

THE ECONOMICS OF EMPLOYEE BENEFITS

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Reining in runaway health care costs should top the next U.S. president's to-do list, General Motors Corp. chairman and chief executive Rick Wagoner said Friday.

The winner of the November election should convene a bipartisan panel to craft and implement a strategy for dealing with a problem that threatens to wreck the nation's competitiveness, Wagoner said.

"It is well beyond time for all of us to put partisan politics behind us and get together to address this health-care crisis," he said in remarks to the Detroit Regional Chamber's annual Mackinac policy conference.

"While we all love the benefits of our dynamic and innovative health-care system, the rising cost is leaving many millions of people without the proper care they need, and making U.S. businesses uncompetitive on a global basis."

From "Controlling health care costs key to competitiveness, business leaders say,"
The Detroit News, June 4, 2004
By John Flesher, Associated Press

If health insurance and other benefit costs really do harm U.S. businesses, why do so many firms offer these benefits? Why not pay workers a higher salary and let them buy insurance on their own? Do benefit costs, in fact, reduce the profits of U.S. firms? These are the topics to be explored in this chapter.

WHY DO FIRMS OFFER BENEFITS?

Most firms compensate employees with some combination of cash plus benefits such as health insurance. This combination of cash plus benefits represents the extrinsic component of total compensation as discussed in Chapter 1. At first glance, it might seem that employees and employers would both prefer a cash-only compensation package rather than a mixture of cash and benefits. After all, employees can use cash to buy health insurance, save for retirement, or buy any other goods or services they want. This freedom allows employees who want a generous health plan to have it, while employees who prefer a cheaper health plan can spend less on health insurance and have more money available for other goods and services. Additionally, benefits are

expensive and time-consuming for employers to administer. Year-to-year changes in the costs of health insurance make benefit planning particularly difficult. It would seem, therefore, that employers also might prefer to pay all employees in cash only. So what advantages are there to firms and employees from having benefits?

Before answering this question, it is important to clarify that the question is not meant to ask whether a firm should pay, for example, a salary of \$50,000 per year plus a health plan plus a retirement plan, or whether it should pay \$50,000 per year without the health and retirement plans. Clearly, if a firm could recruit and retain the same workforce with both pay packages, it would prefer not to offer the costly benefits. Instead, the question is whether a firm would want to reduce the amount of cash compensation and substitute the health and retirement plans. The relevant choice for the firm might be between paying \$50,000 a year plus benefits versus paying \$75,000 a year and providing no benefits. Or, the choice might be between paying \$50,000 a year plus a generous and expensive health plan, or paying \$60,000 a year plus a less-generous and cheaper health plan.

There are three primary reasons why a firm might choose to include benefits in their compensation package:

- The firm has a cost advantage
- Recruiting certain types of workers
- Tax incentives

1. Cost advantage

The first reason that a firm may want to provide a benefit is that the firm may be able to buy the product or service at a lower cost than what employees would pay if they tried to buy it on their own. Health insurance is a perfect example: Firms can generally purchase health insurance for a substantially lower premium per enrollee than the amount employees would have to pay for identical coverage if they bought the insurance on their own. A particular insurance plan might cost \$1000 per employee when purchased by a firm that employs 500 workers, but

cost \$2500 if purchased by a single individual. Employees are therefore better off getting the health plan through their employer and having their cash wages reduced by any amount less than \$2500. The firm is better off by providing the health insurance to its employees and reducing their wage by anything more than \$1000. Together, this means that both the firm and the employees will be better off if the compensation package includes the health plan and salaries are decreased by an amount between \$1000 and \$2500. When the firm can buy a benefit for a lower cost than the employee could buy it on their own, the firm is essentially acting as a buying agent for the worker. Retirement annuities and disability and life insurance are other leading examples of benefit that tends to be cheaper when purchased as part of a large group.¹

So why does health insurance become less expensive when the size of the insurance group increases? A lot of products are sold with quantity discounts; is health insurance just another example? Actually, it isn't that simple. There are three primary reasons why insurance costs tend to fall as the insured group – also known as the insurance pool – gets larger. First, as the group gets larger, insurance becomes less risky to provide. Second, insurance companies need to worry less about the phenomena of high-risk individuals driving out low-risk individuals in large insurance groups in which all members are required to buy insurance. Third, as the group gets larger, fixed administrative costs can be spread out among more people. Let's discuss these factors in turn.

As the size of the insured group gets larger, it becomes much easier for the insurance company to predict the total medical expenses for the group. That means it is less risky to provide health insurance to a larger group than to a smaller group. For example, in 2000 average total medical expenditures were \$920 for children aged 17 and younger; \$1481 for adults aged 18 to 44; \$3154 for adults aged 45 to 64; and \$5864 for adults aged 65 and older. Medical expenses

¹ Retirement annuities are a series of monthly or annual payments to a retiree that begin at retirement and end when the retiree dies. Firms typically pay a fixed dollar amount to a financial or insurance company, who then pay the regular annuity payments to the retiree. The “cost” of the annuity is the rate at which the fixed dollar payment is translated into the stream of future regular payments. Retirement annuities are discussed in Chapter 4. Disability and life insurance are discussed in Chapter ??.

also tend to be higher for women than men, and higher for whites than for minority groups.²

Medical expenses are also naturally higher for people who have experienced medical problems in the past. Insurance companies can use these and other data, in combination with information on the characteristics of the group to be insured, to come up with an estimate of the expected medical expenses that the group will generate over the upcoming year. In very large groups, total medical expenses are likely to be close to that predicted by the age, gender, and past medical history of the group. The number of people who have particularly bad luck and have larger than expected medical expenses is likely to be offset by a roughly equal number of people who have smaller than expected medical expenses. In a small group, by contrast, there is much less certainty that the number of people who have bad luck will roughly offset the number of people with good luck. That is, it is much more difficult to predict the medical expenses that a small group will experience in the future.

A different way to think about this is to note that if you flipped a standard U.S. quarter four times, you would expect to get two heads and two tails, but you would not be terribly surprised if you got three heads and one tail. By contrast, if you had the energy to flip the coin one-thousand times, you should be very suspicious about the authenticity of the coin if you ended up with 750 heads and 250 tails. The more times you flip a standard coin, the more likely it is that you'll receive roughly the same number of heads as tails. In the case of health insurance, the more people in the group, the more likely that total medical expenses will be close to that predicted by the characteristics of people in the group.

The fact that total medical expenses – and hence the amount that insurance companies have to pay out to medical care providers – are more predictable for larger groups of people means that insurance companies bear less risk when they insure larger groups of people. They are

² Figures are based on author's calculations based on figures reported in Trena M. Ezzati-Rice, David Kashihara, and Steven R. Machlin, "Health Care Expenses in the United States, 2000," Rockville, MD: Agency for Healthcare Research and Quality; 2004. MEPS Research Findings No. 21. AHRQ Pub. No. 04-0022.

therefore willing to provide the insurance at a lower cost to larger groups than to smaller groups. Smaller groups, by contrast, will tend to face higher insurance costs to compensate insurance companies for the added risk they bear. Similarly, an insurance policy that covers a single individual or family will tend to be more expensive than a similar policy that covers a small group of people. Because of the riskier nature of individual and small group policies, they are more likely to be subject to what is called **medical underwriting**, a process by which employees provide information on their past medical history in a questionnaire or physical examination. Insurers use this health information to exclude coverage or to tie premiums more closely to past medical history.

The bottom line is that firms can purchase group health insurance at a better rate than an individual could purchase the same policy on their own. This gives employers and employees an incentive to have a compensation package that includes group health insurance in lieu of some cash salary. It also means that this incentive is relatively larger in big firms than in small firms, which explains in part why small firms are less likely to offer health insurance to employees.

A second motivation for employer-provided insurance is to avoid an inherent problem in insurance markets that is referred to as **adverse selection**. This is the tendency of an insurance pool to disproportionately attract “bad risks” and discourage the participation of “good risks.” Suppose a health insurance company operating in a particular city does market research and concludes that the average resident has medical expenses of \$5000 per year. On this basis, the insurance company offers residents a comprehensive health insurance policy with a premium of \$5500 per year. Which residents would choose to buy this plan?

Clearly people who think they are relatively healthy, and therefore unlikely to have anywhere close to \$5000 in expenses, are not going to buy this health insurance plan. On the other hand, people who think they are more likely to have high expenses are likely to buy the plan. Thus the average medical expenses of people who buy the plan will be larger than \$5000 since only people with relatively high medical expenses will purchase the plan. The insurance

company has a risk pool composed mostly of “bad risks”. The result is the insurance company can no longer afford to offer this plan for \$5500 and will have to raise the premium. This will lead the insurance pool will become even more unbalanced as some of the more healthier policyholders decide the policy is too expensive given their own expected medical costs.

Adverse selection in insurance markets stems from the fact that individuals know more about their own health status than does the insurance company. One solution to this problem is for the insurance company to gather as much information as possible about each participant’s risk profile and then offer the insurance at a lower price to healthier people and at higher price to less-healthy people. This is referred to as **experience rating** and is how most automobile insurance policies work. It is also how most individual, single-family, and small group health insurance policies work.

A different solution to the adverse selection problem is for a large group of people who come together for some other purpose to buy group insurance together, with the requirement that all group members must buy into the insurance pool. A group of people who come together to build and sell television sets, provide investment advice, or teach college students, for example, are unlikely to be composed of disproportionately good or bad risks. In any event, as long as everyone in the group is required to participate in the insurance pool, the insurance company can set the premium accordingly without fear that relatively good risks will drop out.

Avoiding the adverse selection problem is one reason why employment-based insurance is so popular, especially in medium and large firms. It also helps us understand why employers provide a whole range of insurance products as part of a benefits package, including disability insurance, life insurance, and retirement annuities. Indeed, avoiding the adverse selection problem is one justification for various government-provided insurance programs, such as Social Security, Medicare, and Worker’s Compensation programs.

Finally, administering an insurance policy involves a good deal of paperwork, claims processing, and other administrative functions. Many of these functions are not much more time-

consuming and expensive to perform for a small group than for a larger group, a process referred to as **economies of scale**. As a consequence, as the group gets larger, the fixed costs of these administrative tasks can be shared among a larger number of people, thereby reducing the average cost per insured person.

2. Recruiting certain types of workers.

A second reason that firms may want to offer a compensation package that includes both cash and benefits is to aid in recruiting and retaining certain types of employees, particularly when the firm managers have a difficult time observing all relevant characteristics of potential employees. In management's perfect world, job applications would contain all relevant information about a potential worker, such as his or her future productivity, work habits, career plans, commitment to the firm, and commitment to undergoing future training. Unfortunately, many important characteristics are not observed and managers may have a difficult time eliciting such information. By offering a compensation plan that includes both cash and benefits that are more highly valued by some applicants than by others, a firm may be able to get applicants to reveal some of these characteristics themselves.

For example, suppose the ideal candidate for a particular firm is a highly-motivated recent college graduate who would like to work for a few years and then go on for an MBA. Looking at the job applications received by the firm, however, it is difficult to tell which potential employees actually fit this description. How should the firm go about selecting a candidate?

One strategy is the firm could simply ask each applicant whether or not they are highly motivated and would like to go on for an MBA. But talk is cheap, which makes this strategy problematic. Every applicant will likely say they fit this description if they think it will increase their chances of getting the job. Also, potential employees may not know for sure whether they will go on for an MBA or may not know what the firm defines as "highly motivated." The firm

needs a way to separate those applicants who are truly motivated and interested in getting the degree from everyone else.

A second strategy is the firm could offer a pay package that includes a slightly-reduced salary and also the promise to pay tuition in an MBA program. (In Chapter 9, we will discuss **tuition reimbursement benefits**, which fully or partially reimburse an employee for expenses incurred for education or training.) This package is valued relatively more by the exact employees the firm wants to recruit. Potential employees who feel there is little chance they will go on for an MBA would prefer to take a job with a higher salary and without the promise of tuition assistance. Offering the tuition assistance in the compensation package induces highly motivated employees to reveal valuable information about themselves to the firm.

Offering particular benefits in a compensation package could also have unintended consequences for the types of employees most attracted to the firm. For example, a firm that touted its generous benefits for mental health services or substance abuse treatment (discussed in Chapter 9) may feel that they are offering a progressive benefit package. But they may also find that the types of employees who are most likely to accept a position at the firm, or most likely to stay at the firm, are those suffering from these conditions. In some cases this may not be the outcome firm managers intended.

3. Tax incentives.

A third reason that firms may want to offer benefits is that the U.S. federal tax code – the Internal Revenue Code (IRC) – provides financial incentives to do so. The most important tax provision is that many benefits are not taxed as income to the employee. Suppose an employee has a 25% marginal tax rate. If the employer increases her pay by \$1000 in cash, she must pay \$250 of that to the government, leaving her with \$750 in after-tax income. By contrast, if the firm gives her a benefit that costs \$1000, she receives the full benefit and does not incur any tax

burden. A different way to see the effect of taxes on benefit provision is to suppose an employee wants to buy a health insurance policy that costs \$1000. If she were to buy the policy on her own, she would have to earn \$1333.33. Of this, she would pay 25%, or \$333.33, in taxes to the government, which would leave her with the \$1000 in after-tax income needed to purchase the insurance. She would be better off receiving the plan as part of her compensation package and having her salary reduced by any amount less than \$1333.33. Assuming her employer could buy the same policy for \$1000, the employer would also be better off by including the insurance in the compensation package and reducing the wage by any amount over \$1000. Putting these bounds together, the employer and employee are better off if the insurance plan is part of the compensation package and salary is reduced by any amount between \$1000 and \$1333.33. Retirement plans are a second example of a benefit that is partly driven by generous tax treatment. More details about tax treatment of benefits are provided in Chapters 3 and in other chapters as appropriate.

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All three motivations above presuppose that employees value a particular benefit and are willing to give up something to receive it. Two important consequences of this are, first, that firms need to figure out the cash value that employees place on a particular benefit and which types of employees value the benefit more than others. Second, if employees are willing to give up something to receive a particular benefit, then the cash component of wages and the types and amounts of benefits a firm offers will be inexorably linked. This link is the subject of the next part of this chapter.

Students usually give two other answers when asked why they think firms offer benefits. The first answer is that firms are just trying to match what every other firm is doing. This probably has a lot of truth to it: a lot of businesses do a lot of things simply because everyone else is doing it. Managers may not have the time, inclination, or expertise to investigate every alternative business practice, so why not cut some corners and follow the pack on compensation

practices? This argument, though, doesn't really answer the question – it just leads us to ask, why does every other firm offer benefits? If all firms continued to follow unprofitable compensation practices, presumably new firms would enter the market to take advantage of unrealized profit opportunities. Existing firms would either follow the lead of new, more profitable firms, or eventually find themselves out of business.

The second answer is that firm managers want their employees to be healthy, so they provide health insurance, or want their employees to be well-prepared for retirement, so they offer pension plans. It is clear that most firm managers do, in fact, want their employees to be healthy, but it is not obvious that this is why firms offer health insurance. First, is directly providing health insurance or a pension the most effective way for a firm to promote these goals? Second, why would firms choose to promote these goals in their compensation policy, rather than promote other worthy goals?

WHO PAYS FOR BENEFITS?

One of the biggest misconceptions about employee benefits is that firms give them as “free add-ons” in a compensation package and that employees do not give up anything to get them. The truth is that, in large part, employees pay for all of their benefits in the form of a lower cash wage or salary than they would have otherwise received. An important consequence of this is that when the cost of providing a benefit increases, it is employees who pay for the increase; firms' profits are generally not affected.³

The degree to which in an increase in benefit costs is passed along to employees in the form of lower cash wages generally depends on four factors:

1. The cash value that employees place on the benefit.

³ The effect of benefit costs on cash wages, firm profits, and employment is complex. A more in-depth discussion of the economic issues surrounding employment-based health insurance can be found in Mark V. Pauly, *Health Benefits at Work: An Economic and Political Analysis of Employment-Based Health Insurance*, Ann Arbor: University of Michigan Press (1999).

2. The degree to which employers will increase or decrease their hiring when the market compensation level decreases or increases; and the degree to which employees will change their desire to work when the market compensation package changes.
3. Whether the benefit cost increases for all firms in a market or for a particular firm.
4. Whether the hiring decisions of a particular firm affect the market compensation level.

Let's begin by more precisely defining the concept of the "value that employees place on the benefit." Suppose you've just accepted a new job and your new employer offers you the choice of a \$75,000 annual salary plus a comprehensive fee-for-service health plan, or a \$90,000 salary and no health plan. Which compensation package would you choose? Both options probably would have some takers. Those who tend to use health services more frequently, who use more expensive health services, or who are more risk averse, will tend to place a relatively higher value on the health insurance plan, and are therefore more likely to forgo the extra \$15,000 in salary. On the other hand, healthier people and those willing to bear more financial risk are more likely to choose the extra salary in lieu of the health insurance. Those with access to insurance through a spouse's employer might be more willing to take the higher salary. Finally, the choice naturally also depends on the cost of health insurance purchased from an alternative source.

What if the choice was between a \$75,000 salary plus the health plan, or a \$100,000 salary and no health plan? Chances are that many people who would have opted for the health insurance in the first example would now choose the higher salary instead. That is, some people would rather have the health insurance than an extra \$15,000 in cash, but would also rather have \$25,000 in cash than the health insurance. Put differently, those who switched from the cash-only package to the health plan package value the health insurance at some amount between \$15,000 and \$25,000 per year.

Some people may be uncomfortable with the concept of placing a dollar value on health insurance or on any other product. Although we aren't always conscious of it, every time we buy

a product or service, we are implicitly deciding that we value the product more than (or equal to) what the merchant is charging for it. Workers make choices about which job to accept, how many days or hours to work each week, and even whether to work at all, based in part on a comparison of the value of compensation packages and the value they place on their leisure time or time spent doing unpaid work at home.

The first lesson is the greater value employees place on a benefit, the larger reduction in cash wages they will accept if the benefit is introduced into a compensation package. Suppose an employer currently offers a compensation package that only includes a cash salary of \$100,000 per year, but is thinking about introducing a health plan that costs her \$10,000 per year. If she simply added the health plan to the \$100,000 salary, her total profits would decrease by \$10,000 times the number of employees. For her to consider offering the health plan and also maintain her profit level, she'd have to reduce the salary she offers by at least \$10,000.

Would she be able to recruit and retain the same workforce if she reduced the salary from \$100,000 to \$90,000 per year? It depends on the value that potential employees place on having the health plan. An employee who valued the plan at exactly \$10,000 would be indifferent between the current compensation package of \$100,000 plus no health plan, and a new package that includes a salary of \$90,000 plus the new health plan. In general, though, there are bound to be some employees who value the plan at less than \$10,000 per year and some who value it at more. Any employee who valued the plan at less than \$10,000 per year would view this move as a cut in compensation and is likely to seek employment elsewhere. By contrast, employees who valued the health plan at more than \$20,000 per year would view this as an increase in compensation. The employer could cut the salary from \$100,000 to \$85,000 per year and these employees would still be better off (because they gave up \$15,000 per year in salary and received instead a health plan that they valued at \$20,000 per year). What's more, the firm's profits would rise because labor costs went down by \$5000 per employee per year. In effect, the employer is

buying health insurance and providing to employees at a lower cost than the amount employees value the benefit.

Let's think through what would happen if a firm introduced the \$10,000 health plan but kept cash wages at their initial level of \$100,000 per year. At the same time, other firms would either continue to pay a salary of \$100,000 per year with no health benefits, or would offer a lower salary and include the health benefits. One consequence is that profits would fall by \$10,000 times the number of employees. The firm may try to raise the price it charges its customers, but competition from other firms with lower labor costs would certainly make it difficult to sustain this strategy. Thus, faced with reduced profits, the likelihood that this firm will go out of business is increased.

If the firm remains in business, workers at other firms and people out of the labor force would realize that the firm was offering a significantly more generous compensation package than that offered by other firms. The firm's human resource manager would soon realize there are many more applications than there are positions. The firm would find itself in a position where it can be choosier about which employees to hire and also find that it can fill its staffing needs at a lower salary. Thus, it's unlikely the firm would continue to offer an above-market compensation package.

What would happen if the firm decided to cut wages by more than the amount employees' value the health insurance package? Let's say that the firm cut salaries from \$100,000 per year to \$80,000 per year, but employees only value the insurance at \$10,000 per year. In this case employees would view their total compensation package as being worth \$90,000, or \$10,000 less than what it was previously. Some employees would decide they would prefer to work at another firm, or not work at all, rather than take a pay cut. To fill their staffing needs, the firm would have to raise its cash wage to maintain the value of the total compensation package.

A related but more common scenario is that a firm already offers a compensation package that includes both salary and benefits, and the cost of providing some benefit increases. The

leading example is the steady rise in health insurance costs experienced by most U.S. firms.

Suppose you are a human resource manager and your C.E.O. tells you that your health insurance company is going to raise the rate it charges your firm for health insurance by 10% for the coming year. Since this rise stands to cost the company a lot of money, one option the C.E.O. proposes is to scale back a planned salary increase for the coming year from 5% to 3%. This 2% savings will offset the 10% increase in health insurance costs. What is your reaction to this proposal? Do you think a decline in the growth of wages will lead some employees to leave the firm? What factors are important in answering the question?

One thing to consider is the underlying reason for the rise in health insurance costs. Here are some alternatives:

1. The rise reflects a general improvement in medical care technology and health care quality, but also more expensive technology.
2. Legal changes allow doctors to unionize and thereby charge higher prices for the existing services they provide.
3. Health insurance costs rose by 10% at only this firm because the company workforce is a year older and is at an increased likelihood of contracting additional medical conditions and hence generating additional medical costs.
4. Health insurance costs rose by 10% at only this firm because the firm decided to layoff a significant portion of their employees, thereby reducing the size of the insured group.

These scenarios are distinguished by whether the rise in medical costs reflects something that adds to employees' valuation of the insurance (examples 1 and 3) or does not add value (examples 2 and 4); and whether health insurance costs rise for all firms (examples 1 and 2) or for just this particular firm (examples 3 and 4). Take some time to think about whether your reaction to the C.E.O.'s proposal depends on which of the above four explanations is the cause of the increased health insurance premium.

The conclusion we reached above that employees' cash wages will tend to fall whenever benefits are fully valued holds when benefit costs rise as well. That is, wages will tend to fall when health insurance cost increases derive from improved quality of care (example 1) or an increased use of care among employees (example 3). In this view, gloomy assessments of the recent increases in health care costs may have missed the point entirely. If rising health insurance premiums signal that health care is more valuable, then recent rises in health care costs are good news for employees – at least for those who use medical care.⁴

On the other hand, if increased health insurance costs are not accompanied by an increase in employees' valuation of the insurance, as in examples 2 and 4 above, cash wages may not be able to adjust downward. Whether or not cash wages will, in fact, fall depends on two additional factors: (1) whether health insurance costs rise for this particular firm only or for all firms in the market, and (2) the degree to which workers and firms will change their labor demand and supply when compensation costs change.

When health benefit costs rise for a single firm in a market, the firm will likely not be able to pass along the benefit costs to workers if workers' valuation hasn't changed (or has increased, but by less than the increased benefit cost). Let's work through an example. Let's suppose that to hire an average-quality lawyer with 10 years of litigation experience, a law firm in New York City must offer a total compensation package worth about \$100,000. An offer of less than that will likely only attract the lowest-quality lawyers, if any at all. Let's suppose that the firm of Lawyers Inc. currently meets the market by offering a compensation package of \$80,000 in salary and a health insurance package that is valued at \$20,000 by the current employees. Now let's suppose that the firm lays-off a quarter of their staff, reducing the size of the insurance pool. So the same policy now costs the firm an extra \$5,000 per employee per year. Could the law firm reduce the salary from \$80,000 to \$75,000?

⁴ An excellent source for more information on the U.S. health care system and alternative reform proposals is David M. Cutler, *Your Money or Your Life: Strong Medicine for America's Health Care System*, New York: Oxford University Press (2004).

Probably not. The increase in health insurance costs were not accompanied by any increase in employees' valuation of the insurance, so employees still value their insurance at \$20,000 per year. If the market compensation level remains at \$100,000, the law firm must maintain the \$80,000 salary in conjunction with the insurance to meet the market and retain their current workforce.

The salient factors in the last example are that the firm must meet the market compensation level and health insurance costs only rose at their firm. Thus, the owners of the firm must pay the increase in costs.⁵ Many commentators and business leaders mistakenly apply that conclusion to the more general scenario when health insurance costs rise for all firms. The same logic does not carryover, however.

To investigate the response of wages to an economy-wide increase in benefit costs, let's pick up with scenario 2 from above in which health insurance costs rise because doctors' fees increase. Clearly employees' valuation of their health insurance plan has not changed. There is a still a possibility for wages to offset the health insurance cost increase, however. The degree to which wages fall – that is, the degree to which employees pay for the cost increase – depends on the degree to which workers will drop out of the labor market when their compensation level falls, and the degree to which firms will reduce their workforce when employment costs rise. To understand this, let's consider two relatively polar opposite cases.

In the first case, firms are relatively insensitive to changes in compensation costs, but workers are sensitive. That is, firms would go about hiring approximately the same number of people if compensation costs rose or fell by 10%. By contrast, if total compensation fell by 10%, many workers would decide they have better uses for their time (such as raising children at home, staying in school a little longer, or retiring a little earlier) and choose not to work anymore. If total compensation rose by 10%, some people who are not working might choose to do so.

⁵ An alternative is that when faced with a large increase in health insurance costs, a firm may be more likely to drop health insurance altogether and instead raise employees' salaries.

In this situation, firms that will not generally be able to pass along higher benefit costs to their employees and instead will end up paying for the benefit out of their profits. What would happen if a firm did try to pass along the benefit cost to employees? Since employees' valuation of their benefits did not change, the decrease in salary would certainly be viewed as a decrease in total compensation. Thus, some employees would likely to begin looking for employment elsewhere. Workers in general would gravitate towards firms that maintained their salary in the face of higher benefit costs.

But we've assumed in this example that firms' hiring needs are relatively insensitive to compensation costs. That is, firms still need about as many workers now as they did prior to the benefit cost increase. Thus, firms that cut wages and lost employees would need to hire additional workers to replace them, which would necessitate raising their compensation level – the result being that the firm pays the increase in benefit costs.

But what if all firms could somehow agree to pass along the higher benefit cost to employees, so workers didn't have the option of moving to higher wage firms? Well, workers in this example always have the option of leaving the workforce altogether. So if all firms decided to cut wages, some workers would leave the market, leaving some firms understaffed. The smaller workforce would force firms to raise their wage offers to fill their staffing needs. The bottom line is that if workers are willing to leave the labor market when compensation falls, and firms have relatively inflexible staffing needs, firms will tend to pay for benefit cost increases.

In the second scenario, employees are totally insensitive to market-wide changes in compensation levels. That is, if total compensation fell by 10% at all firms, no workers would reduce their hours or weeks of work or drop out of the labor market in response. That's what is meant by "insensitive". Although this view of workers' behavior may sound rather extreme, there's actually quite a bit of evidence that most prime-age workers (those aged 30 to 54) behave this way, especially men. By contrast, the groups most likely to adjust their labor supply – and

thus fit the previous scenario – are women with young children, the elderly, part-time workers, and young workers.

In the situation where employees are totally insensitive to changes in market-wide compensation levels, all of the increase in benefit costs will be passed along to employees in the form of lower salary levels, even if employees' valuation of the benefit has not changed. An employee whose salary was reduced by the cost of the benefit might at first perceive a cut in his pay relative to the pay he could receive at other firms, and thus try to seek employment elsewhere. But all firms experienced the same increase in benefit costs, and thus all firms will be seeking to cut salaries. Thus, the employee would soon find that although his salary has been cut, so have the wages at other firms. The employees only options are to drop out of the labor market altogether or accept the lower pay, and we've ruled out the former. Exhibit 2.1 summarizes whether employers or employees will tend to pay for a benefit cost increase in various scenarios.

Most workers with employer-sponsored health insurance pay a token monthly contribution towards their health insurance premium, which is typically deducted from each monthly paycheck. According to data from the 2003 National Compensation Survey, 78 percent of private-sector employees with single-person coverage and 90 percent of employees with family coverage were required to make a contribution towards their health insurance cost. The average monthly contribution was \$60.24 for people with single coverage and \$228.98 for people with family coverage.⁶ This monthly premium is usually paid from after-tax dollars and usually represents only a small fraction of the actual cost of the health insurance. Importantly, this monthly payment should not be interpreted as employees' only contribution towards their health insurance. Rather, the view advanced in this chapter is that the full cost of health insurance is paid for by employees. Part is paid for through this monthly contribution and the remainder is paid for through lower cash wages.

⁶ See "Employee Benefits in Private Industry," United States Department of Labor, Bureau of Labor Statistics. Available at <http://www.bls.gov/ncs/ebs/home.htm>.

It may seem peculiar that firms charge employees these monthly contributions since they come from after-tax dollars. One advantage of these fees, however, is that they easily allow firms to charge different health insurance prices to people with different family sizes, or to people who choose health plans of different quality, such as a PPO versus an HMO. A second advantage is that firms can more easily raise these contributions when benefit costs increase, making it more transparent to the worker that health costs have increased.

Business managers and human resource practitioners sometimes question whether economists' view of the relationship between cash wages and benefits is correct because, they contend, firms are rarely observed cutting wages when a new benefit is introduced or the cost of providing an existing benefit increases. In fact, such wage cuts happen much more frequently than you might think. A firm may scale back a scheduled bonus or reduce the year-to-year rate of growth of cash wages. A firm may also hire new workers at a lower wage rate than what existing workers are paid. If there is relatively fast turnover, the wage decrease will quickly filter through the firm. Finally, a firm may increase employees' "contribution" towards their health insurance premium. An increase in the contribution is in effect taking compensation out of the hands of employees, which has the same effect as a reduction in cash wages. A difference is that increasing the benefit contribution helps employees realize that their wage cut results from an increase in their benefit costs, not from – for example – a decrease in the firm's profitability. In a firm with both employees who receive health insurance and those who don't, increasing the contribution may be a particularly effective way to target a wage decrease on those employees whose benefit cost was actually affected.

TWO EXTENSIONS

1. Government mandates

Frequently a local, state, or the federal government will pass a law that requires private firms to provide employees with a particular benefit or accommodation. For example, firms are

required to meet minimum health and safety codes. The Family and Medical Leave Act requires eligible firms to provide certain employees with up to 12 weeks of unpaid leave per year (the FMLA is covered in detail in Chapter 8). This law and many others (discussed in Chapter 3 and in some other chapters) are referred to as **employer mandates** because the government mandates that employers do something that they might otherwise not do. There are also **employee mandates** or **individual mandates**, which require that individuals do something. For example, many states require that all car owners have automobile insurance. Many proposals for expanding health insurance coverage in the United States contain either employer mandates that require all firms to offer health insurance to all workers, or individual mandates that require all individuals to purchase health insurance. (These are distinct from a national health insurance program, such as that in Canada, which is a government health insurance program that covers all citizens.)

Firm managers and policy makers are naturally concerned about the effect of mandates on profits and employee well-being. In one view, these policies improve working conditions or increase employee compensation, but are paid for by firms in the form of reduced profits. In another view, the costs of providing these benefits is passed from firms to employees, which means employees may or may not be better off, depending on how much they value the new benefit.

The framework introduced above for thinking about how benefits are related to cash wages can be easily extended to shed light on the impact of government mandates. Let's think through an example in which the government passed a hypothetical law that requires all firm to offer health insurance to all employees. Currently about 58 percent of private-sector firms offer health insurance and would thus already in compliance with the hypothetical law.⁷ There will not be any change in employment or compensation at these firms. For the 42 percent of firms that do not already offer health insurance, the mandate would represent an increase in employment costs. Will these firms be able to shift that cost to their employees in the form of lower wages?

⁷ Data are from the 2003 National Compensation Survey. See reference in footnote 5.

The first question is whether or not employees at these firms value the health insurance. Most employees likely will place some value on the health insurance. But it is also likely that most will value it less than it costs their firm to provide it. Why? If the employees valued the insurance at more than the cost for the firm to provide it, presumably the firm would have already provided it. After all, as we discussed earlier in this chapter, firms and employees may be better off if health insurance is substituted for cash in a compensation package, provided that the firm can purchase the insurance at a lower cost than what that faced by employees. Thus, most of the 42 percent of firms that do not already provide insurance will find themselves in a situation where they must provide a benefit that costs more than what their typical employee would be willing to pay for it themselves.

The second factor is whether the increase in employment costs occurs for all firms in the market, or for just one firm. In this case the mandate applies to all firms in the market, so all firms are affected.

Putting these factors together – that employment costs rise for all firms and that the rise is larger than the increase in value to employees – our previous analysis tells us that firms and workers are likely to split the cost of the benefit. Recall my earlier statement that most prime-age workers, especially men, do not adjust the amount they work in the face of changes in their compensation. In the vast majority of firms that primarily employ prime-age workers, workers will end up paying for the increase in health costs. The employment and profitability of these firms will be largely unaffected by the mandate. On the other hand, the cost of mandated health insurance will likely be split between workers and firms in firms that primarily hire younger workers, older workers, or married women with young children. Since these firms will be paying for part of the cost of the benefit, their profits may fall. They may also decide to hire fewer workers in response to the increase in employment costs. It is important to emphasize, though, that the number of firms that fall into this category is likely to be very small.

2. Differences in benefit cost increases across groups of workers.

Sometimes the cost of providing health insurance – or any employee benefit – only increases for a subset of workers in a firm. For example, the Pregnancy Discrimination Act of 1978 requires health insurance to cover maternity costs just as it would any other health condition (see Chapter 3). Today, proposals are frequently made for health insurance carriers to be required to cover birth control pills if they cover other prescription medications. These public policies raises the cost of health insurance to younger families and women of childbearing age, while having no affect on the cost of insurance for single men or older married adults.

Our previous discussion might lead many to believe that if the cost of providing a benefit to a subset of workers increases, the cash wages of that group may fall relative to the wages of other workers in the same firm. For example, adding maternity coverage to the health insurance plan at a particular company may lead to a reduction in the wages of women of childbearing age relative to men at the company. But is it always the case that wages can adjust within a firm? If so, under what conditions will this happen?

There are two reasons why wages may not adjust within a firm to reflect differences in health insurance costs across easily identifiable groups of workers. First, anti-discrimination law may prevent a firm from systematically paying different wages to people of different genders, race, or other protected groups (see Chapter 3). If health insurance is more costly for women than for men, firms may not be able to systematically pay women lower cash wages than what men are paid. Second, firm managers may prefer a relatively flat compensation structure across people with similar jobs. This may be a compensation policy designed to keep things simple, or designed to foster a sense of equity within the firm. In either case, paying different cash wages to people with higher and lower health insurance costs may violate this tenet of a firm's internal culture.

If wages did not adjust to reflect differences in benefit costs, then firms would have an incentive to hire workers who are cheaper to insurance. In the example above, if health insurance is more costly for certain woman than for men, and firms pay the same cash salary to each, then

the firm can reduce its compensation costs by hiring men over women. By contrast, if wages do fall for groups who experience rising benefit costs, then firms do not have an incentive to prefer one group over the other.

There is evidence that wages do, in fact, adjust for differences in benefit costs. In the mid-1970s some states passed regulations to require health insurance companies to treat maternity costs just as they would any similar medical condition, which added coverage for maternity costs to most health insurance plans in these states. This raised the cost of health insurance for women and families, especially those who might experience a pregnancy, by about four percent of their initial wage level. Research by Jonathan Gruber, an economist at the Massachusetts Institute of Technology, showed that the cash wages of married women aged 20 to 40 tended to fall in states that passed maternity coverage laws compared to the wages of similar women in states that did not pass such laws.⁸ He also found that the wages of these women fell relative to the wages of single men aged 20 to 40 and to people over the age of 40 who also live in states that where maternity coverage laws were passed. In 1978 the federal government passed the Pregnancy Discrimination Act, which essentially extended the equal treatment of maternity coverage in health insurance plan to those states that had not already required it. Gruber again found that wages for married women aged 20 to 40 tended to fall in states affected by the federal law. This evidence suggests that when the costs of a benefit rise for an identifiable group of workers, those workers alone may end up paying for the cost increase. It is important to stress, though, that this finding of wage adjustments across groups may not hold in every instance where benefit costs rise for a demographically identifiable group.

⁸ See Jonathan Gruber, "The Incidence of Mandated Maternity Benefits," *The American Economic Review*, Volume 84, number 3 (1994), pp. 622-641.

SUMMARY

This chapter explored why many firms offer a mixture of cash and benefits in compensation packages, and whether workers tend to pay for benefit cost increases in the form of lower cash wages. The primary reasons why firms offer benefits are that the firm can purchase the benefit at a lower cost than could the employee on their own; firms use benefits to attract particular types of employees; and the government gives firms a tax incentive to provide some benefits. Whether workers or firms pay for benefit cost increases depends crucially on why costs increase, whether costs increase for all firms in the market, and how willing employees and firms are able to adjust their labor supply and demand when compensation costs change.

CLASS DISCUSSION QUESTIONS

1. One reason firms offer benefits is the benefit may be cheaper for the firm to provide than it would be for the employees to purchase on their own. Besides the insurance examples discussed in this chapter, what other benefits are cheaper for a firm to provide than for an individual to purchase on their own? Even if a particular benefit is cheaper for a firm to provide, would a firm always want to provide it as part of a compensation package? Why or why not?
2. One reason firms might offer a particular employee benefit is to aid in recruiting certain types of workers. One example given in the text above is a tuition reimbursement program to attract highly motivated employees. What other examples of benefits are you familiar with that might be used to attract a particular type of employee? Which types of employees are most attracted to these benefits?
3. Small firms are less likely than large firms to offer health insurance to their employees. One reason for this is that health insurance tends to cost more for small firms than for large firms. Explain why health insurance costs more for smaller insurance pools. What public policies

are currently being proposed to remedy the disparity in health insurance coverage between small and large firms?

4. A major theme of this chapter is that employers need to know the dollar value that employees place on benefits. Concisely explain why this type of information is important for employers to have. What methods do firms actually use to gauge their employees valuation of benefit packages?
5. Explain why the impact of a benefit cost increase on employee cash wages will generally depend on whether benefit costs rose for all firms in a market or for just one firm. Give some examples of factors that would cause benefit costs to increase in all firms in a market and some that would affect only a single firm.

Exhibit 2.1: Summary of the Incidence of Employee Benefit Cost Increases

Does employees' valuation of the benefit increase?	Employees' valuation increases at least as much as the benefit cost increases	Employees' valuation of benefit does not increase	
		Cost increase happens for single firm	Cost increase happens for all firms
Do costs increase for all firms in the market?			
Who pays for benefit cost increases?	Employees pay for all benefit cost increases	Firm pays for all benefit cost increases	Firms and employees split the cost increase. Party that is least likely to adjust tends to pay more.