Family Health Benefits and Worker Turnover

Dan A. Black
Syracuse University

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One of the major differences between the labor markets in the United States and Canada lies in the treatment of health benefits. While Canada relies on government provision of health care, employers in the United States provide health insurance to most of the employed. The U.S. government's role is primarily to provide health insurance to those over 64 years of age through the Medicare system and to the poor through the Medicaid system. Despite the recent calls for health care reform in the United States, the reliance on employer-provided benefits appears to be a feature of the U.S. system for some time to come. The Clinton health care proposal of 1994 and the numerous Congressional alternatives rely on employer-provided health benefits.

In this chapter, I examine the impact of employer-provided health benefits on job turnover. I focus on a peculiar aspect of employer-provided health benefits: because many employer-provided plans extend coverage to a worker's entire family, the value of an employer's employment offer to a worker depends on whether the worker's spouse provides the family with health benefits. If a worker's spouse has employer-provided health insurance for his family, the worker will value employment offers with and without health insurance benefits differently than a worker whose spouse does not have employer-provided health benefits. Importantly, this distortion arises from the reliance on employer-provided benefits and is independent of any preexisting conditions clauses or issues concerning the portability of health plans. As I show in a later section (p. 273), this is potentially a large distortion. According to the April 1993 Supplement of the Current Population Survey (CPS), among full-time workers, at least 23
percent of the women and 12 percent of the men have coverage from their spouses.

REVIEW OF THE LITERATURE

There is no obvious reason why employers should provide health benefits. While health insurance is less expensive in groups, there is no particular reason the groups should be based on place of employment. Indeed, the initial growth in employer-provided health was the result of firms offering health insurance to their workers during World War II to avoid wage controls. As Long and Scott (1982) and Woodbury (1983) emphasized, the U.S. tax codes provide the major impetus for the employer provision of health and other benefits. The magnitudes of the tax savings are surprising. Consider a university in the Commonwealth of Kentucky that offers an insurance policy whose market value is $131 a month to a college professor who has a 28 percent marginal tax rate for the federal income tax (family income between $36,900 and $89,150 for married couples filing jointly). How much would it cost to increase the professor's after-tax income by $131 per month in 1993? Assuming the professor's wages are not over the social security cap of $57,600 and taking into account Kentucky's 6 percent state income tax and the deductibility of state income taxes from the federal tax bill, the university would have to pay more than $250 a month.

As a result of the substantial tax savings associated with the exemption of health benefits from federal and state taxation, employers have become the major providers of health benefits in the United States. The tax expenditures for the tax deductibility of employer health care premiums now exceed tax expenditures on the home mortgage deduction.1

Economists have long recognized that the association of fringe benefits and employment may affect the employment relationship. Lazear (1979, 1981) argued that firms use defined-benefit pensions to defer compensation in jobs with agency problems or in jobs with large investments in specific human capital. In jobs with agency problems, the deferred compensation deters the worker from shirking; while, in jobs with specific human capital, the deferred compensation reduces
job turnover. Thus, employers in the United States may use their pension plans to improve the efficiency of labor contracts, an option that many Canadian employers do not have. Lazear and the literature that his papers generate (e.g., Ippolito 1985; Hutchens 1987; Dorsey 1987) recognized that deferred compensation is not without its costs and may have to be implemented with other policies such as restrictions on hours and mandatory retirement to mitigate those costs.

Firms are not, however, perfectly able to tailor the parameters of their pension plans to meet contracting needs of individual employees. As Scott, Berger, and Black (1989) and Scott, Berger, and Garen (1995) emphasized, the U.S. Internal Revenue Service (IRS) requires firms to offer fringe benefits in a manner that does not discriminate against the firm's low-wage employees. If the firm wishes to offer an executive a defined-benefit pension plan that defers compensation, the firm must offer her secretary a similar plan. Thus, firms are not able to structure fringe benefit packages to match perfectly the optimal contract for each employee.

The requirement that fringe benefits be offered in a nondiscriminatory manner has a special bite in the provision of health benefits. While firms may tie pension benefits to the earnings of the worker, the firm must offer all full-time workers the same health benefits, which has the predictable consequence that high-wage firms will avoid hiring low-wage workers (Scott, Berger, and Black 1989). Madrian (1994) identified another possible distortion that employer-provided health benefits create: the possibility that workers will be locked into their jobs because they or family members have preexisting conditions and would lose their medical coverage if they changed employers. Using the 1987 National Medical Expenditure Survey, she estimated that job lock reduces voluntary job turnover by 25 percent as compared with a system of perfectly portable health insurance. Madrian's results are controversial. Holtz-Eakin (1994) found no evidence of job lock. If her results are correct, however, Madrian has identified a potentially important distortion in the U.S. labor market that employer-provided health insurance creates. Obviously, labor markets in Canada, with its perfectly portable health insurance, are free from such distortions.

Madrian argued that job lock arises from coverage gaps that preexisting conditions clauses and length-of-service provisions create. If a worker must wait, say, six months before being covered by a new
employer's plan, then the worker may choose not to switch employers. Because this coverage gap is unrelated to the efficient allocation of labor, such a reduction in mobility is inefficient. She suggested that eliminating preexisting condition clauses and increasing the portability of health insurance would largely eliminate the inefficient reduction in job turnover. In the next section, I offer a theoretical model that challenges this suggestion. I show that when dual-earning couples consider employment offers, the value placed on a job offer will depend on the coverage of the spouse's health plan. As I demonstrate in the next section, this difference in valuation may explain the turnover pattern that Madrian uncovered.

JOB SEARCH WITH THE POTENTIAL FOR DOUBLE COVERAGE OF HEALTH BENEFITS

In this section, I construct a simple model to examine the impact of the double coverage of health benefits on labor turnover. To abstract from other issues, I will assume that there are no preexisting conditions provisions and no length-of-service provisions. If a worker finds employment at an alternative employer who is offering health insurance, the coverage begins immediately.

To begin, first consider a worker who has no spouse. The worker is currently employed at a firm paying wage $w_0$ and a health plan indexed by the value $h_0$. I assume that all health plans may be indexed by a single value, $h$, and that workers always strictly prefer plans with a greater $h$. Workers without health coverage have a plan with the value of $h_0 = 0$. Let the worker have a utility function $u(\cdot)$ that depends on the level of wages, $w_0$, and the level of health benefits, $h_0$, or

\[ V^0 = u(w_0, h_0). \] (1)

The value of current employment, $V^0$, forms the reservation utility for all subsequent employment offers. The worker has worked for the current employer for one period and will work, at most, one additional period for the employer. In Figure 1, I depict an indifference curve for
the worker’s utility function as a convex function. If firms could individually tailor their fringe benefit packages to the needs of a worker, the worker would simply pick the amount of health benefits he desires. If the worker had adequate coverage from another source, he could simply elect to take all compensation as wages. Unfortunately, IRS regulations preclude such a design.

Before beginning employment in the second period, the worker entertains employment offers from other employers, which I assume are exogenously determined. The worker’s utility in the second-period is

\[ V = \max[u(w_a, h_a), V^0]. \] (2)

where \( u(w_a, h_a) \) is the utility associated with the best alternative offer. In Eq. 2, the set of acceptable offers is simply all combinations of \((w, h)\)
that are above the indifference curve \( V^0 \) depicted in Figure 1. The probability that a worker leaves his current employer, therefore, depends on the joint distribution of wages and health benefits offered.

Now consider a worker with a spouse. Let \( h_s \) denote the value of the worker’s coverage under his spouse’s health plan. If the worker has no such coverage, then \( h_s = 0 \). The worker’s utility from employment in the first period is

\[
V^0 = u[w_0, \max(h_0, h_s)].
\]

Again, before beginning employment in the second period, the worker entertains offers from alternative employers. The utility from second-period employment is

\[
V = \max\left\{u[w_s, \max(h_s, h_s)], V^0\right\}.
\]

The value of the right-hand sides of Eq. 3 and Eq. 4 depends on the value of \( h_s \). Spouse-provided health care benefits, therefore, alter the value of current employment and thus alter the value of alternative offers.

Figure 2 illustrates how the coverage by a spouse’s plan affects the worker’s job mobility decision. In Figure 2A, I consider the case where \( h_s < h_0 \), or the worker’s own plan is more generous than his spouse’s plan. The indifference curve \( V^0 \) denotes a worker’s indifference curve if \( h_s = 0 \), with the point \((w_0, h_0)\) denoting the worker’s current contract. From Eq. 3, spouse-provided coverage \((h_0 > h_s > 0)\) clearly does not alter the value of current employment, but it may affect the value of alternative offers. To see why, consider the point \((w_s, h_s)\), where \( w_s \) is implicitly defined as

\[
V^0 = u(w_s, h_s).
\]

The wage \( w_s \) leaves the worker indifferent to his current position and the job offering \( w_s \) and consuming his spouse’s health insurance. Any job that pays a wage greater than \( w_s \) will be strictly preferred to his current position. Thus, the area under the indifference curve \( V^0 \) and above
Figure 2 Indifference Curves for Worker’s Utility Function When
(A) Worker’s Own Benefits are More Generous \((h_s < h_0)\)
and (B) Spouse’s Benefits are More Generous \((h_s > h_0)\)
the wage $w_s$, denoted as $A$ in Figure 2A, becomes a part of the set of acceptable offers. For workers with spouse-provided coverage, therefore, the likelihood of turnover unambiguously increases whenever $h_s < h_0$. Unlike the analysis of Madrian, this result does not depend on the lack of portability of benefits but is the direct result of the increase in the acceptable offer set that double coverage provides.

In Figure 2B, I consider the case in which $h_s > h_0$, where the spouse’s benefits are more generous than the worker’s own. Again, the indifference curve $V^0$ corresponds to the worker without coverage by his spouse’s benefits, or $h_s = 0$. When a worker’s spouse provides access to more generous benefits, the worker’s utility increases. The indifference curve $V^0'$, depicts the worker’s indifference curve when $h_s > h_0$. In comparing the values of current employment of workers with and without spouse-provided coverage, there are two regions of interest. First, the area under the indifference curve $V^0'$ and above $V^0$, denoted as region $B$, represents offers that would be acceptable to workers without spouse-provided coverage but that are not acceptable to workers with spouse-provided coverage. Thus, one effect of spouse-provided coverage, when $h_s > h_0$, is to reduce this portion of the acceptable offer set. The second region of interest, however, offsets this result. The region that lies above $w_0$ and below the indifference curve $V^0$, denoted as region $C$, represents an area of offers that are acceptable to the workers with spouse-provided coverage but are unacceptable to workers without spouse-provided coverage. As the worker does not use his own health benefits, any job that offers a wage greater than $w_0$ is strictly preferred to his current situation, regardless of the level of health benefits associated with the job. For workers with $h_s > h_0$, therefore, spouse-provided coverage has an ambiguous impact on turnover probabilities.

My analysis has abstracted from the search decision of the worker’s spouse. When allowing for joint search decisions, the worker’s valuation of his current job and alternative offers depends not only on his spouse’s current position but also her best alternative offer. While the impact of the spouse-provided coverage on a worker’s turnover probabilities is ambiguous, the impact on efficiency is unambiguous—having a worker’s valuation of an employment offer depend on his spouse’s health insurance plan only limits the efficient allocation of labor.6
Of course, my analysis has not considered the possible responses of firms. One obvious response to double coverage is to offer employees the ability to select other benefits or cash in the place of health care benefits. The Revenue Act of 1978 permitted establishment of such cafeteria plans. The economic rationale for offering such plans is obvious: by allowing employees who already have other sources of coverage to select from other benefits or cash payments, firms may reduce their turnover.

Another way in which firms may counter the problem of dual coverage is to attempt to specialize in the hiring of workers of one type of coverage or another. For instance, a firm may seek to hire only workers with access to alternative forms of health care coverage by offering jobs with higher wages and no health benefits. Another firm may seek to specialize in the hiring of workers who wish to provide coverage to their entire families by offering low wages but a generous health plan with family coverage. See Dye and Antle (1984) for a model of such a separating equilibrium applied to fringe benefits.

COVERAGE, DOUBLE COVERAGE, AND REFUSAL OF EMPLOYER-PROVIDED HEALTH BENEFITS

In this section, I present an overview of employer-provided health benefits from the April 1993 Supplement to the CPS. The supplement provides detailed information about employee benefits. I limit my sample to workers between the ages of 18 and 64 for all of the tables. In addition, I report most statistics for full-time workers, which I define to be those who usually work at least 35 hours a week and those who work at least 47 weeks a year. I demonstrate that neither the use of cafeteria plans nor sorting strategies on the part of firms have solved the problem of double coverage. I show that a significant portion of the population has double coverage, that a surprising number of people turn down coverage, and that among those who turn down coverage, most do so without explicit compensation.

Nearly 90 percent of the male workers and 90 percent of the female workers have health insurance from some source (Table 1). For female workers, 88.0 percent reported that they are at a firm that offers
health insurance to at least some workers at the firm, and 88.5 percent of males responded similarly. Firms can place some restrictions on who may qualify for insurance. Often times, temporary, part-time, or leased employees may not be eligible for health benefits. Also, many firms require length-of-service requirements a worker must complete before qualifying for health benefits. To see who is and is not eligible for health benefits, I identify workers as eligible for health benefits if they reported that their firm offers health insurance to some of its workers and either reported that they received those benefits or explicitly stated that they declined those benefits. Using this definition, 83.7 percent of female workers and 85.0 percent of male workers reported that they are eligible for benefits.

Looking at the coverage rate of employer-provided health plans, 79.5 percent of all men but only 72.5 percent of women reported that they have employer-provided health benefits. Thus, gender differences in wages underestimate the true compensation difference. Nearly 8.2 percent of women and 10.1 percent of men do not receive health insurance from their employers but do receive it from another source. The differentials between the eligibility rates and the coverage rates suggest that many workers refuse health insurance coverage and, indeed, 11.2 percent of all women and 5.6 percent of all men decline coverage from their employers. Among full-time workers, 22.0 percent of all women
and 10.7 percent of all men reported that they have health insurance under their spouse’s plan.8

The CPS Supplement also gives us an opportunity to examine another issue: the health insurance coverage of the self-employed. Folklore suggests that the spouses of the self-employed provide the health coverage for the family. I examine this issue in Table 2 by comparing the rate at which the spouses of the self-employed provide health insurance to their spouses as compared with the rate at which the spouses of wage and salary workers provided health insurance to their spouses. In Panel A we see no evidence supporting this folklore. The husbands’ provision of health insurance to their wives is independent of their wives’ self-employment status, which is surprising. In contrast, in Panel B wives are more likely to provide self-employed husbands with health insurance than are wives of wage and salary workers. Women with self-employed spouses are 66 percent more likely to provide their husbands with health insurance than are women whose spouses are not self-employed.

Table 2 Spouse’s Provision of Employer-Provided Health Benefits by Self-Employment Status

<table>
<thead>
<tr>
<th>Insurance provision</th>
<th>Spouse is not self-employed</th>
<th>Spouse is self-employed</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A: Husband’s provision of health insurance to spouse by wife’s self-employment status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husband does not provide spouse with employer-provided insurance</td>
<td>56.6%</td>
<td>56.3%</td>
<td>4006</td>
</tr>
<tr>
<td>Husband provides spouse with employer-provided insurance</td>
<td>43.4%</td>
<td>43.7%</td>
<td>3077</td>
</tr>
<tr>
<td>n</td>
<td>6387</td>
<td>696</td>
<td>7083</td>
</tr>
<tr>
<td><strong>Panel B: Wife’s provision of health insurance to spouse by husband’s self-employment status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wife does not provide spouse with employer-provided insurance</td>
<td>84.5%</td>
<td>74.0%</td>
<td>7297</td>
</tr>
<tr>
<td>Wife does provides spouse with employer-provided insurance</td>
<td>15.5%</td>
<td>26.0%</td>
<td>1527</td>
</tr>
<tr>
<td>n</td>
<td>7314</td>
<td>1510</td>
<td>8824</td>
</tr>
</tbody>
</table>

SOURCE: April 1993 Supplement to the CPS.
The model presented in the previous section suggests that employees whose spouses also have employer-provided coverage may value job offers differently than employees whose spouses do not have such coverage. For dual coverage to have an important effect on labor-market transitions, however, there must be a sizable portion of the working population that may have double coverage. To determine what fraction of dual-earning couples have dual health coverage, I matched husbands' and wives' responses to the April Supplement for those households in which both members are full-time, full-year workers. In Table 3, I present evidence about the possibility of double coverage. For males, 80.3 percent of the men from dual-earning households are eligible for health insurance from their employers, and their spouses are also eligible for family benefits. Thus, over 80 percent of these males could be covered by their wives' plans, and 38.5 percent of these men have wives who elect to provide family benefits. Similar stories arise for men whose employers offer family coverage: 80.6 percent of men who are eligible for family coverage have wives whose employers offer family plans. Interestingly, 38.0 percent of men from dual-earning households who are eligible for family health plans have wives who provide family health plans, representing a sizable segment of the married, dual-earning families. Workers with spouses who have their own employer-provided health benefits may value family health benefits differently than workers whose spouses do not have employer-provided health benefits: 84.9 percent of these male workers have spouses who are eligible for employer-provided health benefits, and 62.4 percent have spouses who receive employer-provided health benefits.

Table 3 presents similar statistics for full-time female employees: 84.6 percent of women in dual-earning households who are offered health insurance have spouses who are eligible for family plans, and 58.6 percent have spouses who provide family health benefits. Thus, women are more likely to have access to health benefits from multiple sources than are men. Of women who are eligible to provide family health benefits, 84.9 percent of their spouses are eligible for family health benefits, and 58.0 percent provide such benefits. Finally, of women in dual-earning households who are eligible for family health benefits, 87.7 percent are married to men who are eligible for health benefits, and 76.5 percent are married to men who have employer-provided benefits.
Table 3  Dual Health Care Coverage of Married, Full-Time Couples

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Percentage</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husband’s employer offers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health benefits and spouse is eligible for family health benefits</td>
<td>80.3</td>
<td>2636</td>
</tr>
<tr>
<td>Health benefits and spouse provides family health benefits</td>
<td>38.5</td>
<td>2636</td>
</tr>
<tr>
<td>Family health benefits and spouse is eligible for family health benefits</td>
<td>80.6</td>
<td>2630</td>
</tr>
<tr>
<td>Family health benefits and spouse provides family health benefits</td>
<td>38.0</td>
<td>2630</td>
</tr>
<tr>
<td>Family health benefits and spouse is eligible for health benefits</td>
<td>84.9</td>
<td>2650</td>
</tr>
<tr>
<td>Family health benefits and spouse receives health benefits</td>
<td>62.4</td>
<td>2645</td>
</tr>
<tr>
<td>Wife’s employer offers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health benefits and spouse is eligible for family health benefits</td>
<td>84.6</td>
<td>2650</td>
</tr>
<tr>
<td>Health benefits and spouse provides family health benefits</td>
<td>58.6</td>
<td>2222</td>
</tr>
<tr>
<td>Family health benefits and spouse is eligible for family health benefits</td>
<td>84.9</td>
<td>2085</td>
</tr>
<tr>
<td>Family health benefits and spouse provides family health benefits</td>
<td>58.0</td>
<td>2085</td>
</tr>
<tr>
<td>Family health benefits and spouse is eligible for health benefits</td>
<td>87.7</td>
<td>2636</td>
</tr>
<tr>
<td>Family health benefits and spouse receives health benefits</td>
<td>76.5</td>
<td>2636</td>
</tr>
</tbody>
</table>

SOURCE: April 1993 Supplement to the CPS.

* To be included in this sample, workers must be working full-time and eligible for employer-provided health benefits. Spouses may or may not be eligible for health benefits but must be full-time workers.

When employers only partially pay for health benefits, employees have an incentive not to accept health benefits when they receive coverage from their spouses’ plans. The refusal of health benefits is not uncommon; 11.2 percent of all female workers and 5.6 percent of all male workers decline employer-provided health benefits (see Table 1). In Table 4, I examine the incidence of workers from dual-earning households refusing employer-provided health benefits by whether or not the workers’ spouses are eligible for family health benefits. The
Table 4 Full-Time, Married Couple’s Refusal of Employer-Provided Health Benefits

<table>
<thead>
<tr>
<th>Decision</th>
<th>Spouse is not eligible for family health coverage</th>
<th>Spouse is eligible for family health coverage</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A: Husband's decision to accept or refuse employer-provided health insurance</td>
<td>Husband accepts employer-provided insurance</td>
<td>96.9%</td>
<td>87.1%</td>
</tr>
<tr>
<td></td>
<td>Husband refuses employer-provided insurance</td>
<td>3.1%</td>
<td>12.9%</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>451</td>
<td>1835</td>
</tr>
<tr>
<td>Panel B: Wife's decision to accept or refuse employer-provided health insurance</td>
<td>Wife accepts employer-provided insurance</td>
<td>95.9%</td>
<td>73.3%</td>
</tr>
<tr>
<td></td>
<td>Wife refuses employer-provided insurance</td>
<td>4.1%</td>
<td>26.7%</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>343</td>
<td>1879</td>
</tr>
</tbody>
</table>

SOURCE: April 1993 Supplement to the CPS.

Note: To be included in this sample, workers must be working full-time and eligible for employer-provided health benefits. Spouses may or may not be eligible for health benefits but must be full-time workers.
When husband and wife search for employment and employers offer health insurance coverage for the whole family, my theory predicts that the husband’s and wife’s health care coverage decision should be negatively correlated. Thus, controlling for other factors that affect the demand for health insurance coverage, we should see the likelihood of a worker choosing employer-provided health insurance declining when his spouse has selected employer-provided health insurance. To test this hypothesis, I estimate a bivariate probit model that allows for correlation between the husband’s and wife’s decisions. I limit the sample to couples where both are full-time, full-year workers. For covariates, I use a vector of race dummies (whites are the excluded category), a vector of education variables (high school graduates are the excluded category), the number of children in the household less than 18 years old, a quadratic in the worker’s age, a quadratic in the worker’s tenure at the firm, and a dummy variable indicating that the worker’s tenure is less than a year. The method of estimation is full information, maximum likelihood. The starting values were taken from probits on the individual equations, and the starting value for the correlation coefficient, \( p \), is zero.

The estimated coefficients on the covariates provide few surprises (Table 5). Workers of both genders have strong tenure effects. It seems unlikely that length-of-service requirements would account for the strong tenure-health benefits relationship, so the strong relationship may simply reflect the fact that matches that offer health benefits tend to survive while those that do not offer health insurance do not survive, a point that Mortensen (1989) and Garen (1988) made in examining the wage-tenure relationship. Workers with at least a BA degree are more likely to have health insurance than less educated workers. A larger number of children reduces the likelihood of having employer-provided health insurance for women, while the relationship is not statistically significant for men. Interestingly, hispanic wives are more likely but hispanic husbands are less likely to have employer-provided health insurance than similar whites. Similarly, black wives are more likely to have employer-provided health insurance than are white wives.

Controlling for the worker’s own characteristics, there is a strong, negative correlation between husbands’ and wives’ health care decisions. The estimated correlation coefficient is \(-0.35\) and the \( z \)-statistic
**Table 5 Health Insurance Coverage for Dual Earning Couples, Estimated Coefficients from a Bivariate Probit Model**

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker is Hispanic</td>
<td>0.273</td>
<td>-0.289</td>
</tr>
<tr>
<td></td>
<td>(2.06)</td>
<td>(2.29)</td>
</tr>
<tr>
<td>Worker is Black</td>
<td>0.230</td>
<td>0.090</td>
</tr>
<tr>
<td></td>
<td>(2.03)</td>
<td>(0.77)</td>
</tr>
<tr>
<td>Worker is Asian</td>
<td>-0.011</td>
<td>0.246</td>
</tr>
<tr>
<td></td>
<td>(0.08)</td>
<td>(1.32)</td>
</tr>
<tr>
<td>Worker is Native American</td>
<td>0.716</td>
<td>0.020</td>
</tr>
<tr>
<td></td>
<td>(1.52)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Worker’s age</td>
<td>-0.028</td>
<td>0.019</td>
</tr>
<tr>
<td></td>
<td>(1.27)</td>
<td>(0.84)</td>
</tr>
<tr>
<td>Age squared /100</td>
<td>0.018</td>
<td>-0.031</td>
</tr>
<tr>
<td></td>
<td>(0.63)</td>
<td>(1.13)</td>
</tr>
<tr>
<td>Worker has less than one year of tenure</td>
<td>-0.231</td>
<td>-0.271</td>
</tr>
<tr>
<td></td>
<td>(2.40)</td>
<td>(2.69)</td>
</tr>
<tr>
<td>Worker’s tenure</td>
<td>0.090</td>
<td>0.092</td>
</tr>
<tr>
<td></td>
<td>(7.29)</td>
<td>(7.80)</td>
</tr>
<tr>
<td>Tenure squared /100</td>
<td>-0.194</td>
<td>-0.180</td>
</tr>
<tr>
<td></td>
<td>(4.13)</td>
<td>(4.75)</td>
</tr>
<tr>
<td>Number of children</td>
<td>-0.069</td>
<td>-0.025</td>
</tr>
<tr>
<td></td>
<td>(2.54)</td>
<td>(0.82)</td>
</tr>
<tr>
<td>Worker did not begin high school</td>
<td>0.058</td>
<td>-0.226</td>
</tr>
<tr>
<td></td>
<td>(0.27)</td>
<td>(1.26)</td>
</tr>
<tr>
<td>Worker did not complete high school</td>
<td>0.067</td>
<td>-0.209</td>
</tr>
<tr>
<td></td>
<td>(0.56)</td>
<td>(1.78)</td>
</tr>
<tr>
<td>Worker attended college but has no degree</td>
<td>0.069</td>
<td>0.137</td>
</tr>
<tr>
<td></td>
<td>(0.96)</td>
<td>(1.68)</td>
</tr>
<tr>
<td>Worker has a vocational degree from junior college</td>
<td>0.038</td>
<td>-0.067</td>
</tr>
<tr>
<td></td>
<td>(0.34)</td>
<td>(0.56)</td>
</tr>
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<td>Worker has an associate’s degree</td>
<td>0.272</td>
<td>0.020</td>
</tr>
<tr>
<td></td>
<td>(1.97)</td>
<td>(0.12)</td>
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<tr>
<td>Worker has a bachelor’s degree</td>
<td>0.289</td>
<td>0.154</td>
</tr>
<tr>
<td></td>
<td>(3.84)</td>
<td>(1.87)</td>
</tr>
<tr>
<td>Worker has a master’s degree</td>
<td>0.300</td>
<td>0.265</td>
</tr>
<tr>
<td></td>
<td>(2.68)</td>
<td>(2.04)</td>
</tr>
</tbody>
</table>
is -9.03. Thus, the data overwhelmingly reject the hypothesis that the health care decisions of dual-earning couples are independent and accept the hypothesis, which my theory implies, that the decisions are negatively correlated. Husbands and wives appear to coordinate their search activities, presumably looking for other forms of compensation when their spouses provide health benefits. Thus, within households, there is some evidence that workers do indeed trade off health benefits for other forms of compensation.

**DOES SPOUSE-PROVIDED HEALTH INSURANCE AFFECT TURNOVER PROBABILITIES?**

The analysis earlier suggested that coverage under a spouse’s health insurance plan alters the worker’s likelihood of accepting an offer. If the spouse’s plan is less generous than the worker’s own health insurance plan, then coverage by the spouse unambiguously increases the likelihood that a worker will accept another offer. In equilibrium, therefore, we should see such workers more likely to change jobs than workers without spouse-provided coverage. When the spouse’s plan is more generous than the worker’s own plan, there is
an ambiguity, but it remains possible that spouse-provided coverage would result in higher turnover rates.

Unfortunately, the CPS is a less than ideal data set to use to examine job transitions. Because the CPS is a short panel and provides few details about a worker's employers, it is often impossible to spot job-to-job transitions. In the April 1993 Supplement, however, workers were asked directly if they have less than one-year tenure, and answers to this question allow me to identify those individuals who have changed jobs in the last year. It is not possible, however, to determine whether the transition was a result of a quit, layoff, or dismissal.

The CPS provides only workers' current health insurance and not their coverage at the time of their job transitions, which causes a potentially serious problem. If workers who have recently had an involuntary job transition (layoff or dismissal) are likely to enroll in their spouses' health care plans, then there is a correlation between current health care coverage under a spouse's plan and turnover that is unrelated to any search story. In addition, the CPS provides no information about the generosity of workers', or their spouses', health care plans. As the generosity of the two plans affects the likelihood of turnover in my model, this data limitation is particularly serious. Finally, the CPS provides no information about tenure on the previous job. As virtually all research has found that hazard functions for employment spells exhibit duration dependence (e.g., Farber 1994), the failure to include tenure in a turnover equation may cause a specification bias.10

With these caveats in mind, I can examine the relationship between job transitions and health insurance coverage provided by a worker's spouse with the equation:

\[ \Pr(\text{job change}) = F(X_i \beta + S_i \delta + u_i). \]

where \( X_i \) is a vector of controls, \( \beta \) is the corresponding vector of parameters, \( S_i \) is an indicator variable that is equal to one if the worker is covered by his spouse's plan and zero otherwise, \( \delta \) is the corresponding parameter, \( u_i \) is the error term that I assume is identically and independently distributed, and \( F(\bullet) \) is a logistic distribution function.

Because males and females may have much different patterns of turnover, I run separate equations for male and female workers. In addi-
tion to controls for whether the spouse is employed or self-employed, I use the same control variables as those I use in Table 5 except, of course, I use no controls for tenure. In column 1 of Tables 6 and 7, I present the estimates for Eq. 6 for male and female workers. I limit my sample to workers who are married, full-time, full-year workers who have at least two years of potential experience, where potential experience is defined to be age minus years of schooling minus six. This restriction should exclude most school-to-work transitions, which presumably occur regardless of the spouse's provision of health benefits.\textsuperscript{11}

A common feature of the results from both samples is that having an employed spouse substantially reduces the likelihood of workers changing jobs. (This result remains regardless of whether I control for coverage by the spouse's health insurance plan.) Spouse-provided coverage has a large impact on the likelihood of turnover for male workers; evaluated at the mean, spouse-provided coverage increases the likelihood of a male worker changing jobs from about 0.10 to 0.16.\textsuperscript{12} For females, the impact is smaller but still large; evaluated at the mean, spouse-provided coverage increases the likelihood of a female worker changing jobs from about 0.10 to 0.14.

My estimates for males are somewhat higher than those of Madrian (1994), who found that not having other health insurance coverage lowered male job transitions by about 26 percent.\textsuperscript{13} Importantly, Madrian was able to control for whether the job transition was voluntary, and I am unable to do so.\textsuperscript{14} To guard against the possibility that spouse-provided coverage is somehow indicative of an involuntary transition from the last job, I reestimate the equation, limiting my sample to those workers who report that they are eligible for employer-provided health insurance (see column 2 of Tables 6 and 7). For this sample, workers who made job transitions at least have the option of taking their employer-provided plan. While clearly this does not preclude a worker from having been laid-off or dismissed from his past position, this does eliminate any workers who have spouse-provided benefits because they have no alternative source of health care. With this sample restriction, the coefficients on the spouse-provided coverage are reasonably stable. Evaluated at the means, spouse-provided coverage increases the likelihood of a male worker changing jobs from 0.07 to 0.11 and the likelihood of a female worker changing jobs from 0.07 to 0.12.\textsuperscript{15}
### Table 6 Turnover Propensities and Health Insurance Coverage Status, Married Males

<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th>All workers (1)</th>
<th>Means</th>
<th>Workers eligible for health insurance (2)</th>
</tr>
</thead>
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<tr>
<td>Worker is Hispanic</td>
<td>0.066</td>
<td>0.336</td>
<td>0.051</td>
<td>0.407</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.03)</td>
<td></td>
<td>(1.83)</td>
</tr>
<tr>
<td>Worker is Black</td>
<td>0.054</td>
<td>0.417</td>
<td>0.051</td>
<td>0.527</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.38)</td>
<td></td>
<td>(2.48)</td>
</tr>
<tr>
<td>Worker is Asian</td>
<td>0.028</td>
<td>0.178</td>
<td>0.027</td>
<td>0.361</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.68)</td>
<td></td>
<td>(1.23)</td>
</tr>
<tr>
<td>Worker is Native American</td>
<td>0.006</td>
<td>-0.089</td>
<td>0.005</td>
<td>-1.045</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.16)</td>
<td></td>
<td>(1.01)</td>
</tr>
<tr>
<td>Worker's age</td>
<td>40.9</td>
<td>-0.157</td>
<td>41.3</td>
<td>-0.125</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.52)</td>
<td></td>
<td>(2.83)</td>
</tr>
<tr>
<td>Age squared /100</td>
<td>1772</td>
<td>0.123</td>
<td>1804</td>
<td>0.089</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.86)</td>
<td></td>
<td>(1.63)</td>
</tr>
<tr>
<td>Worker did not begin high school</td>
<td>0.034</td>
<td>0.162</td>
<td>0.026</td>
<td>0.037</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.62)</td>
<td></td>
<td>(0.09)</td>
</tr>
<tr>
<td>Worker did not complete high school</td>
<td>0.069</td>
<td>0.382</td>
<td>0.057</td>
<td>0.286</td>
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<tr>
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<td>(2.29)</td>
<td></td>
<td>(1.21)</td>
</tr>
<tr>
<td>Worker attended college but has no degree</td>
<td>0.187</td>
<td>0.150</td>
<td>0.0188</td>
<td>0.156</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.18)</td>
<td></td>
<td>(0.97)</td>
</tr>
<tr>
<td>Worker has a vocational degree from junior college</td>
<td>0.052</td>
<td>0.119</td>
<td>0.053</td>
<td>0.222</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.59)</td>
<td></td>
<td>(0.90)</td>
</tr>
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<td>Category</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
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<tr>
<td>------------------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>Worker has an associate’s degree</td>
<td>0.0300</td>
<td>0.082</td>
<td>0.031</td>
<td>0.506</td>
</tr>
<tr>
<td>Worker has a bachelor’s degree</td>
<td>0.186</td>
<td>0.088</td>
<td>0.198</td>
<td>0.202</td>
</tr>
<tr>
<td>Worker has a master’s degree</td>
<td>0.075</td>
<td>0.192</td>
<td>0.082</td>
<td>0.492</td>
</tr>
<tr>
<td>Worker has a Ph.D. degree</td>
<td>0.017</td>
<td>-0.104</td>
<td>0.020</td>
<td>0.199</td>
</tr>
<tr>
<td>Worker has a professional degree</td>
<td>0.018</td>
<td>0.065</td>
<td>0.019</td>
<td>0.540</td>
</tr>
<tr>
<td>Number of children</td>
<td>1.152</td>
<td>-0.047</td>
<td>1.152</td>
<td>-0.062</td>
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<tr>
<td>Spouse is employed</td>
<td>0.629</td>
<td>-0.487</td>
<td>0.635</td>
<td>-0.430</td>
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<td>Spouse is self-employed</td>
<td>0.045</td>
<td>-0.177</td>
<td>0.046</td>
<td>-0.023</td>
</tr>
<tr>
<td>Worker is covered by spouse’s plan</td>
<td>0.149</td>
<td>0.762</td>
<td>0.129</td>
<td>0.697</td>
</tr>
<tr>
<td>Worker is covered by other plan</td>
<td>0.070</td>
<td>1.045</td>
<td>0.051</td>
<td>1.095</td>
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<tr>
<td>Constant</td>
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<td>-</td>
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<td>Likelihood function</td>
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<td>-</td>
<td>-1304.81</td>
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<tr>
<td>Number of observations</td>
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</table>

NOTE: Mean of the dependent variable for column (1) is 0.096 and for column (2) is 0.069. Absolute values of z-statistics are given in parentheses.
<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th>All workers</th>
<th>Means</th>
<th>Workers eligible for health insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker is Hispanic</td>
<td>0.055</td>
<td>-0.234</td>
<td>0.048</td>
<td>-0.029</td>
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<tr>
<td></td>
<td></td>
<td>(0.89)</td>
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<td>(0.09)</td>
</tr>
<tr>
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<td>0.065</td>
<td>-0.329</td>
<td>0.065</td>
<td>-0.563</td>
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<tr>
<td></td>
<td></td>
<td>(1.31)</td>
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<td>(1.66)</td>
</tr>
<tr>
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<td>0.248</td>
<td>0.031</td>
<td>-0.135</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.85)</td>
<td></td>
<td>(0.33)</td>
</tr>
<tr>
<td>Worker is Native American</td>
<td>0.008</td>
<td>0.366</td>
<td>0.007</td>
<td>-0.043</td>
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<td></td>
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</tr>
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<td></td>
<td>(0.70)</td>
</tr>
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<td>1656</td>
<td>-0.033</td>
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<tr>
<td></td>
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<td>(0.63)</td>
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<td>(0.39)</td>
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<tr>
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<td>(0.12)</td>
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<td>0.567</td>
</tr>
<tr>
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<td></td>
<td>(3.25)</td>
<td></td>
<td>(1.87)</td>
</tr>
<tr>
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<td>0.194</td>
<td>-0.302</td>
<td>0.197</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.85)</td>
<td></td>
<td>(0.04)</td>
</tr>
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<td>-0.190</td>
<td>0.057</td>
<td>0.120</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.75)</td>
<td></td>
<td>(0.41)</td>
</tr>
<tr>
<td></td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
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<tr>
<td>---------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>Worker has an associate’s degree</td>
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<td>0.122</td>
<td>0.038</td>
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<td></td>
<td>(0.46)</td>
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<td>(0.94)</td>
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<td></td>
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<tr>
<td></td>
<td>(0.74)</td>
<td>(0.63)</td>
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<td>0.008</td>
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<td></td>
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<td>-1.277</td>
<td>0.009</td>
<td>-0.693</td>
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<tr>
<td></td>
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<td></td>
</tr>
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<td>0.014</td>
<td>0.866</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>(0.25)</td>
<td>(0.03)</td>
<td></td>
<td></td>
</tr>
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<td>0.980</td>
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<td>0.983</td>
<td>-0.284</td>
</tr>
<tr>
<td></td>
<td>(2.75)</td>
<td>(0.63)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worker is covered by spouse’s plan</td>
<td>0.365</td>
<td>0.527</td>
<td>0.339</td>
<td>0.693</td>
</tr>
<tr>
<td></td>
<td>(4.55)</td>
<td>(4.92)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worker is covered by other plan</td>
<td>0.058</td>
<td>0.471</td>
<td>0.040</td>
<td>0.792</td>
</tr>
<tr>
<td></td>
<td>(1.98)</td>
<td>(2.42)</td>
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<td>(0.05)</td>
<td>(1.18)</td>
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</tr>
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<td>-1179.74</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>-820.36</td>
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<td>3940</td>
<td>3320</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Mean of the dependent variable for column (1) is 0.097 and for column (2) is 0.074. Absolute values of z-statistics are given in parentheses.
Thus, the CPS data seem to support the conclusion that spouse-provided coverage does encourage job transitions, and the results are largely consistent with those of Madrian (1994) for workers with dual coverage. Her interpretation, however, is that workers without dual coverage are possibly "locked-out" of jobs that offer insurance with preexisting conditions clauses or length-of-service requirements. Health care reform that eliminates preexisting conditions clauses and length-of-service requirements and requires employers to offer health insurance would virtually eliminate job-lock. Unless the employer mandate also eliminates variations in the type of employer-provided coverage, my analysis suggests that the turnover that spouse-provided coverage creates is likely to persist. Ideally, therefore, we would like to be able to distinguish my search explanation from her job-lock explanation and be able to decompose the turnover effect into a search component and a job-lock component.

That is likely to prove a difficult task. Gruber and Madrian (1994) and Holtz-Eakin (1994) contended that most job-lock appears to be a short-run problem, presumably arising more from the length-of-service requirements than from preexisting conditions. Individuals without a preexisting condition, however, have the option of purchasing insurance from the private market, or, as Gruber and Madrian emphasized, some workers may purchase health care from their previous employers to bridge the gap in coverage that length-of-service provisions create. This solution to a coverage gap is expensive: the worker loses the tax exemption of health care insurance premiums, and, if purchasing health insurance from the private market, individual policies are often more expensive. Yet for these workers, a solution does exist, and a sufficiently generous offer will induce the worker to change jobs. Because this solution is expensive and because workers with spouse-provided coverage avoid these costs, workers differ in their valuation of offers from alternative employers, which, of course, is the essence of my search explanation for the turnover effect from spouse-provided coverage. In my view, distinguishing between these two explanations would be difficult.
POLICY IMPLICATIONS

My results support the findings of Madrian (1994) and Gruber and Madrian (1994) that employer-provided health insurance does affect the turnover propensities of workers. Indeed, the magnitude of my results for male workers is somewhat larger than Madrian’s estimate, and I find that female workers are similarly affected. While I have offered no formal welfare analysis of this effect, it is difficult to believe that a policy that makes a worker’s turnover propensity dependent on the health care policy of his spouse would improve the efficiency of labor markets.

Why have employer-provided health insurance? Friedman (1993) argued that many firms initially offered health care as a fringe benefit, as a means of avoiding the wage-price controls of World War II. As the IRS did not initially count fringe benefits as a part of taxable income, the tax system encouraged firms to offer health care, and Congress eventually codified the tax exemption. As health benefits are income elastic (Woodbury and Huang 1991), the tax exemption favors those with high earnings. Therefore, equity concerns suggest that a change is in order as well. When efficiency and equity concerns agree, one hopes that economists would find the course of action uncontroversial.

The political appeal of continuing the employer-provision of health benefits or the expansion of the system through mandates seems to arise because the costs remain hidden from consumers. Gruber (1994) and Gruber and Krueger (1992) suggested that most, if not all, costs of mandated benefits are passed through to the workers as lower wages, but if the mandated program is sufficiently small, these wage pass-throughs may be difficult for workers to perceive. Moreover, the tax expenditure that arises from the exemption of employer-provided health insurance is not readily apparent. Those of us who are beneficiaries of the tax expenditure probably do not appreciate the largesse of the U.S. government, at least not until the exemption is threatened.

Unfortunately, any elimination of the tax subsidy of health insurance benefits would not be invisible. Consider a reform along the lines that Diamond (1992) suggested, but one without any tax subsidy for middle-class families. In such a plan, employer-provided health insurance is replaced with a system of mandatory coverage where, at least
for most middle class households, consumers pay the full cost of their
health insurance. Those workers who previously had employer-pro-
vided health insurance should receive a nice increase in compensation.
Under Diamond's proposal, regional "HealthFeds" negotiate several
different policies with insurance companies, and consumers within the
region choose among the approved policies. When consumers begin
looking at the prices of the various policies, however, they will notice
that, even if firms increased their compensation by the exact cost of the
previously provided health insurance, the increase in their compensa-
tion is not enough to allow them to purchase an insurance plan of com-
parable quality to their employer-provided plan. Because the tax
subsidy is eliminated, the income and substitution effects presumably
would move most consumers to purchase less generous insurance
plans. Woodbury and Huang's simulation results suggest that the full
taxation of health benefits may result in up to a 15 percent decline in
the amount of health insurance. They calculated these estimates for the
1986 U.S. tax codes, and marginal tax rates have increased since then.
Forcing consumers to understand fully the costs of health care may not
be good politics but, in my view, it is good economics.

Notes

I thank Susan Black and Mike Clark for research assistance. Paul Anglin, Michael
Baye, William Custer, Daniel Hamermesh, and seminar participants at the University
of Kentucky provided useful comments. The National Institutes for Health provided
research support.

1. Statistical Abstract of the United States 1993, Table 515. The tax expenditure on
employer-provided pension plans is the largest single tax expenditure ($70.5 bil-
lion), followed by employer contributions to health insurance ($63.2 billion), and
the mortgage interest deduction ($48.1 billion).
2. See Allen, Clark, and McDermed (1993) and Luzadis and Mitchell (1991) for
recent evidence.
3. The U.S. government no longer allows firms to use mandatory retirement provi-
sions.
4. Hutchens (1986) presented evidence that pensions, when coupled with the nondis-
criminatory provision of the IRS codes, causes firms not to hire older workers.
Scott, Berger, and Garen (1995) argued that health benefits may dissuade firms
from hiring older workers as well.
5. Monheit and Cooper (1994), who also used the National Medical Expenditure
Survey, found evidence of job lock using a much different methodology than
Madrian. Using SIPP data, Gruber and Madrian (1994) found evidence that the 1985 COBRA legislation that allows workers to buy insurance from past employers as well as earlier state legislation that also allowed limited portability increased labor turnover and substantially mitigated job lock.

6. My analysis ignores many other issues that concern most search models. To name but a couple, I have not considered the distinction between unemployed and on-the-job search, nor have I considered the intensity at which workers attempt to generate new offers. Given the underlying ambiguity about the impact of double coverage on the workers' turnover decisions, these extensions would not appear too useful. Perhaps more important, for simplicity, I do not consider the joint search problem of a wife and husband. In a model with such a joint search decision, a worker may refuse a job with a higher wage and more health benefits if it will allow his spouse to take a sufficiently attractive offer.

7. Not all workers decline extra coverage: 12.1 percent of all women and 8.7 percent of all men in the sample of full-time workers reported that they have coverage from at least two sources.

8. This estimate of 10.7 percent differs considerably from Madrian's estimate of 33.5 percent using the National Medical Expenditure Survey, although it is conditional on being married. Of course, our two samples differ considerably because I am requiring males to be full-time, full-year workers to be in the sample. As a consistency check on the data, I matched the husbands and wives in the April Supplement. Among married males, 15.1 percent reported that their spouses' plans cover them; 30.8 percent of spouses of these men, however, reported that they chose a family health insurance plan, which is clearly closer to Madrian's estimate of 33.5. It is important to keep in mind, however, that offering a family plan does not imply that this coverage is free. Employers may charge the employee some or all of the additional costs for obtaining family coverage.

9. Olson (2000) looked at the labor-supply decision and how it may be affected by the spouse's health insurance coverage.

10. The CPS is not the only data set that suffers from these limitations. To my knowledge, no data set with good labor-market information provides detailed analysis of health insurance benefits. As Madrian (1994) notes, the National Medical Expenditure data lack measures of worker tenure; workers' insurance coverage can only be determined at two points in time, 7 to 15 months apart, and not at the time of job transition. As she notes, there are similar problems with the use of the PSID and NLSY. I am currently working with my colleagues Mark Berger and Frank Scott to use the SIPP data set to examine the impact of insurance coverage on worker turnover. While the SIPP does contain continuous information on health insurance coverage, it does not contain information about the generosity of workers' health care plans nor of their spouses' plans.

11. I am grateful to Daniel Hamermesh for this suggestion.

12. Recall that, in logit models, the change in the probability of the dependent variable equals one for a change in the \( j \)th independent variable is, for the \( i \)th worker,

\[
\frac{\partial p_i}{\partial x_i} = p_i(1 - p_i)\beta_j
\]
13. In her specification, Madrian included health care coverage from any source, not simply spouse-provided coverage. As sources of coverage other than the worker's spouse include Medicaid and Champus, I was afraid that these individuals may be different from the population as a whole. For this reason, I use dual coverage arising from some source other than a spouse as a separate variable.

14. It is by no means obvious that we should exclude involuntary transitions. If spouse provision of employer-provided allows workers to accept jobs in riskier occupation, higher involuntary turnover rates may be an outcome of spouse-provided health benefits.

15. These results are robust to various other specification checks. For the male portion of the sample, I divided the sample into age categories and reestimated the equations for each category. Despite the relatively small cell size, the coefficients on spouse-provided coverage are always positive and generally statistically significant. Similarly, if I include a family income variable, undoubtedly endogenous, the coefficient remains statistically significant and of similar magnitude to that reported in Table 4. Moreover, if I included nonmarried workers, the coefficient remains statistically significant.

16. Among full-time employees who have changed jobs within the last year and have jobs with firms that offer health insurance, 14 percent report that they are ineligible for coverage because they have not completed a "probationary period," which I interpret as a length-of-service requirement. In contrast, 0.7 percent claim to be ineligible because of a preexisting condition, and another 3.0 percent report that they have a preexisting condition not covered by their health care plan.

References


