Rosenbaum, 1998).[7]

These data indicate that employer contributions for health insurance doubled or tripled in all regions of the country over the 1984 to 1991 period. However, after 1991, these contributions leveled off and began to fall. The same pattern holds in terms of the premiums that employees actually paid. For example, in the Pacific states, premiums for family coverage rose from $1613 in 1984 to $4372 in 1991.[8] However, between 1992 and 1996 family premiums in the Western states fell from $4828 to $4749. As we have seen, the long decline in rates of private health insurance coverage also seems to have leveled off in the early 1990s, which suggests that this trend is related to the trend in costs.[9]

It is difficult to get the price data necessary to estimate the elasticity of demand for health insurance. Studies such as the

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[7] We thank Bruce Meyer for bringing these data to our attention. The data before 1993 is based on a convenience sample of Foster-Higgins clients, whereas the data after 1993 is based on a sample of large firms. Another difference between the 1991 and 1992 data is that before 1992 data is reported for 7 regions whereas after 1992, it is reported for only 4. Many assumptions are needed to derive a useable time-series from these surveys. These are discussed in an Appendix to Meyer and Rosenbaum (1998).

[8] O'Brien and Feder (1998) cite this run-up in costs as the reason for the decline in private health insurance coverage among low wage workers, but does not offer a direct test of this hypothesis.

[9] However, the decline in private health insurance coverage has been very gradual relative to the rapid run-up in health care costs. This may be due to the fact that health care costs increase both the costs of insurance, and the value of insurance. Moreover, the value of health insurance is likely to increase most rapidly for those who have assets to lose in the event of a health shock, suggesting that the poor may be most likely to respond to increases in health care costs by dropping health insurance coverage.

RAND Health Insurance experiment focus on the demand for health care where the treatment is the type of insurance policy. Moreover, the employee's choice of insurance is complicated by the fact that it is only one element of a bundle of goods that is chosen when he or she accepts employment at one firm rather than another. Hence, even if we knew what each employee actually paid for his or her health insurance, we would have to treat this as an endogenous variable. An additional problem is that there is good reason to believe that the quality of health insurance has been changing over time as traditional fee-for-service plans have been replaced with managed care, or altered to include larger co-payments. Thus, people buying health insurance are not purchasing the same good today as they were purchasing 10 years ago.

One option we explored was using state-level variation in the costs of health care and in the fraction of firms offering health insurance to try to identify the effects of health care costs. The National Center for Health Statistics (1997) reports that the fraction of firms offering health insurance varies widely from state to state. The rate approaches 55 to 60% in states such as Delaware and Pennsylvania, but is closer to 30% in states like Mississippi and Arkansas. State-level data about expenditures on medical care in 1985, 1990, and 1992 is available from Levit *et al.* (1997).

We examined the relationship between state-to-state variations in medical expenditures (measured using personal health care expenditures as a percent of gross state product) and in the

probability of private health insurance coverage, eligibility, and offers. The results indicated that there are negative correlations between state-level health care expenditures, eligibility and coverage. However, adding year dummies to the models reduced all of the correlations to statistical insignificance suggesting that it is the time trend in the expenditure data that is correlated with employer-provided health insurance, rather than the cross-state variation in these expenditures. A more satisfactory examination of the relationship between health care costs and private health insurance coverage awaits better data.

6. Health Insurance for Single Mothers

Single mothers are of particular concern to policy makers in this era of welfare reform. This section examines trends in employer and state-provided health insurance coverage for this group. These trends may shed additional light on the crowdout issue, since the health insurance options facing single mothers have been significantly affected by the Medicaid expansions.

Trends in health insurance coverage by education and employment status are shown in Table 7 for both the SIPP and the March CPS data. There are some important discrepancies between the two data sets. For example, if we focus on all less-educated mothers, the CPS data suggest that there was a modest increase in Medicaid coverage between 1989 and 1993 which was almost entirely offset by a decrease in private health insurance coverage. However, the decline in private coverage came not from employer-

provided coverage but from other types of private policies. In contrast, the SIPP shows a much larger increase in Medicaid coverage, which was only partially offset by declining private coverage.

The CPS also suggests that there was an 8 percentage point increase in Medicaid coverage among college-educated mothers and an offsetting decrease in private health insurance coverage. The SIPP shows little trend in either of these series. These results suggest that estimates of the extent of crowdout may be sensitive to the data that are used to calculate them.

Turning to single mothers who were employed at some point in the past year (CPS) or month (SIPP), we found that their rates of private insurance coverage are very similar to those of all employed women, conditional on educational attainment (though this comparison is not shown). Thus, the lower rates of private insurance coverage among single mothers as a whole reflect lower probabilities of employment rather than inferior benefits for those who are employed.

Regardless of the data set used, Table 7 indicates that Medicaid is a very important source of health insurance coverage for single mothers, and that it has increased in importance in recent years. Given that many single mothers first gain access to Medicaid through welfare, it is interesting to ask what happens to this coverage when women leave the welfare rolls.

Several state-specific studies of this issue are cited in Moffitt and Slade (1997). These studies estimate that between 25%

and 50% of women who leave welfare have no health insurance two or three years later. Moffitt and Slade use a nationally representative sample of young mothers from the National Longitudinal Survey of Youth to look at the health insurance coverage of women and children, one, two, and three years after they left welfare.

They find that the fraction covered by employer-provided plans rose from 23% of mothers and 21% of children in the first year to 38% of mothers and 47% of children in the third year. By the third year, 69% of the mothers were working but about one-half of those who were covered by employer-provided insurance were covered by a spouse's plan. About half of the women and children are covered by Medicaid in the first year, but this fraction declines to 16% of women and 33% of children after three years. At this point, over 40% of the mothers are uninsured as well as 12% of the children.

We have conducted a similar analysis using the SIPP. An advantage of the SIPP is that is possible to determine precisely when people exited AFDC, and what their insurance status is a specific number of months later. A disadvantage is that the SIPP panels are short, so it is difficult to follow women exiting welfare for a long period of time. We therefore look at insurance status 6 months and 12 months after exiting welfare. We use all available observations at each point in time. Restricting the sample to those who were still in the panel after 12 months (many women exit the survey between 6 months and 12 months after leaving welfare) did not materially affect our estimates.

The results are shown in Table 8. In the year following welfare exit, the fraction covered by private health insurance rises, while the fraction with Medicaid coverage falls. Compared to Moffitt and Slade, we find a much higher fraction of women and children with private health insurance coverage after one year, and a lower fraction reporting Medicaid coverage. The net effect is a slightly larger number of uninsured. If we break women into those who remain single and those who marry (since many women leave AFDC through marriage), we see that the fraction with private coverage is higher among those who are married, while the fraction with Medicaid coverage is lower. The fraction with any coverage is almost the same in the two groups, however.

Turning to the children, Table 8 shows that the fraction with private coverage is relatively invariant to age, while the fraction with Medicaid coverage falls with age. This pattern is what one would expect given the more generous rules governing the Medicaid eligibility of young children. We also looked for trends over time in the fraction of women and children gaining private insurance and/or retaining Medicaid after one year, but were unable to identify any definite pattern.

Together these numbers suggest that for a significant fraction of women on welfare, loss of cash benefits is likely to be followed by loss of health insurance for both themselves and their children. Data that will enable us to make definitive statements about the effects of time-limited welfare benefits on health insurance coverage are not yet available. However, in Wisconsin and two

other states with aggressive programs to get people off welfare, Medicaid enrollments have dropped by 40 to 50% among those who have been forced off the roles. This is despite the fact that under the new Medicaid rules, most of the children remain eligible. The problem seems to be that neither welfare recipients nor their case workers know about the Medicaid expansions (Rubin, 1997). Greenberg (1998) offers a summary of several state "exit" studies and concludes that one-third or more of the children and most of the adults in families who exit from the new Temporary Assistance for Needy Families program are without health insurance "some months" after leaving. Knowledge about increases in eligibility is likely to increase over time with consequent increases in both the fraction of former welfare recipients who retain Medicaid benefits, and in possibilities for crowdout.

7. Discussion and Conclusion

We began this research with the belief that the decline in private-employer sponsored health insurance was a continuing problem, especially among less skilled workers. But, our analysis paints a more complex picture. Rates of employer-sponsored health insurance coverage are sensitive to the way that insurance questions are posed, to the way that "workers" are defined, and to the age range of workers examined. Regardless of these data problems, however, we find that in recent years the decline in private employer-sponsored health insurance coverage has slowed, and may even have reversed.

Neither crowdout, nor a deterioration in the quality of jobs available to the less skilled seems likely to fully explain recent time-series trends in health insurance coverage. A simple explanation that has been overlooked is that rising health care costs have driven much of the reduction in private health insurance coverage, but it is difficult to test this hypothesis given the available data.

Three factors suggest that employer-sponsored health insurance coverage could begin to decline again in future. First, the increase in wage inequality that began in the 1970s is continuing into the 1990s with the result that there are more relatively low wage workers than ever. Although past patterns in benefits coverage do not appear to have been driven primarily by income effects, the "bad jobs getting worse" phenomena could become more important in future.

Moreover, if time limits on welfare are effective, they will push many less skilled women into the work force, again increasing the number of less skilled workers (see Moffitt's discussion in this volume). If past experience is any guide, many of these women and children are likely to lose health insurance within a few years of losing their welfare benefits.

Second, crowdout is likely to become more important over time, as more people become aware of the public insurance option. In addition to outreach campaigns, administrative changes designed to make Medicaid more accessible have also been undertaken recently in many states. However, little is known about their effects.

Growing knowledge about the Medicaid alternative may interact with rising health care costs and the falling relative wages of less-skilled workers to increase crowdout.

In view of the attention that has been paid to the Medicaid expansions to pregnant women and children, the fact that Medicaid enrollments have been rising for men as well as women is surprising. A possible explanation is that states have made less heralded changes to their programs that have made it easier for men as well as women and children to receive benefits. This issue deserves further investigation.

Third, although health care costs stopped rising in the early 1990s, this may prove to be a mere hiatus. Cutler and Sheiner (1997) point out that much of the cost-savings arising from the introduction of managed care and hospital reorganization have already been realized, and that technological change is the underlying force driving health care costs. In fact, there are suggestions that health care costs have already begun to rise again. A recent survey of 213 firms found that health care costs were expected to rise 7% in 1999, the first major rise in the 1990s (Armour, 1999). Moreover, if consumers perceive that managed care plans are of lower quality than fee-for-service plans, then quality-adjusted costs of care may be rising at an even greater rate.

Although the value of health insurance increases with health care costs, a future run-up in costs could drive many families to the point where the cost of insurance becomes prohibitive. Further

research on the link between health insurance costs and coverage is certainly warranted.

References

Armour, Stephanie. "Health-Plan Costs to Soar This Year," USA Today, January 6, 1999, 1.

Bernstein, Jared and Lawrence Mishel. "Has Wage Inequality Stopped Growing?," Monthly Labor Review, 120 #12 (Dec., 1997) 3-16.

Blank, Rebecca and Patricia Ruggles. "When do Women Use Aid to Families with Dependent Children and Food Stamps? The Dynamics of Eligibility Versus Participation," Journal of Human Resources, 31 #1 (Winter, 1996) 57-89.

Bradbury, Katherine. "The Growing Inequality of Family Income: Changing Families and Changing Wages," New England Economic Review, (July/Aug. 1996) 55-82.

Cancian, Maria and Deborah Reed. "Assessing the Effects of Wives Earnings on Family Income Inequality," Review of Economics and Statistics, 79 #4 (Nov. 97) 665-669.

Congressional Research Service. Costs and Effects of Extending Health Insurance Coverage, (Washington D.C.: Government Printing Office, 1988).

Currie, Janet. "Gender Gaps in Benefits Coverage," in The Handbook of Human Resource Management, Daniel Mitchell and Mahmood Zaidi (eds.) (Greenwich CT: JAI Press, 1997).

Currie, Janet and Richard Chaykowski. "Male Jobs, Female Jobs, and Gender Gaps in Benefits Coverage in Canada," Research in Labor Economics, 14 (1995) 171-210.

Currie, Janet and Jonathan Gruber. "Health Insurance Eligibility, Utilization of Medical Care, and Child Health," The Quarterly Journal of Economics, 111 #2 (May 1996a) 431-466.

Currie, Janet and Jonathan Gruber. "Saving Babies: The Efficacy and Cost of Recent Changes in the Medicaid Eligibility of Pregnant Women," Journal of Political Economy, 104 #6 (December, 1996) 1263-1246.

Currie, Janet and Brigitte Madrian. "Health, Health Insurance, and the Labor Market," in Handbook of Labor Economics, Orley Ashenfelter and David Card (eds.) (New York: North Holland, 1998).

Cutler, David and Jonathan Gruber. "Does Public Insurance Crowd Out Public Insurance?," The Quarterly Journal of Economics, 111 #2 (May 1996) 391-430.

Cutler, David and Jonathan Gruber. "Medicaid and Private Insurance:

Evidence and Implications," Health Affairs, 16 #1 (Jan/Feb. 1997) 194-200.

Cutler, David and Louise Sheiner. "Managed Care and the Growth of Medical Expenditures," NBER Working Paper #6140, Cambridge MA (August 1997).

Dubay, Lisa and Genevieve Kenney. "Did Medicaid Expansions for Pregnant Women Crowd out Private Coverage?," Health Affairs, 16 #1 (Jan/Feb. 1997) 185-193.

Ellwood, Marilyn R. and Genevieve Kenney. "Medicaid and Pregnant Women: Who is Being Enrolled and When?" Health Care Financing Review, 17 #2 (Winter, 1995) 7-28.

Farber, Henry and Helen Levy. "Recent Trends in Employer-Sponsored Health Insurance Coverage: Are Bad Jobs Getting Worse?," Working Paper #6709, National Bureau of Economic Research (August, 1998).

Greenberg, Mark. "Participation in Welfare and Medicaid Enrollment", Washington D.C.: The Kaiser Family Foundation, September 1998.

Gruber, Jonathan and James Poterba. "Tax Subsidies to Employer-Provided Health Insurance," in Martin Feldstein and James Poterba (eds.) Empirical Foundations of Household Taxation, (Chicago: University of Chicago Press, 1996) 135-164.

Juhn, Chin-hui, Kevin Murphy, and Brooks Pierce. "Wage Inequality and the Rise in Return to Skill," Journal of Political Economy, 101 #3 (June 1993) 410-442.

Levit, Katharine R., Helen C. Lazenby, Cathy A. Cowan, Darleen K. Won *et al*. "State Health Expenditure Accounts: Building Blocks for State Health Spending Analysis," Health Care Financing Review, 17 #1 (Fall, 1995) 201-254.

Meyer, Bruce and Dan Rosenbaum. "Welfare, the Earned Income Tax Credit, and the Employment of Single Mothers," xerox, Northwestern University Dept. of Economics, Dec. 29, 1998.

Moffitt, Robert and Eric Slade. "Health Care Coverage for Children Who Are On and Off Welfare," The Future of Children, 7 #1 (Spring 1997) 87-98.

National Center for Health Statistics. Employer-Sponsored Health Insurance, State and National Estimates, (Hyattsville MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1997).

O'Brien, Ellen and Judith Feder. "How Well Does the Employment-

Based Health Insurance System Work for Low-Income Families?", Washington D.C.: The Kaiser Family Foundation, September 1998.

Rubin, Alissa. "Poor Children Falling Out of Medicaid's Safety Net," Los Angeles Times, (November 18, 1997) A1.

Shore-Sheppard, Lara. "Stemming the Tide? The Effect of Expanding Medicaid Eligibility on Health Insurance Coverage," Working paper #361, Princeton University Industrial Relations Section (April 1996).

Shore-Sheppard, Lara. "Stemming the Tide? The Effect of Expanding Medicaid Eligibility on Health Insurance Coverage," Dept. of Economics, University of Pittsburgh xerox, November 1997.

Swartz, Katherine. "Changes in the 1995 Current Population Survey and Estimates of Health Insurance Coverage," Inquiry, 34 (Spring, 1997) 70-79.

U.S. General Accounting Office, Private Health Insurance: Millions Relying on Individual Market Face Cost and Coverage Tradeoffs (Washington D.C.: Government Printing Office, Nov. 26, 1996) GAO/HEHS-97-8.

Yazici, Esel and Robert Kaestner, "Medicaid Expansions and The Crowding Out of Private Health Insurance," Working Paper #6527, National Bureau of Economic Research (April, 1998).

Yelowitz, Aaron. "The Medicaid Notch, Labor Supply, and Welfare Participation: Evidence from Eligibility Expansions," The Quarterly Journal of Economics, CX #4 (November, 1995) 909-940.

Table 1: Percent Private Sector Workers Covered by Own Employer's Insurance
Source: Farber and Levy, 1998

		All	College Graduates	Some College	High School	< High School
May	1979	71.9	80.6	71.3	71.4	67.3
May	1988	69.1	81.9	68.0	67.2	57.8
April	1993	64.7	77.4	63.8	62.7	47.1
Feb.	1997	64.5	76.0	63.2	61.6	50.2

Note: These numbers were calculated using the CPS Supplements.

Table 2: Trends in Health Insurance Coverage in the March CPS and in the SIPP

Source: March CPS

Type Coverage:	Any	Private	Employer Provided	Own Employer	Spouse Employer	Medicaid
1987	87.1	75.5	62.2	31.6	11.4	7.9
1988	86.6	74.7	62.0	31.8	11.3	8.0
1989	86.4	74.6	61.8	31.8	11.1	8.0
1990	86.1	73.2	60.6	31.3	11.0	9.0
1991	85.9	72.1	59.8	30.9	11.0	9.7
1992	85.0	71.1	58.5	30.0	10.8	10.0
1993	84.7	70.2	57.1	30.7	9.4	11.0
1994	84.8	70.3	60.5	32.0	10.0	12.1
1995	84.6	70.3	60.6	32.1	10.0	12.1
1996	84.4	70.2	60.7	32.1	10.1	11.8

Source: SIPP

Type Coverage:	Any	Private	Employer Provided	Own Employer	Spouse Employer	Medicaid
1989	86.5	76.1	65.2	32.0	12.2	6.7
1990	87.0	75.7	64.8	32.3	11.9	7.8
1991	87.0	74.4	64.0	31.9	11.8	8.8
1992	86.4	73.3	63.0	30.9	11.7	9.5
1993	85.8	71.9	62.0	30.4	11.5	10.5
1994	86.0	71.7	62.1	30.6	11.5	11.0
1995	86.5	72.0	62.7	31.1	11.6	11.4

Notes: In contrast to Table 1 which is based on only private sector workers, the sample for this table includes the entire population. The dotted lines indicate the date of the change in the March CPS questionnaires. The 1995 changes would have been expected to affect the rates for 1994.

Table 3: Trends in Health Insurance Coverage Among Adults and Workers

Source: March CPS, All Adults 25-64

Type Coverage:	Private	Employer Provided	Own Employer	Spouse Employer	Medicaid
1987	79.4	70.6	51.2	19.3	5.0
1988	78.5	70.3	51.3	19.0	5.0
1989	78.4	69.8	51.1	18.7	5.1
1990	77.2	68.6	50.2	18.4	5.7
1991	76.3	68.2	49.8	18.4	6.1
1992	74.9	66.5	48.5	18.1	6.4
1993	74.3	65.4	49.8	15.6	7.0
1994	74.9	68.6	51.3	17.0	7.0
1995	74.7	68.8	51.4	17.2	7.0
1996	74.9	69.0	51.6	17.1	7.1

Source: SIPP, All Adults 25-64

Type Coverage:	Private	Employer Provided	Own Employer	Spouse Employer	Medicaid
1989	79.2	71.6	50.9	19.2	4.3
1990	79.1	71.5	51.2	18.9	4.7
1991	78.1	70.8	50.9	18.5	5.2
1992	77.0	70.0	50.0	18.6	5.6
1993	76.0	69.3	49.4	18.5	6.1
1994	75.9	69.6	49.7	18.4	6.6
1995	76.6	70.6	50.6	18.6	6.7

Source: March CPS, Workers 25-64

Type Coverage:	Private	Employer Provided	Own Employer	Spouse Employer	Medicaid
1987	84.0	78.0	67.8	14.6	.8
1988	82.8	77.3	63.3	14.0	2.2
1989	83.0	77.4	63.0	14.4	2.4
1990	81.6	76.1	62.0	14.1	2.8
1991	80.9	75.6	61.2	14.4	2.9
1992	79.6	74.0	59.6	14.3	3.1
1993	79.3	73.0	60.8	12.2	3.5
1994	79.6	75.6	61.4	14.0	3.7
1995	79.9	76.1	61.8	14.0	3.6
1996	80.0	76.4	62.3	13.9	3.8

Source: SIPP, Workers 25-64

Type Coverage:	Private	Employer Provided	Own Employer	Spouse Employer	Medicaid
1989	87.6	83.6	67.8	14.6	.8
1990	86.8	83.1	67.8	14.1	1.2
1991	86.4	83.0	68.1	13.9	1.5
1992	85.6	82.3	66.8	14.4	1.6
1993	84.9	81.7	66.0	14.5	1.8
1994	84.6	81.5	65.7	14.7	2.1
1995	85.3	82.4	66.5	14.9	2.1

Notes: See Table 2.

Table 4: Own-Employer Benefits Among Private Sector Workers, 25-64

	All	<= 12 Years Ed.		At Least Some College	
		Men	Women	Men	Women
Health Offered					
1988	.83	.83	.76	.90	.85
1993	.82	.78	.75	.90	.84
1997	.84	.81	.76	.91	.86
Eligible for HI					
1988	.80	.81	.69	.88	.80
1993	.78	.75	.69	.88	.78
1997	.79	.77	.68	.88	.79
Health Coverage					
1988	.71	.75	.57	.83	.66
1993	.67	.68	.54	.80	.63
1997	.69	.72	.55	.81	.65
Pension Offered					
1988	.64	.63	.56	.72	.66
1993	.65	.58	.56	.75	.70
1997	.67	.61	.56	.76	.72
Pension Coverage					
1988	.51	.54	.41	.60	.46
1993	.52	.49	.41	.62	.51
1997	.55	.51	.42	.66	.55

Notes: Source is the CPS Supplements. Means from 1995 are not shown as they are generally very similar to 1997. Means of eligibility and coverage are not conditional on being offered the benefit. The sample excludes non-workers and those in the military and public sectors. All means are weighted using the supplement weights.

Table 5
Coefficients on "Full-time" and "Low Tenure" from Regressions of Own-Employer Health Insurance Offers, Eligibility, and Coverage

A: Source=CPS Supplements

	<= 12 Years Ed.		At Least Some College	
	Women	**Men**	**Women**	**Men**
1. Dependent Variable=Health Offered				
Full-time	.216	.192	.144	.175
	(.015)	(.025)	(.054)	(.021)
Full-time x 1997	-.044	.007	.009	-.027
	(.020)	(.032)	(.018)	(.025)
Low Tenure	-.099	-.134	-.095	-.059
	(.018)	(.016)	(.017)	(.014)
Low Tenure x 1997	-.012	.003	-.001	-.025
	(.022)	(.021)	(.019)	(.016)
R-squared	.166	.145	.130	.098
# Obs.	9,124	9,935	9,639	10,783
2. Dependent Variable=Eligible for Health Insurance				
Full-time	.316	.265	.248	.299
	(.016)	(.021)	(.017)	(.024)
Full-time x 1997	.009	.052	.094	.000
	(.021)	(.033)	(.020)	(.029)
Low Tenure	-.216	-.221	-.173	-.153
	(.018)	(.017)	(.019)	(.015)
Low Tenure x 1997	-.023	-.032	-.018	-.004
	(.023)	(.022)	(.022)	(.018)
R-squared	.253	.201	.241	.167
# Obs.	9,068	9,897	9,591	10,748
3. Dependent Variable=Covered by Employer's Health Insurance				
Full-time	.355	.278	.342	.355
	(.017)	(.028)	(.020)	(.029)
Full-time x 1997	-.047	.083	.023	-.032
	(.022)	(.036)	(.024)	(.034)
Low Tenure	-.236	-.260	-.212	-.178
	(.020)	(.019)	(.022)	(.019)
Low Tenure x 1997	-.010	-.036	.000	-.024
	(.026)	(.025)	(.025)	(.022)
R-squared	.261	.212	.272	.155
# Obs.	8,818	9,623	9,439	10,596
4. Dependent Variable=Pension Coverage				
Full-time	.227	.094	.227	.169
	(.018)	(.033)	(.022)	(.037)
Full-time x 1997	-.024	.137	.017	.062
	(.023)	(.042)	(.026)	(.043)
Low Tenure	-.295	-.325	-.334	-.338
	(.021)	(.022)	(.024)	(.024)
Low Tenure x 1997	-.019	-.009	-.038	-.003
	(.027)	(.028)	(.028)	(.028)
R-squared	.226	.214	.218	.179
# Obs.	8,739	9,552	9,315	10,426

Table 5, continued

B: Source=SIPP

5. Dependent Variable=Covered by Employer's Health Insurance				
Full-time	.274	.243	.343	.296
	(.007)	(.010)	(.009)	(.012)
Full-time x 1993+	.011	.022	-.003	-.006
	(.009)	(.013)	(.011)	(.016)
Low Tenure	-.097	-.120	-.081	-.097
	(.007)	(.008)	(.008)	(.008)
Low Tenure x 1993+	.013	-.003	-.002	-.034
	(.011)	(.014)	(.014)	(.016)
Firmsize < 100	-.171	-.131	-.161	-.117
	(.008)	(.007)	(.008)	(.007)
Firmsize < 100	.001	-.000	-.008	-.010
x 1993+	(.010)	(.009)	(.011)	(.010)
Union	.201	.211	.158	.148
	(.009)	(.005)	(.011)	(.007)
Union x 1993+	.023	.025	.018	.014
	(.012)	(.007)	(.015)	(.008)
R-squared	.306	.250	.297	.174
#Obs	146,218	160,552	124,671	147,309
6. Dependent Variable=Medicaid				
Full-time	-.032	-.032	-.011	-.011
	(.003)	(.005)	(.002)	(.003)
Full-time x 1993+	-.008	-.022	-.003	-.003
	(.004)	(.007)	(.003)	(.004)
Low Tenure	.032	.010	.014	.004
	(.004)	(.002)	(.002)	(.001)
Low Tenure x 1993+	.027	.017	.022	.007
	(.007)	(.006)	(.006)	(.004)
Firmsize < 100	.007	.001	.002	.000
	(.003)	(.002)	(.002)	(.001)
Firmsize < 100	-.004	.002	.005	.001
x 1993+	(.004)	(.002)	(.002)	(.001)
Union	-.011	-.006	-.006	-.002
	(.003)	(.001)	(.003)	(.001)
Union x 1993+	-.002	-.003	-.002	.001
	(.005)	(.002)	(.003)	(.002)
R-squared	.088	.034	.055	.011
#Obs	146,218	160,552	124,671	147,309

Notes: Source is the CPS Supplements for May 1988 and Feb. 1997, and the SIPP (all years). Models were estimated separately for each group indicated in the column headings. Models also included demographic variables, industry, and occupation as described in the text. The sample consists of workers aged 25-64 and excludes those in the military, those in the public sector, and those with missing data. Standard errors in parentheses.

Table 6
Coefficients on Family Structure Variables from Regressions of Employer-Provided Health Coverage

A: Source=CPS Supplements

	<= 12 Years Ed.		At Least Some College	
	Women	**Men**	**Women**	**Men**
Married	-.104	.039	-.133	-.017
	(.017)	(.017)	(.018)	(.018)
Married x 1997	-.043	-.045	-.063	-.062
	(.021)	(.022)	(.022)	(.020)
# Children	-.028	-.010	-.021	.012
	(.017)	(.014)	(.019)	(.013)
# Children x 1997	.019	.015	-.021	.009
	(.022)	(.018)	(.022)	(.016)
Any child <1	.138	.035	-.024	.020
	(.054)	(.035)	(.047)	(.030)
Any child <1 x 97	-.141	-.042	.081	-.025
	(.071)	(.045)	(.055)	(.037)
Any child 1-4	.036	.012	-.024	-.011
	(.031)	(.025)	(.033)	(.023)
Any child 1-4 x 97	-.037	-.062	.053	.005
	(.040)	(.032)	(.038)	(.028)
Any child 5-10	.014	.028	-.016	-.008
	(.028)	(.024)	(.032)	(.024)
Any child 5-10 x 97	-.021	-.033	.052	-.017
	(.037)	(.031)	(.037)	(.029)
Any child 11+	.008	.014	-.042	-.009
	(.029)	(.024)	(.033)	(.024)
Any child 11+ x 97	-.045	-.030	.033	-.007
	(.037)	(.031)	(.039)	(.029)
R-squared	.261	.212	.272	.155
# Obs.	8818	9623	9439	10596
B: Source=SIPP				
Married	-.158	.025	-.193	-.013
	(.007)	(.007)	(.007)	(.007)
Married x 1993+	.009	-.012	.005	-.027
	(.009)	(.009)	(.010)	(.009)
# Children	-.030	-.019	-.033	-.014
	(.012)	(.011)	(.014)	(.011)
# Children x 1993+	.013	-.003	-.009	.003
	(.017)	(.015)	(.019)	(.015)
Any child <1	.025	-.017	.022	.007
	(.013)	(.035)	(.014)	(.010)
Any child <1 x 93+	-.031	.002	.016	-.019
	(.018)	(.015)	(.020)	(.014)
Any child 1-4	-.011	.012	-.006	.002
	(.010)	(.025)	(.012)	(.009)
Any child 1-4 x 93+	-.001	-.027	.008	.017
	(.013)	(.009)	(.016)	(.013)

Table 6, continued

Any child 5-10	-.024	.001	-.023	.006
	(.009)	(.008)	(.010)	(.008)
Any child 5-10 x 93+	.008	-.011	.001	.009
	(.012)	(.011)	(.014)	(.011)
Any child 11+	-.038	-.004	-.028	-.002
	(.010)	(.009)	(.012)	(.010)
Any child 11+ x 93+	-.011	.013	-.010	-.001
	(.014)	(.013)	(.016)	(.013)
R-squared	.306	.250	.297	.174
# Obs.	146,218	160,552	124,671	147,309

Notes: See Table 5.

Table 7: Trends in Health Insurance Coverage Among Single Mothers

	Less than 12 Years Ed.			At Least Some College		
Type Coverage:	Private	Employer Provided	Medicaid	Private	Employer Provided	Medicaid
Source: March CPS, All 25-64						
1987	40.8	32.5	39.7	73.1	62.3	15.1
1988	42.2	34.6	38.8	72.4	61.0	15.6
1989	43.7	36.9	35.3	72.0	59.9	15.0
1990	38.6	33.0	40.4	71.2	59.4	16.9
1991	37.1	31.6	43.1	67.2	57.9	19.5
1992	35.8	31.2	42.7	64.4	53.7	21.1
1993	36.3	31.5	43.4	65.8	55.7	23.2
1994	37.2	32.9	39.3	63.7	56.4	22.4
1995	36.1	31.8	40.0	64.0	54.6	21.2
1996	37.2	32.9	39.3	66.4	57.9	19.3
Source: March CPS, Workers only, 25-64						
1987	68.9	58.8	8.7	86.5	77.0	2.0
1988	67.2	59.0	9.0	83.2	72.4	2.6
1989	66.8	58.8	9.1	82.6	73.9	3.6
1990	63.3	56.1	10.9	82.3	73.7	3.5
1991	62.7	55.9	11.5	82.0	72.9	4.4
1992	60.9	54.4	11.3	82.0	72.2	5.3
1993	60.7	52.6	13.0	81.2	72.6	4.7
1994	60.3	54.5	12.5	76.1	69.9	6.1
1995	60.0	54.2	12.4	77.5	70.9	5.8
1996	59.0	52.8	14.5	79.4	72.4	6.0
Source: SIPP, All 25-64						
1989	47.3	42.4	28.1	68.6	60.4	15.4
1990	47.6	42.0	31.1	73.0	67.0	11.5
1991	46.3	40.8	33.5	72.2	66.7	12.6
1992	44.8	39.9	34.8	70.6	64.4	13.1
1993	42.7	38.3	37.5	67.2	61.3	15.7
1994	43.1	39.5	38.3	68.1	61.9	16.6
1995	41.2	37.8	40.0	69.9	64.3	16.8
Source: SIPP, Workers Only, 25-64						
1989	67.4	63.3	3.5	84.5	76.6	2.8
1990	69.2	64.0	8.8	82.7	79.2	2.9
1991	69.1	64.6	10.0	81.3	77.1	4.5
1992	67.1	63.5	11.4	81.1	76.7	4.3
1993	65.9	62.3	12.2	78.3	74.2	5.9
1994	66.0	63.0	13.1	78.9	74.6	7.7
1995	64.3	62.4	12.5	78.1	74.1	8.9

Notes: The dotted lines indicate the date of the change in the March CPS questionnaires. The 1995 changes would have been expected to affect the rates for 1994.

Table 8
Health Insurance Coverage for Women and Children Leaving Welfare

	After 6 Months		After 1 Year		# Obs.	
	Private	Medicaid	Private	Medicaid	6 months	1 year
Mothers						
All	33.4	42.2	40.4	32.3	1283	762
Single	29.0	46.3	36.7	37.5	834	477
Married	41.6	34.5	46.7	24.6	449	285
Children						
All	31.0	52.7	39.0	45.9	2679	1510
< 6	33.4	61.2	39.6	55.4	872	455
>=6	30.0	48.5	38.8	41.8	1807	1055