

# Employers' Benefits from Workers' Health Insurance

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**M**OST NONELDERLY AMERICANS RECEIVE THEIR health insurance coverage through their workplace. Almost all large firms offer a health insurance plan, and even though they face greater barriers to providing coverage, so do the majority of very small firms. These employment-based plans cover two-thirds of nonelderly Americans and pay most of working families' expenses for health care and about one-quarter of national health spending. Despite employers' role in the health insurance market, however, very little attention has been paid to employers' motivations for providing health insurance to workers. Why *do* employers offer health insurance to workers? Is it because workers want it? Because their unions demand it? Or do employers offer health benefits to workers because their productivity and profitability depend on it?

The standard economic theory of the availability of employer-provided health insurance focuses on worker demand (Cutler 1997; Pauly 1997; Summers 1989). According to that theory, employers are willing to arrange health insurance plans for workers because workers are willing to "buy" that health insurance through wages reduced by the amount of the cost of the insurance. The theory states that rather than receiving additional cash compensation and finding and purchasing health insurance on their own, workers prefer to obtain coverage through their employers and so accept a wage offset to cover the cost of that coverage. This theory has a number of problems, though, not the least of which is that the data

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provide very little support for it. Despite decades of effort to demonstrate its validity, the empirical basis for the theory of compensating differentials remains surprisingly weak. Many empirical studies suggest that workers covered by employment-based health insurance plans earn *more*, not less, than do workers without health benefits (Buchmueller and Lettau 1997; Levy and Feldman 2001; Monheit et al. 1985; Simon 2001). But rather than reassess the theory, economists have focused on why the empirical research fails to produce the expected result.

This article makes a case for reassessing the theory. A key flaw in the standard theory is that it ignores the benefits accruing to employers from offering health benefits. According to the conventional view, employees pay the full cost of coverage presumably because they believe that the benefits of health coverage are entirely for themselves. The alternative view that I am investigating posits a “business case” for employment-based health coverage, acknowledging that employers may want to offer coverage because offering a compensation package composed of both wages and health insurance is more profitable than providing wages alone.

Employers might benefit from providing health insurance, for example, if it allowed them to recruit and retain high-quality workers. Perhaps employees who demand health benefits have other qualities that employers value; they might be forward-looking or less mobile (e.g., workers with children). Thus by offering health insurance, the firm could attract employees who anticipate establishing a long-term employment relationship. Firms might also provide health insurance if health insurance improves workers' health, by increasing their productivity at work and reducing absenteeism and turnover. Moreover, workers in “good jobs” are happier and more productive. Rather than having only some workers insured or having wide variation in the extent and quality of coverage—as would likely happen if workers were left on their own to purchase insurance—employers could benefit from having all or most of their employees covered under plans with standard minimum benefits.

This “business case” merits a passing mention in some discussions of the availability of employment-based health benefits (see Currie and Madrian 1999, 3368; Wolaver, McBride, and Wolfe 1997), but it is not central to the standard theory, and economists have typically minimized its importance. In a discussion of the impact of a government mandate, for example, economist Mark Pauly ruled out any real benefits to the employer. Employer-provided health benefits, he argued,

“will have little effect on the employer’s bottom-line. Workers may be a little bit healthier and a little happier . . . and that will presumably benefit employers a little. But the main consequences, positive or negative, of increasing workers’ insurance coverage will fall on the workers themselves” (Pauly 1997, 84). In a recent paper in which he reviewed existing empirical evidence, economist Thomas Buchmueller also found that employers reap few or no “spillover benefits” from providing health insurance to workers. Academic studies, he concluded, show little evidence that health insurance improves workers’ health and productivity, reduces turnover, or substantially cuts employers’ costs associated with workers’ compensation and absenteeism (Buchmueller 2000).

Despite the short shrift afforded the business case in mainstream economics, it seems worthwhile to reassess it. Although Buchmueller’s review may seem to settle the matter, he neglected to discuss a number of recent studies analyzing the productivity effects of poor health. But perhaps a more compelling reason for a reassessment is that many employers seem to think health and health coverage affect workers’ productivity and organizational performance. A burgeoning “health and productivity management” literature argues that the value of health coverage far exceeds its direct cost to employers. Even if employers have only recently begun to appreciate the value of health coverage for employee and firm performance, as some experts suggest (e.g., Cenicerros 2000), it would be helpful to document and understand that shift in perceptions.

Changes in the business community’s perceptions of the value of secondary education in the early 20th century offer a useful comparison. As economic historian Claudia Goldin explained, at the turn of the century, education at the secondary and higher level was viewed as providing “private,” not public, goods: “unlike the elementary schools, which taught basic skills thought to be essential to a democracy and needed to coordinate commercial activity, high schools were often depicted as producing skills *accruing entirely to the individual*” (Goldin 2001, 19–20; *italics added*). By the early 20th century, though, people and training, not capital and technology, had become the new concerns. Capital embodied in people—human capital—mattered. The result of this shift in perceptions, according to Goldin, was that for the first time “the post-literacy schooling of the masses was perceived to greatly enhance economic production” (Goldin 2001, 1). The growing sense in the American business community that secondary education mattered to them helped spur investments in education.

Like education, health is a key component of human capital (Becker 1964; Fuchs 1966; Grossman 1972). Education and skills, after all, are embedded in people, whose productivity depends on their health. It thus seems reasonable to suspect that at the turn of the 21st century, employers may have concluded that health insurance coverage and other investments in their employees' health are important to productivity and organizational performance—and more now than in the past because of advances in medical care and its rising cost.

Indeed, employers are said to be concerned with the return on investments in employer-provided on-the-job training, for which U.S. employers budgeted an estimated \$58.6 billion in 1997 (Bartel 2000, 502). It thus seems incongruous that employers would see no potential for returns on investments in health, on which more than \$335 billion was spent in 2000 (Cowan et al. 2002).

Furthermore, even if empirical progress has been slow to date, it bears keeping in mind that economists have frequently struggled to demonstrate the empirical importance of certain propositions because the principal concern is notoriously difficult to measure. In a revealing comment in a lengthy survey article on health, health insurance, and the labor market, economists Janet Currie and Brigitte Madrian observed that “academic research has only recently substantiated that health is a consequential determinant of labor market outcomes. Economic agents, however, have long recognized the importance of this relationship” (Currie and Madrian 1999, 3363). Their comment is noteworthy because it acknowledges that it took economists a very long time to quantify a phenomenon that seems intuitive to noneconomists (i.e., that health affects individual economic performance). The question I am raising is whether economists should make a greater effort to assess the relationship between health coverage and firms' outcomes.

## The Business Case

Why do employers offer health insurance benefits to workers? The cost and tax advantages of employment-based coverage, along with workers' willingness to pay at least part of the cost, may be the primary factors. To better understand the reasons for the availability of employment-based coverage, however, it is necessary to look at the value of health insurance coverage not just to employees but to employers as well.

### *Why Do Workers Want Employment-Based Coverage?*

Workers want health insurance for themselves and their families in order to protect against the catastrophic costs of serious illnesses and to ensure access to medical care. For those without the time or income to save for it, insurance may be the only way to obtain medical care that would otherwise be unaffordable (Nyman 1999). Although it is possible for individuals to purchase insurance on their own, the high cost of private individual coverage, barriers to access to that coverage, and steep transactions costs help account for the value of group coverage to workers and thus explain why, in the absence of any viable alternative, workers demand coverage through their employers.

Employment-based coverage is far less expensive than individually purchased coverage, for several reasons. First, through “pooling,” employers can reduce adverse selection and administrative expenses. These cost advantages are significant, especially for large firms. Moreover, employers are able to offer relatively inexpensive health insurance because most people covered by employment-based plans are in good health. Those people who are most expensive to insure—the elderly and people with serious disabilities and chronic conditions—are typically covered by public programs such as Medicare and Medicaid, thereby reducing the cost of employment-based insurance (Davis 2001).

Second, under federal law, employment-based insurance receives special tax treatment. Although employees pay income tax on their wage earnings, the portion used for health insurance is not taxed as income, and payroll taxes do not include the amount paid for these benefits. And if their employers arrange for it, employees can also pay their share of the insurance premium out of pretax income. Indeed, the tax advantages for employment-based coverage are significant. According to one estimate, the tax exclusion reduces the “price” of employment-based health insurance by an average of 27 percent (Gruber and Poterba 1996, cited in Currie and Madrian 1999, 3366). By contrast, individuals buying insurance on their own must pay for health insurance with aftertax dollars. They receive no tax benefit unless their spending on medical care exceeds 7.5 percent of their adjusted gross annual income, and they must itemize the deductions on their tax return. (The self-employed, however, may deduct a portion of the amount paid for health insurance premiums—60 percent in 2000—when determining their taxable income.)

Third, the transactions costs of buying an individual insurance policy are high for both individual workers and their families. Even when workers and their families are young and healthy, shopping for insurance in the individual market requires a lot of time to assess and compare different plans' benefits. In those states where the individual market is not well regulated, premiums vary substantially by age and health status. Moreover, health insurers may exclude coverage for certain conditions, exclude coverage for some services, or deny coverage altogether for people with preexisting health conditions or who are perceived to be at high risk (Pollitz, Sorian, and Thomas 2001). By comparison, because risks are pooled in group health insurance plans, the cost to an individual does not depend on his or her particular health status.

These advantages of employment-based health insurance suggest that it is worth considerably more to most workers than the additional wages that some economists say they would earn in its absence. Because there is no dollar-for-dollar trade-off—a similar product in the individual market, if available at all, would be much more expensive and impose transactions costs on workers and their families—the value to the employee of employment-based health benefits far exceeds whatever the employer is paying for it. Indeed, given the cost advantage to the employer, there is “quite a bit of leeway for employers to get the wage/benefits bundle ‘wrong’ and still leave employees better off than they would be if given only wage compensation and left to their own devices” (Currie and Madrian 1999, 3366).

Do workers also regard insurance in this way? Surveys confirm that workers view employment-based health insurance as a very valuable benefit of work. Most workers report that the availability of health insurance is a key factor in their decision to take or keep a job. In one recent survey, 73 percent of workers said that the insurance provided by their employer was a “very important” factor in their decision to take or keep a job (Duchon et al. 2000). Of all the fringe benefits offered by employers, health insurance was by far the most important: 65 percent of workers in another survey ranked health insurance as the most important employee benefit, compared with 21 percent who said a retirement savings plan was the most important benefit (Salisbury and Ostuw 2000). In addition, most workers with employment-based health insurance reported that either they were satisfied with the amount of health insurance benefits they were receiving or would prefer a higher benefit (87 percent); only 10 percent said that they would prefer a higher wage (Salisbury and Ostuw 2000).

In another study of what workers wanted at work, “having some say in benefits decision-making” was ranked third in importance after “influence in deciding how to do their job and organize their work,” and “deciding what training is needed.” But although workers reported that they did, in fact, have a good deal of influence on the organization of work and training, they reported having very little influence on decisions about benefits, substantially less influence than they would like (Freeman and Rogers 1999, 48–9). At the same time, other research has found that employees believe their employers are “good agents” in the market for health coverage (Peele et al. 2000).

### *What Do Employers Gain?*

If workers prefer to obtain health insurance through their employers rather than on their own, why are employers willing to act as their health insurance “agents”? Part of the explanation undoubtedly rests with the tax incentives for employers to offer coverage to workers and their dependents. Payments for health insurance are deducted from gross revenues in calculating the employer’s taxable income, and they also are excluded from the base payroll in determining the employer’s share of the payroll tax for Medicare and Social Security. More important, however, employers may want to offer health insurance to their workers because failing to do so could harm the firm’s performance. The evolution of company-sponsored medical care plans suggests that employers have long recognized the value of providing health insurance to workers. With the rapid growth of manufacturing and unions before World War I, the provision of welfare benefits, including health insurance, was widely acknowledged to be “good business”: The employee plans

relieved the employer of the solicitations for aid for the destitute dependents of deceased employees; also, it was not necessary for the employees to “pass the hat” among themselves during working hours for the same purpose; the program assisted in attracting better employees and in retaining those already employed, employee morale was enhanced, job relations improved and the public relations of some firms favorably affected. (Strong 1950, cited in Munts 1967, 8)

The history of early union-sponsored “sickness funds” (which offered protection against lost income and coverage for medical expenses) reveals that unions had strategic considerations in mind when they offered these funds. That is, the growth of union-sponsored funds in the 1880s was

based on the notion that the union benefits would help retain workers during depressions, strikes, and wage cuts. Providing protection against illness for workers and their families was expensive, however, and

in the search for the greatest appeal to workers, the discussion shifted back and forth between the need for low dues as an incentive for workers to join the union, and better benefit systems through higher dues as incentives to stay, between wage and job security on the one hand and security against the expenses of illness and death on the other. (Munts 1967, 4–5)

These historical references suggest that early employer and union plans were formed in response to the needs of both the workers and the sponsoring organizations. Just as workers still need financial protection today—and undoubtedly more so because of the high cost of medical care—employers also still benefit from offering health benefits to workers. The economic value of health insurance to employers comes from a variety of sources. First, because the productivity of any firm depends on the quality of its employees, employers may provide health insurance in order to attract high-quality workers. Although many job-related factors affect the number and quality of the applicants an employer succeeds in attracting—such as the nature of the work, wages, and opportunities for promotion—health insurance may be a required component of a competitive compensation package. Simple observation suggests that health insurance is the common denominator in employer fringe benefit packages. According to the standard theory, firms offering health benefits are more likely than those not offering them to attract workers in poor health (or with sick dependents) who are more costly and less productive (Lazear 1998, 418). But this characterization may not accurately represent the attitudes of the majority of prospective employees or the choices they face. Even healthy workers are likely to value employment-based health insurance at far more than its cost. Moreover, the additional cash compensation that some economists assert would be forthcoming without health benefits may not, in fact, be provided.

Second, once employers hire workers, they have a vested interest in keeping them. The costs of hiring and especially for turnover are expensive when employers have invested in training and workers have firm-specific skills. If the basic model of the wage-health insurance trade-off holds and employees value health insurance at the cost to their employers of providing it, then health insurance can be considered as just another



component of the compensation package, and its effects on turnover should not be different from receiving the cash equivalent of health insurance in wage compensation. However, since group health insurance plans typically end when a worker leaves a firm (or shortly thereafter if COBRA coverage is available and the worker elects to enroll in it), turnover involves changing not only jobs but also health insurance. In addition, the loss of health insurance may leave a worker and family exposed to uninsured changes in health status. Some workers may be able to obtain coverage through a new employer, but in many cases they must undergo a waiting period for coverage, and plans often exclude coverage for preexisting medical conditions (although the 1996 Health Insurance Portability and Accountability Act addressed this portability problem and protects those people in employer plans who have already served out an exclusion period for preexisting conditions from facing another such period, provided they have maintained continuous coverage).

Health insurance benefits can, therefore, help keep workers in a firm, whereas dissatisfaction with health benefits may cause workers to consider other employment opportunities (Rynes and Gearhart 2000, 33–4). Employers may also have productivity or recruiting considerations in mind when deciding to provide retiree health benefits. Firms with a stable, long-term workforce may offer retiree health benefits to encourage efficient retirement patterns. Without health benefits, a firm's turnover may be too high, and without retiree benefits, workers' decisions to delay retirement may interfere with the firm's productivity. The recent erosion in retiree benefits may mean that employers no longer believe they need to provide retiree health benefits to attract high-quality workers or encourage efficient retirements.

Third, health insurance may enhance workers' effort and productivity because of the psychosocial aspects of having a "good job." Most workers recognize that good health coverage is necessary to ensure access to medical care and protect economic well-being. Consequently, the simple fact of its offering health insurance may increase satisfaction with a job. Conversely, the lack of insurance imposes burdens on workers and their families. For the uninsured, the financial consequences of a serious illness can quickly exhaust the additional wages provided to workers not offered employment-based health coverage. Workers who do not have to worry as much about their own illnesses or those of family members covered by health insurance may also be more productive. The economic theory of

“efficiency wages” may justify an employer’s decision to provide health benefits. The theory of efficiency wages suggests that employers who pay their workers more than the going market rate are likely to have more productive workers. Employees who would have a difficult time finding a better-paying job if they left or were fired from their current job work harder than do workers who could easily move to another job that paid equally well. Thus, some employers pay above-market wages in order to reduce turnover, improve morale, and obtain the best performance from their employees. Most employers’ investment in their workers extends beyond wages to include education and training, health coverage, and other compensation and work-life benefits. Many analysts “accept as fact that investments made in human resources, employee services and general workplace environment have a positive impact on productivity.” Consequently, firms’ expenditures for health coverage and services can be viewed as a “complex investment” designed to maintain and improve health (Berger et al. 2001, 23).

Fourth, health insurance may contribute to workers’ and firms’ productivity, as healthy workers are usually more productive than unhealthy workers. Since workers with health insurance may be more likely to seek regular preventive care and get needed treatment for illnesses and injuries, those with health insurance may be less likely to miss work and to miss fewer days of work when they do fall ill. Workers’ absences are expensive to employers—finding temporary replacements is costly; the operation of production teams may suffer; and assets may be left idle—and sick employees may be less productive when they are at work. Similarly, other workers in the firm do not feel obligated to work harder to compensate for employees who are absent or unproductive at work. Unhealthy workers also may quit or retire early, creating a costly source of turnover. The benefits to employers of having healthier workers may also lower other labor costs, especially the cost of short-term and long-term disability insurance and workers’ compensation.

Finally, it may simply make more sense for employers to provide health insurance because it is good business for their workers to have more or less standard health insurance benefits. Workers seeking coverage on their own may end up with different levels of insurance protection. Even if those differences reflect the workers’ varying preferences, they may not meet their employers’ needs, and many workers may end up without insurance and face high out-of-pocket bills or difficulties getting needed medical care.

Do employers think health coverage affects workers' and firms' performance? The cost, quality, and generosity of the health coverage and of the other kinds of health-related investments that employers make all vary. Some employers offer comprehensive and generous health benefits. Some also provide access to on-site medical care and prevention and wellness programs. Some even invest in community health activities and work with providers to improve the quality of medical care available to the community as a whole. These differences suggest that employers may perceive different returns on these investments. However, at least anecdotal evidence from employer surveys and commentary in the business press shows that most employers believe that health insurance and their employees' health are important to productivity and organizational performance.

In surveys of employers both large and small, employers report that offering health benefits improves the firm's performance. In one recent survey, a large majority of small employers (78 percent) reported that offering health benefits affected recruitment; three-fourths said that it helped retain employees; and a similar proportion maintained that it improved employees' attitudes and performance. Two-thirds reported that health benefits helped improve the health of employees, and almost 60 percent believed that helped reduce absenteeism (EBRI/CHEC/BCBSA 2000).

To human resource experts, the conventional wisdom is that health insurance matters to the firm's performance. Health benefits are used to recruit and retain the best employees in a competitive labor market, and investments in health, including health insurance, wellness programs, and disability management, are seen as key components of a strategy of investing in the firm's human capital. Consultants advising employers also frequently stress the gains to employers from offering coverage. "Organizations may experience reduced costs and a more loyal workforce," one consultant suggested. Furthermore, when benefits are made available to lower-level employees as well as "core" employees, the effect is to "emphasize a team concept and strengthen relationships between employees" (Davy 1998).

Consultants acknowledge, however, that a full understanding of "the impact of employee benefits on productivity has been lacking and is just starting to emerge." Those corporate benefit managers and chief financial officers who emphasized controlling the cost of employee benefits now realize that managing productivity losses is more important than controlling costs. Employers are now concerned with managing medical

costs “with an eye toward how the management of disease will affect lost time and productivity” (Ceniceros 2000).

With respect to some of these investments in health, some employers have begun to assess the effect on productivity of investing in their employees' health and to calculate the return on their investment. As one analyst observed, “Programs that focused on health, disability, absence and turnover [have rarely] been associated with the achievement of corporate objectives. However, there is an increasing awareness that these programs may play a significant role in achieving improved organizational productivity and, for commercial enterprises, improved profitability” (Goetzel et al. 2001, 15).

## Evidence of the Effects of Health Insurance

Are employers' perceptions of the value of health and health coverage consistent with the evidence from empirical studies? Is health coverage associated with measurable gains in health and productivity? Is absenteeism reduced? Do the benefits of health coverage justify its costs? The existing empirical research can shed some light on these questions, but it is hardly conclusive. Substantial gaps in research remain.

### *Worker Quality and Turnover*

Do firms offering health benefits recruit and retain higher-quality workers than do firms that do not provide health coverage to workers? Are firms offering health insurance more likely to attract workers interested in a long-term employment relationship? Many studies (see table 1) suggest that workers in jobs with health insurance coverage change jobs less frequently than do workers in jobs without health benefits (Anderson 1997; Buchmueller and Valletta 1996; Madrian 1994b; Monheit and Cooper 1994; Slade 1997). Evidence for this relationship remains somewhat mixed, however, with other studies suggesting that offering health insurance has very little or no effect on job turnover (Holtz-Eakin 1994; Kapur 1997; Mitchell 1982; Penrod 1995). Moreover, even if researchers could agree on whether and how much health coverage affects turnover, they would still disagree about the productivity implications of the turnover effect.

TABLE 1  
Health Insurance and Job Turnover

Study	Key Findings
Mitchell 1982	No effect of health insurance (HI) on job change or job departure.
Monheit and Cooper 1993	Employment-based HI reduces turnover by 25% for married women, 38% for married men, 29% for single men, and 30% for single women. Being likely to gain employment-based HI as a result of turnover increases turnover by 28% to 52%; being likely to lose HI as a result of turnover reduces turnover by 23% to 39%. The effect of health conditions on turnover varies in sign and significance with condition.
Madrian 1994b	Employment-based health insurance reduces turnover by 25% to 30% when identified by spousal health insurance, by 32% to 54% when identified from family size, and by 30% to 71% when identified from pregnancy.
Gruber and Madrian 1994	One year of continuation coverage increases job turnover by 10%.
Holtz-Eakin 1994 Penrod 1995	No effect of employment-based HI on job turnover. Little evidence supporting an effect of health insurance on job departure.
Buchmueller and Valletta 1996	Employment-based health insurance reduces turnover by 35% to 59% for married men, 37% to 53% for married women, 18% to 33% for single men, and 35% for single women. Among those with employment-based health insurance, spousal coverage increases turnover by 26% to 31% for married men and 34% to 38% for married women.
Anderson 1997	Employment-based HI reduces job mobility for those for whom losing coverage would be costly. Lack of employment-based HI increases mobility for those who would benefit most by having it.
Slade 1997	Individuals who change jobs frequently are less likely to be employed in jobs with HI. On job change, the effect of the availability of and the demand for HI is sensitive to empirical specification.
Kapur 1998	There is no significant or substantive impact of health insurance on job departure.

*Note:* These studies were reviewed in Currie and Madrian 1999, 3394–7.

Empirical studies also show that the availability of health benefits affects retirement choices (see table 2). Individuals covered by employment-based health insurance plans while working are less likely to retire early (i.e., before they reach age 65 and become eligible for Medicare) if doing so would mean losing those health benefits. Therefore, access to employer-sponsored retiree health benefits substantially increases the likelihood of early retirement (Karoly and Rogowski 1994; Madrian 1994a; Rogowski and Karoly 2000). The continuation of coverage options is also shown to increase the likelihood of early retirement (Gruber and Madrian 1993), but to a lesser extent than do employer-funded retiree health benefits, since retirement choices also depend on the cost of coverage to workers (Johnson, Davidoff, and Perese 1999). No studies addressed the issue of worker quality, and there is far from any consensus on what the impact of health coverage on retirement means for firms' productivity and profitability.

### *Health and Worker Productivity*

The existing studies found little evidence that workers with health coverage are absent less often than are workers without coverage. For example, the Rand Health Insurance Experiment found that the effect of insurance coverage on work loss days was small and insignificant (Buchmueller 2000, 14). Similarly, despite years of research outside mainstream economics (in human resources and industrial psychology), there is almost no direct evidence regarding the effect of health insurance coverage on morale and worker productivity and the firm's performance. In those fields, although the link between employment practices and productivity is widely recognized, "the linkages between productive behavior and psychosocial job structure have remained unclear in the eyes of many observers" (Karasek and Theorell 1990, 162). However, there is compelling research demonstrating that health insurance has a powerful influence on access to health care, the timeliness of care, the amount and quality of care received, and fundamental health (see table 3). People without health insurance are less likely to seek medical care, less likely to get it, and, as a result, more likely to be in worse health and have higher death rates than are people with insurance coverage (for comprehensive reviews of this evidence, see ACP-ASIM 1999; Hadley 2001; and U.S. Congress 1992). Uninsured persons have a much greater risk of health

TABLE 2  
Health Insurance and Retirement Decisions

Study	Key Findings
Hurd and McGarry 1993	Workers who have retiree health insurance that is at least partially funded by their employers are 18% to 24% less likely to be working full time beyond age 62 than are workers without health insurance.
Karoly and Rogowski 1994	The probability of early retirement increases by 50%, or 9 percentage points, among workers with access to health insurance. The availability of health insurance in addition to employer-sponsored insurance (ESI) increases the likelihood of early retirement.
Gruber and Madrian 1993 Madrian 1994a	There is a sizable and significant effect of continuation coverage on retirement among males age 55 to 64. Individuals with retiree health insurance retire five to 16 months earlier than those without ESI. The probability of retiring before age 65 is between 7 and 15 percentage points higher for workers with retiree health insurance.
Gustman and Steinmeier 1994	Employment-based health benefits lower retirement age by 1.3 months. The effect triples when the value of health benefits to workers is used rather than cost to employer.
Lumsdaine, Stock, and Wise 1994 Gruber and Madrian 1995	Retiree health benefits have no impact on retirement behavior. Continuation of coverage group rate subsidies encourage early retirement for those not yet eligible for Medicare. The probability of retiring increases 32% (2.2 percentage points) for each additional year of continued coverage.
Blau and Gilleskie 1997	Among men ages 51 to 62, the availability of retiree health benefits increased the rate of retirement by 2 percentage points per year when retirees were required to contribute to the cost of coverage, and 6 percentage points per year when they were not, an increase of between 26% and 80% in the retirement probability. The rate of retirement increases with age.
Rust and Phelan 1997	Men aged 60 to 61 with retiree health insurance were as much as 10 percentage points more likely to retire than men without such insurance.
Fronstin 1999b	Postretirement pension benefits and the availability of retiree health benefits have a significant influence on workers' retirement age expectations.
Rogowski and Karoly 2000	Workers with access to retiree health benefits were 68% more likely to retire than were their counterparts without access to ESI.

Note: These studies were reviewed in Fronstin 1999a, 7–11.

TABLE 3  
Health Insurance and Health

Study	Key Findings
Young and Cohen 1991	Compared with privately insured patients, uninsured heart attack patients were 15% to 43% less likely to receive a major heart procedure and were 50% more likely to have died within 30 days of discharge, if discharged alive (13.1% mortality compared with 8.3%).
Ayanian et al. 1993	Controlling for disease stage, uninsured women with breast cancer (with local or regional disease) had a 50% lower survival probability up to five years postdiagnosis; no difference for women with distant disease.
Franks, Clancy, and Gold 1993	Uninsured persons were 1.25 times more likely to die than were privately insured persons; almost twice as many uninsured persons had died after 17 years (18.4% compared with 9.6%).
Sorlie et al. 1994	Compared at baseline with privately insured persons, uninsured persons were 1.2 to 1.5 times more likely to have died after five years.
Ayanian et al. 2000	Controlling for other risk factors, uninsured persons were significantly less likely to receive screening and preventive services and, due to cost, significantly more likely to report not seeing a physician when sick.
Baker et al. 2001	Uninsured persons were 1.4 times more likely to have a major health decline or to die and were 1.2 times more likely to develop an activity limitation (difficulty walking or climbing stairs).

*Note:* These studies were reviewed in Hadley 2001.

decline and death, with several studies showing them to be 1.2 to 1.5 times more likely to die than are insured persons (Baker et al. 2001; Franks, Clancy, and Gold 1993; Sorlie et al. 1994).

Studies examining access to care and the outcomes of treatment for persons with specific diseases or medical conditions also found that the uninsured receive less timely care and less intensive care and suffer worse outcomes as a result. Uninsured women with localized breast cancer have a 50-percent lower probability of survival compared with insured women (Ayanian et al. 1993). Similarly, uninsured heart attack patients were shown to be less likely to undergo a major heart procedure and more likely to die (Young and Cohen 1991). Even when the uninsured are



relatively healthy, they are less likely to receive screening and preventive services and are more likely to report not seeing a physician when sick because of cost (Ayanian et al. 2000). Although some studies suggest, to the contrary, that health insurance has little impact on health outcomes (Perry and Rosen 2001; Ross and Mirowsky 2000), the consensus view of a recent Institute of Medicine panel was that the links between health insurance coverage and access to care and health coverage and overall health were well established (Institute of Medicine 2001, 2002).

A number of economic studies also demonstrated that health matters for individual labor market outcomes, including labor force participation, hours worked, and earnings (see table 4). People in poor health or with specific health conditions like arthritis, depression or other psychological disorders, or chronic backache, for example, worked less and earned less than did people in good health (Bartel and Taubman 1979; Chirikos and Nestel 1985; Ettner, Frank, and Kessler 1997; Fronstin and Holtmann 2000; Mitchell and Butler 1986; Rizzo, Abbott, and Berger 1998). Workers were also more likely to quit and retire early when they were in poor health (Diamond and Hausman 1984).

Researchers are also beginning to calculate the costs to employers of unhealthy employees. Some studies demonstrated that poor health may be related to increased absenteeism (see table 5) and lower productivity (see table 6). Other studies examined the effects on workplace productivity of specific health conditions and health risks, including hypertension, heart disease, obesity, depression, and asthma. These studies showed that the productivity effects of illness result mostly from absences (Frank and Manning 1992; Paringer 1983; Rizzo, Abbott, and Berger 1998; Rizzo, Abbott, and Pashko 1996; Vistnes 1997; Yen, Edington, and Witting 1992). Poor health, as the studies of workers' labor market outcomes suggested, may also lead to turnover and early retirement. "In extreme cases, poor employee health may also lead to premature death, resulting in significant turnover costs to employers from the search for new workers and subsequent training" (Greenberg, Finkelstein, and Berndt 1995, 27). Research also demonstrates that exhausted, depressed, sick, or injured workers are not energetic, accurate, or innovative at work, leading to productivity losses. The studies show that poor health reduces workers' productivity at work, and that effective health care treatments can reduce productivity losses and may even "pay for themselves" in terms of increased productivity (Berndt et al. 1998; Burton et al. 1998, 1999,

TABLE 4  
Health and Workers' Labor Market Outcomes

Study	Key Findings
Bartel and Taubman 1979	Poor health (hypertension and heart disease) reduces earnings by 8.5%.
Diamond and Hausman 1984	"Bad health" has a larger impact on retirement than do any of the other demographic variables examined (education, marital status, number of dependents, wealth).
Chirikos and Nestel 1985	Compared over ten years with workers in good health, poor health reduces earnings by 12% to 28%, depending on race and gender.
Mitchell and Butler 1986	Men with arthritis had 15% to 30% lower annual earnings than did men without arthritis, depending on its severity.
Pincus, Mitchell, and Burkhauser 1989 Mullahy and Sindelar 1994	Earnings of men and women with arthritis were 30% to 63% of the earnings of people without arthritis. Direct and indirect effects of alcohol abuse are prominently displayed in income. Empirical results suggest that alcoholism has negative indirect effects on income attributable to reduced educational attainment and increased marital disruption. These are greater than the direct effects.
Ettner, Frank, and Kessler 1997	Psychiatric disorders significantly reduce employment among both men and women. Conditional on employment, results are a small reduction in work hours and a substantial drop in income. In the aggregate, psychiatric disorders reduced the probability of employment by about 15%.
Rizzo et al. 1998	Average annual productivity losses per worker due to chronic backache were \$1,230 for male workers, measured in 1996 dollars, and \$773 per female worker. Aggregate annual productivity losses from chronic backache were approximately \$28 billion in the United States. Productivity losses from chronic backache differ by gender and other sociodemographic characteristics. Aggregate labor productivity losses associated with chronic backache were quite large and comparable to estimates of the direct medical costs associated with treating this chronic illness.
Fronstin and Holtmann 2000	Health insurance increases the likelihood of good health, which in turn increases expected earnings. The annual increase in earnings for men working full time and for a full year ranges from \$97 to \$381 and, for women, from \$47 to \$467.

TABLE 5  
Health, Health Care, and Absenteeism

Study	Key Findings
Paringer 1983	Health status and age are the principal determinants of work absences; economic variables have little impact on time lost from work. Perceived health status is an important predictor of hours lost when all workers are included in a regression equation. Age is significantly related to the number of work days missed because of an illness; the effect varies by gender and occupation.
Mintz et al. 1992	Functional work impairment is common among workers with depression: 11% are unemployed, and 44% experience on-the-job performance problems (absenteeism, decreased productivity, interpersonal problems). These impairments are highly responsive to treatment, given adequate time.
Yen, Edington, and Witting 1992	Employee health has a significant impact on costs of medical claims and losses due to absenteeism. Most costs of absenteeism are due to illness. Among the health-related measures significantly related to absence were smoking, drug and medication use, blood pressure, and total cholesterol.
Nichol et al. 1995	Vaccination against influenza has substantial health-related and economic benefits for healthy, working adults. Primary study outcomes included upper respiratory illnesses, absenteeism from work because of upper respiratory illnesses, and visits to physicians' offices for upper respiratory illnesses. During the three-month follow-up period, those who received the vaccine reported 25% fewer episodes of upper respiratory illness than those who received a placebo (105 vs. 140 episodes per 100 subjects); 43% fewer days of sick leave from work due to upper respiratory illness (70 vs. 122 days per 100 subjects); and 44% fewer visits to physicians' offices for upper respiratory illnesses (31 vs. 55 visits per 100 subjects). The cost savings were estimated to be \$46.85 per person vaccinated.
Rizzo, Abbott, and Pashko 1996	The net benefits to employers from having workers take prescription medicines for their chronic illnesses are substantial.

(continued)

TABLE 5—*Continued*

Study	Key Findings
Kessler and Frank 1997	<p>Assuming average compliance rates were achieved, net benefits to employers in 1987 amounted to \$286 per hypertensive employee, \$633 per employee with heart disease, \$822 per depressed employee, and \$1,475 per type II diabetic employee under medication from a physician. These estimated benefits accrue because prescription medications substantially lower absenteeism among chronically ill workers.</p> <p>Work impairment is one of the adverse consequences of psychiatric disorders. In comparison, the average prevalence of psychiatric work loss days (six days per month per 100 workers) and work cutback days (31 days per month per 100 workers) do not differ significantly across occupations. There is substantial variation across occupations in the prevalence of psychiatric disorders, with an average prevalence of 18.2% for any disorder. The effects of psychiatric disorders on work loss are similar across all occupations, while effects on work cutback are greater among professional workers than those in other occupations.</p>
Vistnes 1997	<p>Most absenteeism is related to illness. For both men and women, health status measures (such as self-reported health status and medical events) more consistently explain absenteeism than do economic factors such as wages.</p>
Rizzo, Abbott, and Berger 1998	<p>Average annual productivity losses from chronic backache per worker between \$733 (women) and \$1,230 (men), resulted in 1996 in an aggregate annual productivity loss in the United States of \$28 billion. These productivity losses are quite large, comparable to direct medical costs for treating this chronic illness.</p>

2001; Frank and Manning 1992; Kessler and Frank 1997; Rizzo, Abbott, and Berger 1998; Rizzo, Abbott, and Pashko 1996).

Researchers trying to quantify the indirect costs of illness to employers reported that these indirect costs frequently surpassed employers' direct expenditures on health benefits. When employers factor in the indirect costs—such as those for replacement workers, overtime premiums, productivity losses due to unscheduled work absences, and productivity

TABLE 6  
Health and Productivity at Work

Study	Key Findings
Berndt et al. 1998	<p>Medically efficacious treatments for depression positively affect workplace productivity. The at-work performance of chronically depressed patients improves as the severity of their depressive symptoms is reduced. Responses to each of the six work performance questions indicate considerable improvement. A composite measure shows a "compelling bivariate relationship." Less severe depression is associated with better work performance. Change in perceived work status is moderately reduced as baseline depressive status becomes more severe. The most significant limitation is that measures of work performance are subjective: "We refrain from offering any quantitative estimate of how much 'real' work productivity improves as depressive severity is reduced."</p>
Burton et al. 1999	<p>Overall health risk status appears to be related to the likelihood of meeting a productivity standard, but the relationship is not statistically significant. Some specific health risks were significantly related to a failure to attain the productivity standard and were associated with work hours lost because of absence due to illness, including "general distress," diabetes, and body mass index. Most of the productivity loss was not due to absence, but to failure to meet the productivity standard, but this pattern varied across health risks.</p>
Burton et al. 2001	<p>A significant correlation was observed between an increase in pollen counts and a decrease in productivity for workers with allergies. Compared with workers without allergies, employees with allergies who reported using no medication showed a 10% decrease in productivity. No differences were observed among workers with allergies who used different types of medications, although the medication groups were significantly more productive than the no-medication group. The expected lowered productivity of those workers with allergies who used sedating antihistamines may have been offset by their relatively less severe symptoms and by the nature of the job and the productivity measures used.</p>

losses of workers while on the job—the total health and productivity cost burden is quite large (Karasek and Theorell 1990, 167). But the estimates of indirect costs are controversial, with no agreement on the best way to value the cost to employers of lost work days and lost productivity due to poor health (Berger et al. 2001).

### *Other Labor Costs*

The relationship between firms' health insurance offerings and the incidence and cost of disability and workers' compensation claims has received only scant attention in the literature (see table 7). As Thomas Buchmueller observed in his review of the evidence, only one study (Card and McCall 1996) tried to estimate the relationship between health insurance coverage and workers' compensation claims. Card and McCall's study tried to determine whether the variation in workers' health insurance coverage could explain why a disproportionate number of workers' compensation claims were filed on Mondays. Although uninsured workers were more likely to receive workers' compensation benefits, Card and McCall found that predicted insurance coverage had no effect on the prevalence of Monday claims. Buchmueller concluded that "Card and McCall's analysis provides no support for the premise that firms that offer insurance reap a benefit in the form of lower workers' comp[ensation] claims" (Buchmueller 2000, 11).

While the study may not support the contention that firms offering health coverage had fewer claims, that is not the question that Card and McCall wanted to answer. Rather, their more narrowly focused study asked whether the Monday effect could be explained by fraud on the part of uninsured workers. In addition, the study relied on the predicted likelihood of insurance coverage and did not account for variations in cost sharing or the quality of workers' health coverage. A full accounting of the value of health coverage to firms would have to examine whether firms with generous health benefits plans had fewer workers' compensation claims and lower overall workers' compensation costs, questions not addressed in Card and McCall's study.

With regard to disability claims, the authors of one study showed how the generosity of coverage for mental health affected the incidence of disability claims. Looking at employers' long-term disability claims for mental disorders, David Salkever and his colleagues (2000) found that the incidence and cost of claims were affected by the health plans'

TABLE 7  
Health Insurance and Other Labor Costs

Study	Key Findings
Card and McCall 1996	Workers with low probabilities of medical coverage are no more likely to report a Monday injury than are other workers. Moreover, employers are no more likely to challenge the Monday injury claims of workers with low medical coverage rates than the claims filed by workers with high coverage rates.
Kessler et al. 1999	Depressed workers have more short-term disability days. Depressed workers were found to have between 1.5 and 3.2 more short-term work-disability days in a 30-day period than other workers had, with a salary-equivalent productivity loss averaging between \$182 and \$395. These workplace costs are nearly as large as the direct costs of successful depression treatment, which suggests that encouraging depressed workers to obtain treatment might be cost effective for some employers. Forty-five percent to 98% of the treatment cost would be offset by the increased work productivity.
Salkever et al. 2000	Employee fringe-benefit arrangements, including patterns of coverage for mental health treatment, were found to be important predictors of disability claims incidence rates. The proportion of health plans with high deductibles for mental health services was significantly and positively related to the number of claims. The fraction of plans with mental health carve-outs was negatively related to the number of claims. Mental health and health services availability and benefits variables showed virtually no significant effects on benefit payments for individual claims. Some employee disability-management strategies, such as front-line manager involvement and provision of alternative jobs for employees returning from disability leave, are predictive of lower claims rates and/or costs.

particular characteristics. The authors explored a broad range of factors thought to be associated with mental disorder claims for long-term disability insurance. These factors included the workers' characteristics, the provisions of the long-term disability policy, the firm's disability management policies, and the physical and financial accessibility of health care services and benefits (including mental health care). Since all firms

offering long-term disability insurance (and disability management services to employees) also provided health benefits to employees, the study examined how the incidence and cost of disability claims varied with the generosity and structure of the health plan.

The authors found evidence that more generous mental health coverage was associated with fewer mental disorder long-term disability claims. High deductibles for mental health services were associated with more disability claims, whereas the fraction of plans with mental health care carve-outs (which expand access to specialty outpatient care) and shorter exclusion periods for preexisting conditions significantly reduced the claims rate (Salkever et al. 2000, 99). In addition, when firms with less generous mental health coverage expanded that coverage, the disability claim rate was lower. Although the authors did find fewer claims, they found no evidence that insurance coverage was related to the level of benefit payments for individual claims.

### *Organizational Performance and Profitability*

Perhaps the most important impact of health insurance is its effect on firms' productivity and profitability, although these effects were not directly tested. Similarly, no studies compared the quality or ability of workers employed by firms providing health insurance with workers at firms that did not offer insurance. However, the evidence that firms offering health insurance paid their workers higher wages than did those not offering health benefits suggests that insured workers may be more productive than uninsured workers. A complementary explanation is that workers with health insurance also received a wage premium, or an "efficiency wage."

Some analysts make a similar argument with regard to pensions and productivity: "The strength and durability of the wage/pension relationship across different data sets and empirical procedures support the view that pensions enhance productivity" (Dorsey, Cornwell, and Macpherson 1998, 58). More remains to be learned about how health insurance fits into a compensation structure that enhances work effort. However, the fact that firms making a wide range of investments in workers typically start with health insurance suggests that health coverage comes to mind first when employers consider making human capital investments in their workforce.



### *Gaps*

Our review indicates that evidence of a “business case” for health coverage can be found in a broad range of empirical studies. Despite the dominant view that workers shoulder all the costs (in the form of reduced wages) and absorb all the benefits of health insurance, the empirical evidence for the theory of compensating differentials is weak. Jobs without health insurance do not seem to come with a compensating wage premium. Rather, employers offering health insurance to workers often also pay them higher wages, invest more in training, and provide other features associated with a “good job,” such as opportunities for promotion. Firms’ decisions about whether to offer and how to structure health benefits likely depend on how they think these choices will affect the outcomes the firm cares about, including the quality and quantity of labor, productivity, and profitability. Taken as a whole, these studies suggest that health insurance and health affect worker productivity, turnover, and retirement decisions. Some evidence shows that health insurance may help employers attract and retain higher-quality workers. In addition, numerous empirical studies show that health insurance improves health, whereas other studies show that healthier workers are more productive.

This empirical research begins to confirm the conventional wisdom among human resource professionals that human resource policies, including fringe benefit policies and practices, can provide a direct and economically valuable contribution to a firm’s performance. But no studies furnish evidence on the direct effect of health insurance on a firm’s profitability. Moreover, the relative importance of the ways in which health insurance affects productivity is not known. Tests of the direct relationship between health insurance and firm performance and an understanding of the factors contributing to any effects are needed for future research.

The lack of direct evidence regarding the value of health benefits to employers can be attributed to several factors. The first and most obvious explanation is that economists have not tried to find such evidence. The empirical literature on the labor market effects of health insurance has focused on workers, not firms. Many empirical studies looked at how the availability of employment-based health benefits affected individual decisions about work and work outcomes and paid far less attention to the complex ways in which health coverage and health might affect firms’ productivity and profitability. The lack of empirical evidence is not due

solely to the neglect of the business case in economic theory, however. Substantial measurement and methodological difficulties also stand in the way. Several of the economic outcomes of interest are difficult to measure, including the value of employment-based insurance to workers and workers' productivity. In addition, the effects of employment-based coverage can be expected to vary with the generosity of coverage and the quality of the health benefits provided, but there is no accepted way of measuring these differences.

Because health insurance is often just one part of a broader package of things that come with a good job (including good pay, pension coverage, training opportunities, and promotion potential) and because of the complementarities of health-related investments and other human capital- or human resource-related investments made by employers, it is difficult to sort out the particular effect of health insurance in an empirical study. The health and productivity of today's workforce, moreover, depend on factors other than workers' current access to health care. Among other things, they also depend on the workers' past coverage and access to health care. But longitudinal data on health insurance coverage are hard to come by, making it difficult to assess the full impact of health coverage and the expanded access to care that it provides.

Even when the variables of interest can be measured in a straightforward way, researchers do not often have all the data they need. Detailed individual compensation data gathered across employers are difficult to collect. Researchers, for example, may have information on employers but none on the characteristics of employees. Others may have good data on workers' characteristics but none on the firms for which they work. Similarly, researchers may have information on workers' health insurance coverage but none on their pension coverage, employment-based training, or wages—variables needed in order to isolate the effect of health insurance on productivity and profitability. Researchers often attempt to "impute" these values, but their attempts are necessarily imperfect and lead to imprecise estimates. Similar kinds of measurement gaps and methodological problems have limited the empirical research on pensions and productivity. Although there is a well-developed literature on the "economic value" of pensions to firms (pensions help reduce turnover, create incentives for workers not to "shirk," and regulate retirement behavior), there are few direct tests of the effects of pensions on productivity (Dorsey, Cornwell, and Macpherson 1998; Gustman and Mitchell 1992). More generally, research on the impacts of compensation

policies has been limited. With the exception of research on executive compensation, little is known about how different employee compensation practices affect firms' performance.

A key question remains: if offering health insurance and investing in employee health affect productivity, why do some firms offer health insurance coverage and others do not? What prevents many small employers from offering health benefits? Why do large employers—nearly all of which offer health insurance—fail to make all their workers eligible for health insurance? Many workers earning very low wages simply cannot afford health insurance coverage. They are not able to pay for health benefits; their employers are not willing to absorb the full cost of providing them; and they lack the union representation that might secure access to health benefits through collective bargaining. The disparities may also be due to the differences in the labor market conditions for different groups of workers. Although firms may need to offer health benefits to attract highly skilled workers, different rules may operate in labor markets for less skilled workers. Labor markets may be segmented, with different groups of workers operating in different labor markets with different working conditions, opportunities for promotion, wages, and market institutions (Reich, Gordon, and Edwards 1998). According to this theory, there are persistent differences in the way that different groups of workers are treated. Thus, in the “secondary labor market”—in which jobs tend to be filled by minority workers, women, and young people—stable work habits are not required (and even discouraged); wages are low; turnover is high; and job ladders are few. In the primary labor market, by contrast, jobs require and develop stable working habits; skills are acquired on job; wages are relatively high; and job ladders exist. Providing health insurance to primary workers may be economically beneficial, whereas providing it to secondary workers may not be.

In addition to these demand side and structural barriers, however, gaps in coverage may also be caused by employers' failure to supply it. The failure of some firms to offer health insurance may be due to real differences in cost and benefits or gaps in information. Among firms that would benefit equally, different choices may reflect different business strategies.

One explanation is that the costs of health coverage vary across employers. The overhead and administrative costs of health insurance programs are much higher for small firms than for large firms. In addition,

since smaller firms have higher turnover rates, a health insurance plan's administrative costs also are higher. In addition, employers may perceive differently the benefits of health insurance and health. Employers may differ, for example, in their perceptions of their effects on output and the costs of providing health insurance to workers. If employers offer a wage-and-benefit package in accordance with their perceptions of specific benefits, they may make different choices depending on how absenteeism and turnover affect output and costs. For example, the costs of absenteeism may vary depending on how work loss affects the flow of output and depending on how inventory costs are associated with the variation in output. Firms that rely on team-based approaches to work organization may be more affected by absences and thus make greater investments in health. The costs of turnover, moreover, may change with workers' firm-specific human capital (Berger et al. 2001; Pauly et al. 2002). If, however, providing health insurance to workers would enhance a firm's performance regardless of how its work is organized, then information gaps may help explain the gaps in employers' offerings. Although some employers may understand that employees' health problems may incur costs beyond those paid out of pocket, others may not take proper account for the indirect costs of illness.

### Suggestions for Future Research

Additional research is needed to better document the value of health and health insurance coverage to employers. However, since almost all large firms offer health insurance to at least some of their employees, there is no easy way to demonstrate that not offering health coverage adversely affects firms' performance. One way to proceed is to take advantage of differences in health plan offerings across large firms—differences in the proportion of workers made eligible for coverage, the share of premiums paid by workers, the availability of dependent coverage, the generosity of coverage, and the like—to determine how these differences affect workers' take-up and firms' performance.

Another approach is to devise better measures of the value of the production losses associated with poor health. Existing efforts to measure the "cost of illness"—or to quantify the value of the production losses attributable to employees' poor health—have always been uncertain. Recently, Berger and colleagues (2001) called for an improved assessment of

the returns to investments in health. They argued that the existing methods of valuing productivity losses, including the “human capital” (based on lost wages or earnings) approach and the “friction cost” approach (developed in Koopmanschap and Rutten 1996 and Koopmanschap et al. 1995), are problematic and that a more careful accounting is needed to ensure an appropriate investment in health. The authors explained that “although employers realize that sick leave and mortality have a meaningful economic impact, questions are still unanswered about the best way to measure the gains and costs in a manner that helps decision makers analyze the consequences of their health investment decisions” (Berger et al. 2001, 19). They suggested that existing approaches to measuring the costs of illness are flawed because they adopt a societal, rather than an employer, perspective. For example, although premature mortality may be properly counted as a cost of illness from the perspective of society, the employer may bear only a portion of these costs. Furthermore, the existing methods of measuring the costs of illness may underestimate the true gain to employers from improved health. To complicate matters, the authors noted that no single measurement approach is likely to work for all firms. Different methods of valuing work loss are needed for firms that use team-based production approaches, for example, since the impact of a worker’s absence on output is quite different in that kind of firm compared with a firm that does not use a team-based production approach (for an extensive discussion, see Pauly et al. 2002).

Another useful direction for research on the business case would be to follow the model used in the industrial relations literature. There, research has focused on the benefits of workplace innovation or “high-performance work practices.” This literature shows that groups of innovative work practices greatly affect productivity. That is, firms experience large productivity gains when they adopt complementary practices such as careful recruiting and selection of workers, skills training, employment security, work teams, flexible job assignments, and labor-management communication. Analysis of the implementation of these innovative employment practices in steel-finishing lines, for example, reveals significant productivity gains (Ichniowski, Shaw, and Prennushi 1997). Other studies show that reorganizing work to facilitate team-based processes and other high-performance practices, such as incentive pay and labor-management communication, also generate significant productivity gains in the apparel industry and in medical devices and digital-imaging production (Appelbaum 2000). In much of this research,

the success of these practices is not dependent on the specific conditions for any one firm. When old firms overcome the nonpecuniary costs of switching to new human resources policies and employment practices, their productivity rises significantly (Ichniowski 2000).

Researchers concerned with demonstrating the importance of health coverage to firms' productivity should draw on the lessons learned in the literature on workplace innovation. One lesson is that the productivity effects of high-performance work practices are not observed when employers adopt one or two innovative practices. Rather, the effects depend on adopting several of these innovations. However, a second observation from this literature is that even when firms face similar markets and use similar technologies, firms nevertheless adopt different practices because their business strategies are different (Cappelli 1999). Some firms adopt "high-road" employment practices—providing worker training, participatory work processes, job ladders, high wages, and good benefits—in order to cultivate a stable workforce, engender worker loyalty, and promote superior employee performance. Others may pursue a low-cost strategy. Economists cannot yet explain the different choices that firms make, but recent research suggests that similar firms, faced with similar markets, make very different choices regarding workers. And the choice of worker mix is inextricably bound up with other choices that firms make. "Firms ultimately locate along a productivity/earnings/skill locus with some firms being high productivity, high wage, and high skill while others are low productivity, low wage, and low skill" (Haltiwanger, Lane, and Speltzer 2000, 4). Making progress demonstrating the importance of health coverage to firm productivity may depend on taking into account the complex web of choices that firms make.

## Conclusions

Although empirical research has not yet adequately documented the gains to employers, some research sheds light on what employers may gain, including lower turnover, improved access to care, healthier and more productive workers, and fewer disability claims. But the existing evidence is far from conclusive, and noticeably absent are studies that assess the direct effects of health coverage on the bottom line. Despite the difficulties of this empirical research, a more accurate accounting of

the value of employer-provided health insurance to both employers and employees is needed to reveal employers' behavior and coverage patterns.

Whether or not economists demonstrate the empirical validity of the proposition that health insurance and the access to care that it provides are important determinants of firms' productivity and profitability, many employers will continue to offer health insurance to workers and retirees and their families in order to remain competitive in labor markets. Others, though, with little evidence on the magnitude of performance gains, will find it difficult to evaluate the likely payoff from offering health insurance to workers. Quantitative evidence that health insurance matters for worker and firm outcomes may provide the kind of information that employers need to expand their investments in health insurance and workers' health.

A better understanding of employers' motivations for offering coverage also is needed to inform policy debates. Many discussions of the anticipated effects of policy changes depend on the value that employers place on their existing plans. For example, it has been suggested that a policy to provide tax credits for individually purchased health insurance may cause many employers to drop their existing health plans. Similarly, predictions about whether employers are likely to replace defined benefit plans with defined contributions for health care also depend on employers' valuations of employment-based health benefits. In at least one series of discussions on the topic, "veteran employee benefits managers" acknowledged that a defined contribution strategy "could disrupt employee relationships, squander the years of effort employers have invested in cost containment, and lose the efficiencies associated with . . . employer-sponsored health insurance products." The change would amount to "a substantial setback for companies that have been trying to promote a stronger link between health, health benefits, and productivity, including reducing disability and absenteeism" (Office of the Assistant Secretary for Planning and Evaluation 2000, 6). To the extent that employers view health benefits as investments in the workforce, the likelihood that they would drop employment-based plans in response to individual tax credits or shift to defined contributions may have been overstated. A more explicit accounting of the value of employment-based health insurance to both workers and firms would provide a more complete understanding of why workers want group health insurance and why firms provide it.

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