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ABSTRACT

This report summarizes a review of the literature on employee benefits. It indicates what is known and not known about the effects of providing benefits on both employees and employers. Following an introductory discussion on the problems and prospect of employee benefits, the report is organized in 11 sections. The first four sections indicate why employees want benefits and the cost of benefits to employees, why employers offer benefits, and the role benefit packages play in matching firms and workers. The following six sections review the public policy issues pertaining to specific areas in which benefits are offered, including pensions, health insurance, and dependent care. Also included are discussions of flexible benefit plans and individual retirement accounts. Throughout the report, as well as in the concluding section, questions are raised that need to be addressed in the development of a comprehensive benefits policy. A 59-item bibliography is included in the report. (KC)

U.S. DEPARTMENT OF EDUCATION

EMPLOYEE BENEFITS FOR AMERICAN WORKERS

Research Report No. 89-09

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THE NATIONAL COMMISSION FOR EMPLOYMENT POLICY

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The opinions expressed in this paper are those of the authors and do not necessarily reflect the opinions of the members and staff of the National Commission for Employment Policy.

PREFACE

The National Commission for Employment Policy, in response to requests from Members of Congress for advice and assistance, undertook this examination of issues pertaining to the provision of employee benefits. A preliminary review of the literature on benefits revealed that while much has been written on the topic, the information needs to be organized in a systematic fashion in order to identify the research questions.

Employee benefits have been a subject of considerable public policy discussion in recent years. For many employers, benefits constitute a significant portion of their total compensation costs. For some workers, the relative attractiveness of benefits packages may influence the choice of places to work or could influence the decision of whether to accept a job at all.

Many current benefits are required under federal and state public law: Old Age and Survivors benefits under Social Security; Workers' Compensation; Unemployment Insurance, Medicare, to name a few. New proposals for mandatory provision of benefits of various kinds have been advanced over the past few years. Some of them are proposals for health insurance for all firms having a specified number of employees; maternity/paternity leave; or leave for care for young and old family members.

The Commission engaged the services of Professor Robert Clark of North Carolina State University in order to undertake a comprehensive review of the literature on the provision of employee benefits. He was asked to explore what is known and not known about such benefits and identify the key lists of issues that should be analyzed in order to provide information that would inform public policy decisions.

The Commission believes that Professor Clark has carried out his assignment admirably, providing us with an excellent review and summary of the literature from many sources and with an outstanding bibliography. On behalf of the Commission, I thank Dr. Clark.

JOHN C. GARTLAND

Chairman

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PROBLEMS AND PROSPECTS OF EMPLOYEE BENEFITS

Employees are compensated for their work by both cash earnings and employee benefits. Throughout the twentieth century, employee benefits have increased as a proportion of workers' compensation. Today, the cost of providing employee benefits typically represents 20 to 30 percent of total compensation. Important employee benefits include pension plans, health insurance for active workers, health insurance for retirees, and paid leave.

For over 50 years, public policy has played a major role in determining the composition of employee compensation. Public policy concerning employee benefits has developed along two distinct paths. First, the government has mandated that virtually all firms offer certain benefits. Mandatory benefits include old age and survivors' insurance, social security disability insurance, Medicare, unemployment insurance, and workers' compensation.

Government policies also set minimum standards in other areas of working conditions. These include minimum wage policies, occupational health and safety standards, and overtime compensation. In each of these areas, all firms must conform to the governmental standards and provide the required benefits and working conditions. Such policies are based on the rationale that it is in society's best interest for compensation, hours, and working conditions to conform to the prescribed minimum standards.

The second track of public policy concerning employee benefits has been for the government to encourage but not require firms to offer certain types of benefits. The principal method of encouraging firms to provide employee benefits has been through the use of preferential tax treatment. Current policy allows firms to consider "benefit expenses" as tax deductible expenditures while these benefits are not counted as current income to workers. This tax incentive is a strong inducement for many workers and firms to institute benefit programs. In conjunction with providing preferential tax treatment for benefits, the federal government typically adopts regulatory standards to which firms must adhere if they offer these employee benefits.

Despite the substantial tax subsidy to benefits, many workers remain uncovered by such basic benefits as employer-provided pensions and health insurance. Uncovered workers typically are low wage workers, persons employed in small firms, nonunion employees, and persons who work only part time. Recently, attention has focused on workers who are not covered by health insurance or who lack pension coverage. In addition, an emerging issue is the lack of formal leave policies for dependent care.

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Each of these benefits has important implications for worker welfare. For example, pension benefits increase retirement income and are an important factor in maintaining living standards into retirement. Health insurance allows workers to have access to medical care without the threat of losing all their wealth. Persons without health insurance face a difficult time obtaining adequate health care. Employee benefit programs also have a direct impact on public programs such as social security, Medicare, Medicaid, and child care. The presence of employee benefits reduces dependency on these government programs. Furthermore, the presence of these benefits may affect the propensity of women and other caregivers to be in the labor force and may influence their productivity while working.

The primary public policy questions relative to the lack of coverage by these benefits are (1) should these benefits be required by law? or (2) should additional incentives be given to encourage firms to provide these benefits? or (3) should no new policies be introduced? Prior to deciding among these choices, policymakers should consider available evidence on the cost to workers and firms of employee benefits, the effect of these programs on worker productivity and the level of employment, and the current coverage rates of these benefits across different types of workers. It must be clearly understood that both workers and firms will respond to new mandatory benefits and/or the further regulation of existing benefits. How they respond should be considered carefully in the development of future policies covering employee benefits.

Employee benefits are facing a series of major challenges. The responses of individuals, firms and the government will determine the future of employee benefits for U.S. workers. These challenges include the rapidly rising cost of health care, the lack of coverage by health insurance and pensions for many workers, the increasing need for workers to care for aging parents, the need for supplemental health insurance in retirement, and the emerging changes in accounting standards for retiree health plans. Government policymakers must work together with employers, unions, and workers to develop appropriate public policies for a changing economy and for a labor force that is aging and becoming increasingly female.

This report is based on a review of the literature on employee benefits. It indicates what is known, and not known, about the effects of providing benefits on both employees and employers.

The next several sections indicate why employees want benefits and the cost of benefits to employees, why employers offer benefits, and the role benefit packages play in matching firms and workers. The subsequent several sections review the public policy issues pertaining to specific areas in which benefits are offered, including pensions, health insurance, and dependent-care. Also included are discussions of flexible benefit plans and individual retirement accounts. Throughout the report, as well as in the concluding section, questions are raised that need to be addressed in the development of a comprehensive benefits policy.

EMPLOYEES AND THEIR DESIRE FOR BENEFITS

When deciding on which job to accept, individuals consider the total value of all forms of compensation along with the quality of basic working conditions. They are interested in the net value of working for one employer compared to all others. This net value depends on all forms of employee compensation, the environment of the workplace, along with the flexibility of hours and the quality of management. Workers will consider not only today's compensation but the expected value of remaining with the company and prospects for advancement within the firm. Of course, the available options for some persons may be severely restricted by current labor market conditions.

Economic theory of employment and wage determination is based on the principle that workers value all aspects of their jobs and make employment decisions based on the net value of employment.[1] This means that workers must be compensated for negative aspects of employment, such as unsafe working conditions, by being offered higher wages or other benefits. Another way of illustrating this concept is to think of workers buying employee benefits from the firm by accepting lower wages in exchange for receiving benefits that the workers value, such as health insurance or paid leave, while demanding higher wages for negative job characteristics. In such a labor market, the more the firm pays for health insurance, the less it will provide in cash earnings.

These tradeoffs explicitly are made during collective bargaining between unions and firms as negotiators consider the total cost of the contract in developing each aspect of compensation. In nonunion settings, firms typically develop their compensation packages and then offer them as conditions of employment. Employees either accept the total package or they must move to another firm. The ability of the firm to hire new workers and its success in retaining its existing labor force provides it with a clear signal concerning the appropriate level and mix of the compensation package.

To the extent that the provisio. ʻ various types of benefits does not alter workers' behavior, firms would be indifferent as to whether workers wish to be paid all in cash or part in cash and part in benefits. The firm will be willing to "sell" benefits to workers at their cost, i.e. wages are reduced one dollar for each dollar the firm spends on benefits.

Government Tax Policy

Why would workers want to buy benefits from their employer rather than purchasing the goods and services directly from companies that produce these products? The most important reason appears to be governmental tax policy that allows workers to exclude benefits provided by their employer from taxable income. Thus, firm-provided benefits are purchased with pre-tax dollars while benefits bought on the market are purchased with after-tax dollars.[2] The greater the marginal tax rate, the lower the after-tax cost to workers of employer-provided benefits.

All relevant taxes on individual earnings should be considered in the determination of this effect. These taxes would include federal personal income tax, state personal income tax, and payroll taxes paid by the worker. The increase in these tax rates from 1940 to 1980 is one of the most important reasons for the dramatic growth of employee benefits.[3]

If rising tax rates increased the demand for employee benefits, what will be the effect of the recent reductions in income tax rates? Based on the theoretical model described above, the demand for employee benefits would be expected to decline. This would be observed first in a decline in the growth of employees covered by certain benefits. It is too soon to determine if the cuts in income tax rates are slowing the spread in employee benefits. It should be remembered that payroll tax rates have continued to increase during the 1980s, thus moderating the decline in the marginal tax rate.

A prediction from this analysis is that the preferential tax treatment of employee benefits increases the demand for these benefits by reducing their price. The greater the individual's marginal tax rate, the larger the incentive to purchase company-provided benefits. Since high wage workers are in higher tax brackets, the price to these workers is reduced by a larger amount. Thus, we should expect that higher wage workers will be more likely to be covered by employee benefits and will choose a larger proportion of their total compensation in the form of company-provided benefits.[4]

Current tax policy is a significant determinant of both the proportion of the labor force covered by various employee benefits and the type of workers covered. An important policy question is how responsive are workers to changes in the after-tax price of employer-provided benefits. The answer to this question will determine whether additional tax incentives will expand benefit coverage to those workers who currently do not participant in benefit programs.

Prices of Employer-Provided Benefits

Workers may also wish to purchase company-provided benefits because their employers can buy large quantities of the benefits at lower unit prices than individual buyers. Lower prices associated with employer-provided benefits may also be attributable to group coverage which reduces the possibility of adverse selection facing the underwriters of these benefits. Adverse selection occurs if a disproportionate number of persons with high life expectancy purchase retirement annuities or if a disproportionate number of persons facing relatively high health risks purchase medical insurance. The selection problem is substantially reduced if the firm enrolls all of its employees into a specific plan and therefore, insurance companies are willing to sell such coverage to the firm cheaper than they would sell the same coverage to an individual.

These arguments suggest that larger employers will be more likely to provide such benefits. There may also be economies of scale in the costs of administering these benefit programs that increase coverage rates among large companies compared to smaller firms.[5] In general, large companies are much more likely to provide employee benefits than smaller firms.

Complexity of Benefit Programs

Some benefit programs are very complex and difficult to understand. As a result, workers may be more likely to buy these benefits when they have assistance in evaluating the plans. For example, unions employ benefit professionals that help the union and its members evaluate benefit plans. Also union members may feel more comfortable accepting benefits because they believe the union will monitor the administration of these benefits and prevent firms or their agents from reducing the value of the promised benefit. For this reason, workers covered by collective bargaining agreements are more likely to be covered by employee benefits. In addition, unionized workers may have higher coverage rates due to the bargaining process that allows them to express their preferences for benefits better and more clearly.[6]

Limits to Benefits as a Proportion of Compensation

What factors limit the proportion of compensation going to benefits? Workers do not wish to receive all of their compensation in benefits because the preferences of all workers are not the same and firms typically are unable to provide tax-exempt individualized employee benefits.[7] Workers clearly wish to spend some of their earnings on such items as food, clothing, and housing which are typically not provided by firms.[8]

The major disadvantage of employee benefits is that workers relinquish control of a portion of their income; the employee is not able to decide how to spend his compensation. Benefits which are greater than the level the employee would purchase if all his/her compensation were in the form of cash earnings tend to reduce the net value of compensation provided to the worker if the worker was required to pay for these benefits in the form of lower wages.[8]

If workers were identical and they all wanted the same amount of every item, then firms could provide 100 percent of employee compensation in the form of benefits that their employees wanted. With differences in employee preferences, this is virtually impossible to accomplish. For these reasons, workers will not want all of their compensation in the form of benefits and instead will demand a minimum portion in cash.

Of course, if firms provided all compensation in the form of benefits, the government would be forced to change its tax policy or else it would have no tax revenues from earnings. This point illustrates the dilemma currently facing policymakers. Further incentives to expand coverage by employee benefits reduce the income tax base. This lowers tax revenues and has an adverse impact on the federal deficit. During the past few years, all benefit policy proposals have been subject to considerable scrutiny concerning their impact on the deficit.

Questions in the Development of Public Policy

- How do changes in marginal tax rates affect the demand by workers for employee benefits? This responsiveness will determine the increase in benefit coverage to any new tax incentives.

- What is the process by which benefit coverage spreads throughout the labor force? Has the decline in unionization and the restructuring of the economy affected the proportion of workers covered by benefit plans?

COST OF BENEFITS TO EMPLOYEES

Many economic studies have attempted to estimate the cost to workers in lower earnings of different types of benefits and working conditions. This has proven to be very difficult. The key prediction of the labor market theory described above is that other things equal, workers will pay for benefits in the form of wage reductions. This can only be tested if researchers are able to hold constant all worker and firm characteristics that determine wages. In addition, information on the value of all employee benefits is required.

Appropriate statistical methods exist to accomplish this if adequate data are available. However, analysts often have only partial information on the extent of company-provided benefits. The lack of such data has been a major obstacle to adequate testing of the magnitude of wage reductions due to specific employee benefits. In particular, it is very difficult to value some types of benefits such as pensions or working conditions such as the risk of accident. Thus, most studies examine the effect of a single benefit or working condition on cash earnings. Such a specification will miss any change in other benefits in response to increases in the benefit being studied.

A series of studies have estimated the magnitude of the reduction in earnings due to various working conditions that affect the safety and health of workers. These papers support the hypothesis that wage premiums are paid because of the presence of safety and health risks (Smith, 1979; Marin and Psacharopoulos, 1982; Brown, 1980; and Duncan and Holmlund 1983). Also, there is evidence that earnings are higher for jobs with a higher probability of unemployment (Abowd and Ashenfelter, 1980; Adams, 1985; Li, 1986) and mandatory overtime (Ehrenberg and Schumann, 1984).

Estimates show that workers are willing to substitute benefits for wages in their compensation packages (Woodbury, 1983) and that workers receive higher wages if they are not covered by certain benefit plans (Leibowitz, 1983). Other studies have shown that wages are lower for workers covered by pensions (Ehrenberg, 1980; Smith and Ehrenberg, 1983; and Moore, 1987) and that specific plan provisions that alter the value of the pension result in changes in earnings (Schiller and Weiss, 1980; and Allen, Clark, and Sumner, 1986).

These empirical studies that estimate wage differentials due to coverage by employee benefits indicate that earnings do reflect the presence of benefits and job characteristics. However, virtually no study finds evidence for a dollar for dollar compensating differential. Most of the studies estimating wage differentials find small and often insignificant wage reduction due to the presence of valuable benefits and working conditions.

Despite these findings, there is virtual unanimous agreement among economists that wage differentials for employee benefits and working conditions exist. This is based on both the theory of individual utility maximization and firm profit maximization. The lack of empirical confirmation of this theory is generally attributable to data limitations. The inability to statistically confirm this theory is troubling. Either the theory is wrong or existing studies suffered from inadequate statistical models and lack of adequate data.

Questions in the Development of Public Policy

- Accurate information on the wage-benefit tradeoff is critical to assessing public policy concerning employee benefits. Such information might be obtained by working with a few large employers with a diverse set of employees and jobs. Results from these studies would be helpful in formulating policies to extend benefit coverage. For example, they would more clearly indicate the cost to workers in terms of foregone earnings resulting from the government mandating new employee benefits.

WHY DO EMPLOYERS OFFER EMPLOYEE BENEFITS?

The preceding analysis has shown that many workers wish to have a portion of their compensation paid in the form of employee benefits. Competition in the labor market will force firms seeking to employ these workers to offer such benefits. If firms do not offer compensation packages workers desire, workers will value total compensation less in these firms than that offered by similar firms who are spending the same amount on total compensation. As a result, firms offering the less desirable compensation package will experience higher turnover rates and have a more difficult time recruiting new employees. As long as earnings are reduced one dollar for each dollar spent on benefits, firms will be indifferent between paying cash or providing benefits to their workers.

Employee benefits may alter workers' behavior in ways that influence total labor costs. For example, pensions reduce the likelihood that workers quit their jobs (Ippolito, 1986). The magnitude of this penalty is determined by the benefit formula, the rate of expected future wage increases, and the age of the worker (Clark and McDermed, 1988). Virtually all studies of mobility conclude that pensions significantly reduce turnover rates (Mitchell, 1982, 1983; Allen, Clark, and McDermed, 1989).

Reduced turnover implies lower hiring and training costs. If workers are expected to remain with the firm for longer periods, firms can invest more in the training of workers and thus have a more productive workforce. Health insurance plans may improve the health and productivity of workers while dependent care plans may reduce absenteeism. Lower rates of absenteeism also lower firm production costs.

If employee benefits reduce other labor costs, firms will not be neutral sellers of these benefits. Instead, they will tend to offer these benefits to workers at a price in foregone earnings that is less than the cost to the employer. This reasoning suggests that firms that have higher costs of turnover and higher training costs will be more likely to offer benefit plans.

There is also a tax incentive for firms to provide employee benefits. Expenditures on benefits are not subject to payroll taxes. Thus, a dollar spent on benefits costs the firm one dollar while a dollar spent on earnings cost the firm one dollar plus payroll taxes. These taxes include those used to finance OASDHI, unemployment insurance, and workers' compensation.

Questions in the Development of Public Policy

- Do employee benefits increase productivity and reduce other forms of labor costs? How can these gains from employee benefits be measured? In the future, will firms find it to be in their best interest to offer more employee benefits?

- How do firms respond to tax incentives to provide employee benefits? For example, if firms were given tax credits to offer health insurance to low wage workers, how would they respond?

MATCHING WORKERS AND FIRMS IN THE LABOR MARKET

Workers differ in their preferences for specific benefits and the costs of providing these benefits vary across firms. Economic theory suggests that workers who place a high value on benefits will seek employment with firms that can provide these benefits at the least cost (Rosen, 1974; Smith, 1976).[10] Since workers differ in their preferences for goods and services, the value placed on the same benefit will vary across workers.[11] For example, some workers may be willing to pay $10 per day in lower earnings for access to an on-site day care center while other workers may be unwilling to accept any reduction in salary for this benefit. In this case, firms that provide the day care center are trying to appeal to a particular type of worker who values this benefit.

Each firm must assess the costs and benefits of providing employee benefits. An accurate determination of these values may be rather difficult, especially in calculating the productivity gain from certain benefits. Higher costs of benefits require larger reductions in cash wages to pay for the benefits.

The cost at which firms can provide some benefits such as pensions, health insurance, or safety varies across firms. Some firms can provide these benefits at much lower prices than others. Thus, competing firms may offer different combinations of cash and benefits to their workers.[12] In order to be competitive in the labor market, each firm must offer at least one combination of earnings and benefits that matches the value workers place on the total compensation of other firms.

These basic concepts imply that workers with a high preference for benefits will seek out firms that are low cost providers of these benefits. Workers who have lower desires for benefits will tend to work for employers who can only provide benefits at relative high costs. It is important to remember that if workers can choose among employers, they have the option of deciding not to receive some employee benefit because they value cash earnings more highly than a similar amount of the benefit. This means that workers can actually be made worse off if employers are required to offer a benefit which is financed by equal reductions in earnings. Therefore, careful consideration should be given to the cost of employee benefits prior to the adoption of policies requiring firms to offer certain benefits.

Questions in the Development of Public Policy

- Who pays for employee benefits? The worker in the form of lower wages? The firm in the form of lower profits which may reduce overall employment? Consumers in the form of higher prices? If employee benefit costs raise prices, increases in benefits may have an adverse effect on competitiveness of domestic firms.

- Can workers be made worse off if the government requires all firms to offer certain benefits? This is an important factor to be considered prior to mandating any employee benefit. They key concept is the subsequent reduction in earnings associated with the higher benefit cost and whether the worker is willing to pay this price for the benefit.

PENSION COVERAGE

Employer-provided pension plans first appeared in the United States in the last quarter of the nineteenth century. Prior to 1900, there were only few pension plans; however, large employers began to institute pensions between 1900 and 1920. The expansion of pension coverage slowed during the next 20 years and then expanded rapidly after World War II. The proportion of the full time labor force that is covered by a pension has leveled off at approximately 50 percent.

Pension plans are of two basic types: defined contribution plans and defined benefit plans. In defined contribution plans, the firm contributes a specified amount each pay period into an account for the worker. The retirement benefit depends on the amount of the contributions and the return on invested funds during the person's worklife. In general, these plans do not promise any minimum benefit so that the worker bears all of the financial market risks associated with retirement savings. In defined benefit plans, the firm promises to pay a specific benefit to the person at retirement that is typically based on years of service and/or earnings. Until recently, defined benefit plans were the dominant type of pensions adopted by firms. Large, unionized firms are much more likely to have defined benefit plans while smaller, nonunion firms tend to rely on defined contribution plans.[13]

Public tax and regulatory policies have played an important role in the spread of pensions and the adoption of particular plan provisions. Prior to World War II, pensions were subject to only limited government regulation. Amendments to the Internal Revenue Code in the 1920s allowed companies to make tax deductible contributions into approved pension plans and these contributions were not counted as current income to workers. Plans had to meet certain requirements to receive this tax status.

Beginning in 1974, government regulation of pension provisions and pension financing expanded rapidly. This has required firms to alter their plans substantially and frequently to retain tax qualified status. Changes in government regulation have also stimulated a trend toward the increased use of defined contribution plans and a reduced reliance on defined benefit plans (Clark and McDermed, 1990). This trend away from defined benefit plans is a clear example of how governmental intervention into the labor market can have unintended effects.

The most comprehensive information on pension coverage is provided by Current Population Surveys conducted in May of 1979, 1983, and 1988. Table 1 indicates coverage rates for full time workers by various worker and firm characteristics in 1979 and 1983. The overall coverage rate declined from 55.2 percent in 1979 to 53.1 percent in 1983. Union members were almost twice as likely to participate in a pension plan than nonunion workers; 81.8 percent to 45.0 percent in 1983.

Table 1

Pension Coverage by Selected Characteristics[a]

Characteristic	Current Population Survey 1979 Pension Coverage Rate	Current Population Survey 1983 Pension Coverage Rate
All Workers		
	55.2	53.1
Union Contract		
Nonunion	45.8	45.0
Union	83.7	81.8
Company Size		
Less than 25	28.5	17.7
25-99	38.2	35.1
100-499	57.1	54.7
500-999	66.7	62.9
1,000 or more	80.7	79.9
Sex		
Female	47.0	47.4
Male	59.5	56.7
Age		
16-24	33.6	27.6
25-34	56.4	51.5
35-44	61.9	62.6
45-54	66.2	63.8
55-64	65.0	64.8
65 or older	27.8	29.9

Table 1 (continued)

Characteristic	Current Population Survey 1979 Pension Coverage Rate	Current Population Survey 1983 Pension Coverage Rate
Earnings[b]		
Less than $4.00	20.0	14 0
$ 4.00 - 5.99	34.2	33.7
$ 6.00 - 7.99	53.8	54.7
$ 8.00 - 9 99	69.3	68 7
$10.00 - 14.99	83.0	79.6
$15.00 or more	86.3	78.1
Industry		
Agriculture	14.9	3.8
Mining	72.9	71.4
Construction	42.9	36.4
Manufacturing		
Durables	73.4	72.6
Nondurables	67.5	64.8
Transportation & Communications	70.6	71.6
Trade		
Wholesale	55.1	52.1
Retail	34.6	32.8
Finance, Insurance, Real Estate	57.9	59.9
Services	40.2	40.8

[a]Includes all workers working at least 35 hours per week in the private sector

[b]These figures are average hourly wage rates. The 1979 figures are reported in 1983 dollars.

Source: Robert Clark and Ann McDermed, The Choice of Pension Plans in a Changing Regulatory Environment, Washington: American Enterprise Institute, 1990.

Employees of large firms were much more likely to be covered by pensions In 1983, the coverage rate for workers in firms with less than 25 employees was only 17.7 percent compared to 54.7 percent for employees in firms with 100 to 499, 62.9 percent for employees in firms with 500 to 999, and 79.9 percent for employees in firms with 1,000 or more workers. These data also indicate that men are approximately 10 percent more likely to be covered by pensions than women, and older workers are more likely to be covered by pensions than younger workers

Coverage rates are higher among people with higher earnings. Workers earning less than $4.00 per hour had a coverage rate of only 14.0 percent compared to a coverage rate of 54.7 percent for workers with $6.00 to $7.99 and almost 80 percent for workers earning more than $10.00 per hour. Table 1 also reveals considerable differences in pension coverage across industries. Mining, manufacturing and transportation have the highest coverage rates and agriculture, retail trade and services have the lowest coverage rates.

An analysis of the 1988 CPS indicates that the proportion of full-time workers covered by a pension is only 48 percent (Woods, 1989). Thus, pension coverage has continued to decline in the 1980s. These more recent data also show that coverage increases with age, years of service, and firm size. Unionized and white workers continued to have higher coverage rates

As noted earlier, public policy has shaped the development of employer-provided pensions in the United States. Increased government regulation has raised the price of providing defined benefit plans relative to defined contribution plans and as a result, there has been a significant movement toward greater use of defined contribution plans. This trend is shown in Table 2. These data are based on the Internal Revenue Service form 5500 reports that pension plan sponsors are required to file. The analysis is limited to primary pension plans with 100 or more participants. Thus, supplemental plans and small plans are excluded.

In 1977, there were 15,652 primary defined benefit plans representing 77.7 percent of all such plans. These plans covered 20.3 million workers or 88 9 percent of pension participants in primary plans with 100 or more participants. The use of defined benefit plans increased between 1977 and 1980; however, growth in defined benefit plan coverage has virtually stopped in the 1980s By contrast, defined contribution plans increased in number from 4,384 in 1977 to 7,271 in 1980 and further to 12,42, in 1985. The number of pension participants in these defined contribution plans increased from 2.2 million in 1977 to 6.9 million in 1985. This trend is observable in all industries and in firms of all sizes (Clark and McDermed, 1990)

Most of the trend toward greater use of defined contribution plans is due to increased government regulation that has increased the price of offering defined benefit plans relative to defined contribution plans. Consideration should be given to the effect of further regulations concerning defined benefit plans on the likelihood that firms will simply stop offering these plans and rely more heavily on defined contribution plans

Table 2

Number of Primary Plans and Active Participants by Plan Type[a]

Plan Type	Plans 1977	Plans 1980	Plans 1983	Plans 1985	Paticipants (millions) 1977	Paticipants (millions) 1980	Paticipants (millions) 1983	Paticipants (millions) 1985
Defined benefit	15,652	22,010	23,264	23,174	20.3	26.4	26.0	26.7
	(77.7)	(74.7)	(70.3)	(64.7)	(88.9)	(87.1)	(82.0)	(78.7)
Defined contribution	4,384	7,271	9,623	12,427	2.2	3.6	5.3	6.9
	(21.8)	(24.7)	(29.1)	(34.7)	(9.9)	(11.9)	(16.9)	(20.4)
Other	101	187	209	231	0.3	0.3	0.4	0.3
	(0.5)	(0.6)	(0.6)	(0.6)	(1.2)	(0.9)	(1.1)	(0.9)
Total	20,137	29,468	33,096	35,832	22.8	30.3	31.7	33.9
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

[a]Firms having no primary plans of 100 or more participants and tax-exempt organizations are excluded The numbers in parentheses represent percent of column totals.

[b]These plans include defined benefit plans with benefits based partly on balance of separate account of participant (code section 414(k)), annuity agreements of certain exempt organizations (code section 403(b)(1)), custodial accounts for regulated investment company stock (code section 403(b)(7)), pension plans utilizing individual retirement accounts or annuities (described in code section 403) as the sole funding vehicle for providing benefits.

Source: Robert Clark and Ann McDermed, The Choice of Pension Plans in a Changing Regulatory Environment, Washington: American Enterprise Institute, 1990.

As noted above, a series of studies have found that pension plans can be used to reduce turnover. Firms can also use pensions to achieve a desired age structure of its labor force by encouraging retirement (Burkhauser,1979; Burkhauser and Quinn 1983; and Fields and Mitchell, 1984). Most special early retirement programs are developed in conjunction with existing pension plans. While the theoretical literature indicates how pensions or other contingent compensation plans can be used to stimulate increased work effort (Lazear, 1979), there is little systematic evidence relating pensions to productivity and profits (Allen and Clark, 1987).

Questions in the Development of Public Policy

- What is the relationship among pensions, employee productivity, and firms' profits? A better understanding of these relationships would help to explain the current pattern of pension coverage and indicate what policies might be effective in increasing coverage.
- Can pension coverage be expanded by further tax incentives? What impact would mandatory pension coverage have on workers and firms?
- What is the relationship between pension funds and corporate mergers? In recent years, pension funds have been part of corporate takeovers, mergers and acquisitions. Should firms be precluded from terminating plans for the purpose of recovering excess assets? Several proposals are now pending to limit these plan terminations.
- How secure are pension benefits? Future pension benefits depend on inflation, job mobility, firm bankruptcy, and the government pension insurance program. Much debate has focused on the desirability of additional regulations on the portability of benefits and inflation adjustments.

HEALTH INSURANCE FOR ACTIVE WORKERS

An estimated 57 percent of the 127 million people who worked in 1986 were covered by an employer-provided health insurance plan on their job.[14] Table 3 indicates that coverage is associated with several characteristics of workers and firms. In 1986, three quarters of full-year, full-time workers were covered by employer-provided health insurance but only one quarter of full-year, part-time workers were covered. The proportion of workers covered rises with employee earnings from 13.4 percent for persons with less than $5,000 to 63.5 percent for those with earnings of $10,000 to $14,999. Workers with earnings of over $20,000 had a coverage rate of over 80 percent.

Data for 1983 indicates a strong relationship between health insurance coverage and firm size. Only 37.3 percent of workers in firms with less than 25 employees were covered compared to 66.0 percent for those in firms with 25 to 99 workers, and coverage rates of 75 percent or more in larger firms. Coverage rates vary widely across industries with manufacturing, mining, public administration, and transportation have coverage rates in excess of 75 percent. Low coverage rates are found in agriculture, personal services, and retail trade.

Evidence from the 1988 Employee Benefit Survey indicates that health care benefits were provided to 90 percent of all full-time employees in medium and large companies (U.S. Bureau of Labor Statistics, 1989). These plans provided coverage for the major categories of medical care for virtually all of their participants. In addition, 66 percent of the participants were covered by dental care provisions while more than 75 percent had coverage for home health care and extended care facilities.

The most common form of coverage is a plan that provides a fee-for-service. These plans pay expenses as they are incurred by the worker or his/her dependents. These plans may be either self-insured (42 percent of all fee-for-service participants), commercially insured plans (34 percent of all fee-for-service participants), or Blue Cross-Blue Shield plans (18 percent of all fee-for-service participants). Fee-for-service plans cover 74 percent of all health plan participants and are more common among production and service workers.

The use of health maintenance organizations (HMOs) has increased rapidly in the 1980s. HMOs are prepaid health care plans that provide comprehensive health care to plan participants for a fixed fee. In 1988, 19 percent of all participants in employer-provided health care plans were enrolled in HMOs. This is up sharply from 13 percent in 1986 and 7 percent in 1985. HMOs are more commonly provided to

Table 3

Health Insurance Coverage Rates of Employees by Selected Characteristics

Characteristic	Percent of Workers Covered
Work Status: 1986	
Full year, full-time	75.6
Full year, part-time	24.9
Earnings: 1986	
Less than $5,000	13.4
5,000 - 9,999	37.8
10,000 - 14,999	63.5
15,000 - 19,999	77.3
20,000 - 24,999	81.8
25,000 - 29,999	85.2
30,000 - 49,999	87.7
50,000 or more	84.8
Firm Size: 1983	
Less than 25 employees	37.3
25 to 99	66.0
100 to 499	74.8
500 to 999	79.5
1,000 or more	85.4

Source: U. S. House of Representatives, Committee on Ways and Means, "Background Material and Data on Programs Within the Jurisdiction of the Committee on Ways and Means," Washington: U.S.G.P.O., March 15, 198[illegible] pp.274-276.

professional and administrative workers and technical and clerical workers.

Another rapidly increasing type of health insurance is preferred provider organizations (PPOs). These plans pay greater benefits for medical services provided by designated (than by nondesignated) health care providers although in most cases participants are free to select any health care provider. PPOs covered 7 percent of participants in medical care plans in 1988 up from only 1 percent in 1986.

Plans covering 90 percent of participants include provisions for some initial deductible expenses, most commonly $100. Once the deductible has been met, plans typically specify a percent of expenditures that is paid by the plan (usually around 80 percent) with the remainder paid by the employee. Most plans set an overall limit on the annual amount that an individual can pay in out-of-pocket expenses for health coverage. This limit is less than $1,250 for 68 percent of participants in health care plans.

Several other studies show the changes in health insurance coverage during the past decade using data from the 1977 National Medical Care Expenditures Survey (Wilensky, Farley and Taylor, 1984) and the 1987 and 1988 Health Insurance Association of America surveys of employer-sponsored health plans (DiCarlo and Gabel, 1989; Gabel, DiCarlo, Fink, and Lissovoy, 1989). A comparison of these studies also shows an increased reliance on HMO's. An examination of the Current Population Surveys for March 1987 and 1988 shows that workers without employer-group insurance are "... predominantly young, and they are in families with incomes above 2 times the poverty level. In addition, they are likely to be working in the service, retail trade, construction, manufacturing and agriculture-forestry-fishing sectors of the economy" (Swartz, 1989).

Questions in the Development of Public Policy

- Healthy workers should have higher productivity and lower absence rates. Thus, to the extent that health insurance improves the average health of a firm's workforce, increases in productivity should be observed. However, there is little solid evidence on the link between health insurance and worker productivity.

- Who is to pay for the rapid increase in health insurance? Health costs have been rising faster than productivity or general consumer prices. If firms continue to provide the same level of services, total costs rise. Firms have attempted to pass some of these cost increases along to workers by reducing certain services and increasing workers'share of costs These actions have stimulated a series of labor relations problems most recently in the telecommunications industry.

- How can health insurance best be extended to those workers who are currently without coverage? Options include mandatory health insurance or increasing subsidies to firms offering these benefits. To evaluate these options, policymakers need more information on the possible response of firms and workers to alternative policies.

RETIREE HEALTH INSURANCE

Many companies now provide health insurance to their retirees. Prior to the mid 1960s, relatively few firms allowed retirees to remain in their health plans. After the passage of Medicare, firms began to establish retiree health insurance plans. The Consolidated Omnibus Budget Reconciliation Act of 1985 requires employers to continue health care benefits to retirees for up to 18 months. Retirees may be charged up to 102 percent of the premium cost.

The most comprehensive information on the proportion of current workers who are covered by health insurance plans with provisions for the continuation of coverage into retirement is from the Employee Benefits Survey for Medium and Large Firms (EBS). The most significant shortcoming of these data is the lack of coverage of small employers (with fewer than 100 employees).

The 1988 EBS indicates that 45 percent of workers covered by employer-provided health insurance are in plans where the employer finances all or part of the insurance for retirees Of those with employer-financed retiree health insurance, 53 percent are in plans where the firm pays all of the cost. Most of the participants (89 percent) in employer-financed plans are in plans that do not reduce benefits at retirement and virtually all (98 percent) have benefits that continue for life.

Analysis of earlier Employee Benefit Surveys indicates that larger firms are more likely to offer retiree health insurance than smaller companies (Employee Benefit Research Institute, 1985) and that coverage rates are higher in mining, transportation, and financial sectors of the economy and lowest in retail trade (Leavitt, 1985). The EBS data on retiree health insurance coverage can be supplemented by various surveys with more limited coverage.[15] These surveys also indicate that larger firms are more likely to offer retiree health plans and that most of these plans are linked to Medicare.[16]

Retiree health plans are currently troubled by a series of financial issues. The continued rapid rise in the cost of health care and health insurance increases the cost of providing these plans. The aging of the workforce within firms implies that there are more retirees per active worker. Therefore, expenditures due to retiree health insurance are increasing as a proportion of total labor costs. Government reductions in Medicare coverage also increase firms' costs for plans that are coordinated with Medicare.

Faced with these rising costs, many firms have attempted to reduce costs by requiring larger co-payments, higher premiums, and increased deductibles. Other firms have attempted to eliminate retiree health insurance. In contrast to the substantial regulation of pensions, there is very little regulation of retiree health insurance based on statute. As a result, the courts have intervened to determine allowable practices.

Although acceptable practices are still being determined, current rulings imply that firms will not be allowed to terminate health plans that have been promised to current retirees. Specifically, benefits are viewed as being vested at retirement. Companies could eliminate future coverage for current workers. Without eliminating programs, companies can reduce costs by decreasing the benefits provided to retirees. The extent of reductions that will be allowed are still being decided by the courts.

The Financial Accounting Standards Board has decided that firms will be required to include unfunded liabilities associated with retiree health plans on their balance sheets. This has caused a great deal of concern among companies with retiree health plans. Virtually all plans are unfunded and some firms have very large liabilities. In most cases, companies are not allowed to deduct contributions into a fund to finance the future costs of health insurance. In the coming years, this may be an area for policy decisions by Congress. Currently, several proposals have been made to allow firms to shift excess funds from their pension plans into funds for retiree health insurance.

Theoretically, retiree health insurance plans could be part of long run employment contracts that reduce turnover and stimulate greater effort. This follows from the fact that workers vest in these plans only at retirement and must have accumulated a minimum specified number of years of service. These plans should also affect retirement plans especially of persons less than 65 years of age. The continuation of health insurance is an important retirement benefit.

Questions in the Development of Public Policy

- Are retiree health plans part of employment contracts used to reduce turnover, increase productivity, and alter retirement patterns? It would be timely to evaluate the effect of retiree health insurance plans on workers' behavior.

- What is the effect of employer-provided retiree health insurance on the well-being of older Americans? Retirees with additional private health insurance are better able to cope with medical bills in old age; however, little is known concerning the value of these plans to retirees.

- Will current economic conditions and policy changes reduce coverage of retiree health plans and increase their costs to retirees? Many firms are now considering methods of reducing future costs of these plans. Options include setting dollar amounts for benefits.

- Should firms be allowed to pre-fund these plans? Would this increase the number of firms offering retiree health insurance? Compared to pensions, retiree health plans are not subject to much government regulation. Should the government set minimum vesting and funding standards for retiree health plans?

DEPENDENT CARE BENEFITS

Firms provide a variety of benefits that assist their workers in providing care for their young children and elderly parents. One of the most important benefits is time away from the job. Leave can be in the form of paid vacations, paid personal leave, or unpaid leave. Virtually all firms in the 1988 EBS provided paid vacations for their employees. Vacation days per year are typically related to years of service with average paid vacation being 9.0 days after 1 year, 16.1 days at 10 years, 20.1 days at 20 years and 21.7 days at 30 years. Plans covering professional and administrative workers generally offer more vacation days (see Table 4). Employees can use vacation time to care for relatives; however, companies may require advanced notice for the use of vacation days thus limiting the usefulness of this benefit for unexpected problems.

The 1988 EBS indicates that 24 percent of full-time employees in medium and large firms had paid personal leave. Professional and administrative, along with technical and clerical workers, were more than twice as likely to have this benefit as were production workers. Typically, workers received from 1 to 5 days of personal leave per year with an average of 3.3 days (see Table 5).

Maternity leave was provided to 36 percent of full-time employees of medium and large firms while paternity leave was offered to only 17 percent of employees. Both types of leave were almost always without pay; only 2 percent of workers had paid maternity or paternity leave coverage (see Table 6). Unpaid parental leave policies typically allow workers to use this leave after regular paid leave has been exhausted. In most cases, employees could expect to return to their own or a similar job. Unpaid parental leave averaged between 4 and 5 months.[17]

Some states currently require firms to provide non-disability parental leave. In these states employers must provide parental leave of between 6 and 13 weeks. These laws require that the employee receive his or her job or a similar job upon returning to work (Meisenheimer, 1989). Several countries such as Sweden, Canada, and the United Kingdom have some form of mandatory parental leave policies. Over the past few years, the U.S. Congress has considered legislation that would require employers to provide unpaid parental leave.

In addition to these forms of paid and unpaid leave, some firms provide benefits such as on-site day care plans, reimbursement for emergency dependent care, flexible time scheduling, and information concerning dependent care. The Bureau of Labor Statistics conducted a survey of 10,000 business establishments and government agencies in 1987 (Hayghe, 1988). This survey indicates that 11 percent of the nonagricultural establishments with 10 or more employees provided at least some form of direct assistance to employees. However, only 2 percent sponsored day-care centers and an

Table 4

Paid Holidays and Vacations: Average Number of Days for Full-Time Participants, Medium and Large Firms, 1988

Item	All participants	Professional and administrative participants	Technical and clerical participants	Production and service participants
Paid holidays				
	9.4	9.6	9.4	9.2
Paid vacation by length of service[1]				
At 6 months	5.7	6.5	5.7	5.1
At 1 year	9.0	10.8	9.7	7.6
At 3 years	10.8	11.8	11.0	10.2
At 5 years	13.1	14.4	13.6	12.1
At 10 years	16.1	17.2	16.5	15.2
At 15 years	18.3	19.3	19.0	17.4
At 20 years	20.1	21.0	20.4	19.3
At 25 years	21.3	22.3	21.8	20.5
At 30 years[2]	21.7	22.7	22.2	20.9

[1]Participants are included only for the service periods for which they receive vacations.

[2]The average (mean) was essentially the same for longer lengths of service.

NOTE: Computation of average included half days and excluded workers with zero holidays or vacation days.

Source: U. S. Bureau of Labor Statistics, Employee Benefits in Medium and Large Firms, 1988, BLS Bulletin No. 2336, Washington: USGPO, 1989.

Table 5

Paid Personal Leave: Percent of Full-Time Employees by Number of Paid Personal Leave Days Provided Per Year, Medium and Large Firms, 1988

Number of days	All employees	Professional and administrative employees	Technical and clerical employees	Production and service employees
Total	**100**	**100**	**100**	**100**
Provided paid personal leave	**24**	**32**	**33**	**15**
1 day	4	5	4	3
2 days	5	6	7	2
3 days	4	6	6	2
4 days	3	3	4	3
5 days	3	4	4	
More than 5 days	2	3	3	1
No maximum specified	3	5	4	1
Varies by length of service	1	1	2	1
Not provided paid personal leave	**76**	**68**	**67**	**85**

[1]Workers were provided as much personal leave as they needed.

Note: Because of rounding, sums of individual items may not equal totals.

Source: U. S. Bureau of Labor Statistics, Employee Benefits in Medium and Large Firms, 1988, BLS Bulletin No.l 2336, Washington: USGPO, 1989.

Table 6

Maternity and Paternity Leave:[1] Percent of Full-Time Employees by Leave Policy, Medium and Large Firms, 1988

Employer leave policy	All employees	Professional and administrative employees	Technical and clerical employees	Production and service employees
Maternity leave				
Eligible for paid leave	2	3	2	2
Eligible for unpaid leave	33	37	34	31
Fixed number of days available	30	34	[illegible]	28
Information not available on duration	3	3	[illegible]	3
Not eligible for maternity leave	64	60	64	67
Paternity leave				
Eligible for paid leave	1	2	1	1
Eligible for unpaid leave	16	19	[illegible]	13
Fixed number of days available	14	17	[illegible]	[illegible]
Information not available on duration	1	–	2	
Not eligible for paternity leave	83	80	82	[illegible]

[1]Paid or unpaid leave provided to new mothers or fathers for the specific purpose of caring for their child during the early days of its infancy. This plan is separate from any sick leave, annual leave, vacation, personal leave, or short-term disability plan that the employee may take.

Note: Because of rounding, sums of individual items may not equal totals.

Source: U. S. Bureau of Labor Statistics, Employee Benefits in Medium and Large Firms, 1988, BLS Bulletin No. 2336, Washington: USGPO, 1989.

additional 3 percent provided financial assistance towards child-care expenses. Five percent of the companies offered information and referral services to assist employees in identifying care facilities.

As with other benefits, large firms are more likely to provide dependent care services. For example, only 9 percent of firms with 10 to 49 employees offered child-care benefits or services compared to 15 percent for firms with 50 to 249 employees and 32 percent for firms with 250 or more workers. Firms in the service sector were more likely to offer these benefits that firms in the goods-producing sector.

Coverage by dependent care plans seems to reduce absenteeism rates. One study examines child care plans at several large companies and shows how companies have determined that these plans are cost-effective (Friedman, 1986).[18] A few companies are now addressing the problem that workers have in caring for their elderly parents; however, little systematic evidence exists concerning the cost-effectiveness of these plans from the viewpoint of the firm.[19]

FLEXIBLE BENEFIT PLANS

The changing composition of the labor force is affecting the demand for employee benefits. The proportion of the labor force accounted for by women has risen from 40.5 percent in 1976 to 45.0 percent in 1988 Furthermore it is projected to increase to 47.3 percent by the year 2000 (Fullerton, 1989) The number of dual career families has also risen. In addition, the labor force is aging as the number of new entrants declines. These changes have altered the demand for benefits by workers. One way firms are responding to these changes is to offer a proportion of compensation in flexible or "cafeteria plans" These plans, along with flexible working hours, allow employees to tailor working conditions to their own preferences.

Employers allocate a specified amount of money to each employee covered by a flexible benefit plan These plans allow workers to spend funds for particular benefits that the employee selects Options typically include medical care, disability insurance, vacation time, dependent care and life insurance. Benefits are not included in taxable income provided that certain conditions are met Generally if all monies in the individual's benefit account are not used by the end of the year, the fund reverts to the employer

In contrast, reimbursement plans require the employee to contribute (usually with pre-tax dollars) into an account established by the employer Employees are then reimbursed for such expenses as dependent care or premium co payments, deductibles or other expenses not covered by the basic health plan of the firm The 1988 Employee Benefit Survey of Medium and Large Firms indicates that 13 percent of workers were covered by either or both a flexible benefit plan or a reimbursement plan (Meisenheimer and Wiatrowski, 1989)

An indirect dependent-care benefit that firms provide workers is a flexible work schedule Flexible working hours allow employees to meet household responsibilities associated with dependents and still contribute to the day's work responsibility Flexible work schedules are much more common than direct dependent-care plans Table 7 indicates the range of plans offered by firms with 43 percent of the firms offering flextime and 35 percent allowing voluntary part time work

Questions in the Development of Public Policy

- How can firms evaluate the effectiveness of dependent care plans in reducing absenteeism and increasing productivity? A framework for cost-benefit analysis of these benefits would be useful ... the firm's own best interest to offer such plans? Some companies think so, but why? Is ... evidence that other firms ... consider providing this

Table 7

Characteristics of Establishments with 10 or More Employees Work Work-Schedule or Leave Policies Aiding Child Care by Type of Policy, Summer 1987

Characteristic of establishment	Total establishments (in 1000s)	Percent providing: Flexitime	Voluntary part time	Job sharing	Work at home	Flexible leave	Other
Total	1,202	43.2	34.8	15.5	8.3	42.9	2.1
Size							
10 To 49 Employees	919	45.1	36.0	16.0	9.2	43.8	1.9
50 To 249 Employees	236	37.7	32.0	13.7	5.6	39.9	2.9
250 Employees Or More	47	34.9	25.1	15.7	3.8	40.2	3.1
Industry							
Private total	1,128	43.6	35.3	15.0	8.5	42.9	1.8
Goods-producing total	272	31.3	22.4	9.0	8.2	37.3	1.3
Mining and construction	109	33.0	20.7	8.2	9.9	37.5	1.2
Manufacturing total	163	30.1	23.6	9.4	7.0	37.2	1.3
Durable goods	94	27.5	23.2	8.8	4.8	35.3	1.6

Table 7 (continued)

Characteristic of establishment	Total establishments (in 1000s)	Percent providing:					
		Flexitime	Voluntary part time	Job sharing	Work at home	Flexible leave	Other
Nondurable goods	69	33.8	24.1	10.3	9.9	39.8	0.0
Service-producing total	856	47.5	39.4	16.9	8.6	44.6	1.9
Transportation and public utilities	59	34.4	24 6	9.6	6.7	40 4	1.2
Trade, total	427	51.2	44.1	18.1	5.6	45.8	1.5
Wholesale	124	32.3	28.6	11.7	9.5	42.5	0.6
Retail	303	58.9	50.4	20.7	4.0	47.2	1.9
Finance, insurance, and real estate	80	38.9	26.1	14.9	13.7	41.4	1.1
Services	290	47.2	39.2	17.3	12.2	44.6	3.0
Government	74	37.5	26.7	23.5	4.0	43.7	7.1

Source: Howard Haygle, "Employers and Child Care: What Roles Do They Play?" Monthly Labor Review, September 1988.

- **Should dependent care plans be mandatory? Is this an affirmative action issue?**

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INDIVIDUAL RETIREMENT ACCOUNTS

Individual retirement accounts allow certain individuals to contribute up to $2,000 per year of non-taxed income into savings accounts for retirement. The 1986 Tax Reform Act limited tax- deferred contributions to persons who are not active participants in employer-sponsored pensions or whose adjusted gross income is below $25,000 for an individual and $40,000 for a married couple filing a joint return. Persons not eligible for tax-deferred contributions can make taxable contributions into IRAs and the accumulation of these IRA accounts is tax deferred until funds are withdrawn.

Preliminary analysis of the May 1988 Current Population Survey indicates that 12 percent of all private wage and salary workers made an IRA contribution during the previous tax year. Despite the differential tax status, workers covered by employer-sponsored pension plans had higher IRA contribution rates than did workers who were not covered by pension plans. Of the 57 percent of all workers who were not covered by employer-provided pensions, only 10 percent of these workers contributed to an IRA (Woods, 1989). This increases the proportion of all workers covered by some type of retirement plan to 47 percent (41 percent covered by an employer pension plus 6 percent participating in an IRA).

Earlier research, when eligibility was not restricted by income or pension status, indicated that the proportion of workers who contributed to IRAs rose with income, from 5 percent of those with income of less than $10,000 to 59 percent of those with more than $70,000. However, more than half of all IRA contributions in 1982 were made by workers with incomes between $10,000 and $30,000 (see Table 8). After adjusting for their age, income and other characteristics, workers not covered by pension plans were no more likely to have contributed to an IRA than pension participants (Venti and Wise, 1988). Recent research has indicated that contributions to IRAs have stimulated net new national savings (Venti and Wise, 1987).

Questions in the Development of Public Policy

- How much do IRAs increase national savings? For each dollar of tax deferred contributions, what is the increase in net new savings versus a transfer into IRAs from other forms of savings?
- Is there a way of encouraging greater use of IRAs by low and middle income workers? Should there be tax deferred saving plans for other objectives besides retirement?

Table 8

IRA Contributions, 1982

Income interval (thousands)	Percent of workers with IRA contributions	Percent of all IRA contributions
0 - 10	5.0	9.9
10 - 20	11.3	26.1
20 - 30	19.2	26.5
30 - 40	32.4	18.1
40 - 50	44.9	9.1
50 - 70	53.5	6.5
70 +	59.3	3.8

Source: Steven Venti and David Wise, "The Determinants of IRA Contributions and the Effect of Limit Changes," in Zvi Bodie, John Shoven and David Wise (eds.), Pensions in the U. S. Economy, Chicago: University of Chicago Press, 1988, pp. 9-52.

RESEARCH AGENDA AND POLICY QUESTIONS

Employee benefits have become an integral component of total compensation. They are used in conjunction with other personnel policies to achieve firms' objectives. Economic theory would predict that workers pay for these benefits in the form of lower wages; however, the empirical economics literature fails to validate this prediction. As a result, many questions that have important policy implications remain unanswered.

This section identifies specific policy proposals that require additional information before they can be evaluated.

1. Further research is needed to estimate the cost of employee benefits to workers in the form of lower earnings. These studies should use detailed data on employee benefits that can only be provided by firms. This information is necessary to determine the cost to workers of benefit coverage. The results would also indicate whether firms are neutral sellers of benefits.

Knowledge of the true compensating differentials is important to any proposed policies mandating employer-provided benefits. Mandatory health insurance and a minimum pension have been proposed. The desirability of these programs depends on the responses of employers to mandatory benefits. Studies estimating wage differentials could provide useful information in the evaluation of these proposals.

2. Studies should be undertaken to determine the change in demand for employee benefits in response to increased tax incentives. The tax treatment of employee benefits is one of the primary reasons workers buy benefits from their employers. Higher tax rates lower the after-tax price of benefits and encourage the purchase of more employee benefits. This helps explain the current distribution of many benefit plans. Knowledge concerning the responsiveness of employee benefit coverage to tax changes would be useful in assessing any changes that may occur due to tax modifications in the 1980s. Such studies would also provide information on whether further increases in coverage can be achieved by tax incentives.

3. There have been very few studies that have attempted to examine systematically the effect of employee benefits on workers' productivity and firms' profits. Such studies would be very useful to understanding the distribution of employee benefit coverage and why firms offer benefit plans.

4. Government regulation of benefit plans directly shapes what type of coverage workers are offered. Pensions are highly regulated. Government regulation since 1974 has substantially altered provisions and funding of defined benefit plans; however, this regulation has also resulted in fewer companies offering this type of pen-

sion. Proposed regulations should be evaluated both for their direct effect on the benefit plans given that they are offered and on the probability that such coverage will be provided. Specific attention could be given to issues relating to the extension of retiree health insurance beyond the period mandated by COBRA, the funding of these benefit plans, and whether workers should accrue vested benefits in these plans.

5. Greater knowledge concerning the use of flexible benefit or cafeteria plans would be useful in formulating tax and regulatory policy towards these employee benefits. It would be interesting to know what proportion of such benefits as health insurance and dependent care are provided through these plans. Are current regulations limiting the use of these plans? What policies would result in the expansion of coverage of flexible benefit plans?

6. A clearer understanding of how workers who are not covered by employee benefits acquire certain goods and services is needed. For example, do workers who are not covered by health insurance purchase individual insurance policies? Are these policies adequate? What happens if uncovered workers have no health insurance at all? What is the impact of retiree health insurance on the economic well-being of retirees? Does such coverage reduce the cost of Medicare or Medicaid?

7. Additional information is needed on the role of dependent care plans in keeping caregivers in the labor force. For those who are in the labor force, how is their productivity affected? What would be the impact of mandatory care plans, especially on small firms?

8. Why are small employers less likely to offer employee benefits? The lower coverage rates may be due to administrative costs or adverse selection effects associated with small groups. The government might be able to lower these costs by providing subsidies for administration of plans or the pooling of risks across employers.

This section has summarized the key areas in which policy-makers need additional information to evaluate new policy proposals for the provision of employee benefits.

ENDNOTES

1. This concept was recognized over two hundred years ago by Adam Smith in The Wealth of Nations.

2. Consider a worker who is paid $2,000 per month in total compensation. If the worker is paid completely in cash earnings and is subject to a 30 percent tax, he will receive only $1,400 per month after taxes. Thus, he can buy a total of $1,400 worth of goods and services. Now suppose he receives company-provided benefits equal to $500 per month and $1,500 in cash earnings. He is not taxed on the $500 in benefits but pays $450 in tax (.3 * $1,500) on his earnings. Thus, he has a total purchasing power of $1,550 ($500 in benefits and $1,050 in cash earnings). Total purchasing power has increased by $150 per month because the worker receives 25 percent of his compensation in company-provided benefits. This example shows that the worker is able to purchase $500 in benefits at a cost of only a $350 reduction in after tax cash earnings ($1,400 - $1,050).

The greater the tax rate, the greater the advantage to the worker from receiving company-provided benefits. For example, a worker with a tax rate of 50 percent would have only $1,000 in after tax income if all of his $2,000 per month compensation is paid in cash earnings. If he receives $500 per month in benefits and $1,500 in earnings, total after-tax compensation is $1250 ($500 in benefits plus $750 in after-tax earnings). In this case, the worker "pays" $250 in reduced after-tax earnings for $500 in employee benefits. Thus, as the tax rate increased from 30 percent to 50 percent, the cost of $500 of employee benefits fell from $350 to $250.

3. The marginal federal personal income tax rate paid by the median taxpayer rose from 4.4 percent in 1940 to 23.0 percent in 1945 and remained approximately 20 percent through the 1970s. Similarly, the percent of tax filers who paid taxes increased from 13.2 percent in 1940 to 65.3 percent in 1945 and then fluctuated between 60 and 70 percent through 1975 (Ippolito, 1986, p. 25). There has also been a sharp increase in the payroll tax for social security. This tax has risen from 1.0 percent paid by both the employer and the employee on the first $3,000 of earnings in 1940 to 7.51 percent paid on the first $48,000 in 1989.

4. In addition, some benefits may be viewed as luxuries by consumers. This would result in high wage workers spending a larger share of their income on these items while low wage workers concentrate their purchases on the current necessities of food, clothing, and shelter.

5. Mitchell and Andrews (1981) find evidence for these economies of scale among multi-employer pension plans.

6. Freeman and Medoff (1984) discuss union effects on benefits and compensation. They also examine the process of expressing worker preferences for benefits through the union. This is sometimes referred to as the "union voice effect." For a discussion of the effect of union on pensions, see Allen and Clark (1986).

7. Federal laws limit the differential treatment that can be provided to workers within a single firm. These discrimination requirements are primarily aimed at preventing firms from offering tax-exempt benefits only to high paid workers and executives.

8. Of course it is not impossible for employers to provide these items. Examples of instances where a very high proportion of total compensation is devoted to benefits include nineteenth century company towns and current migrant workers.

9. Obviously, the worker is better off if he receives a benefit without having his earnings reduced. As noted above, benefits are not expected to be free to workers.

10. This model is based on the economic concepts of workers attempting to maximize their utility or well-being and firms attempting to maximize profits. Studies using this model typically assume that workers are aware of all job characteristics and all forms of compensation and that they can correctly evaluate all types of benefits. Workers have a wide range of employment possibilities with different employers offering different combinations of wages, benefits, and working conditions. Workers can freely choose among these potential employers.

Within the context of the utility maximization model, workers are shown to be indifferent to many different combinations of compensation that provide them with the same level of well-being. The value a worker places on a particular benefit is shown by determining how much in earnings he is willing to give up in order to receive a specified increase in a particular benefit.

11. Famulari and Manser (1989) provide a useful discussion of how the value of benefits to workers may differ from the cost of these benefits to employers.

12. A readable description of this economic model of compensating wage differentials applied to safety in the workplace is presented in Smith (1976).

13. Clark and McDermed (1990) provide a detailed examination of the differences in these two types of plans.

14. This percentage does not include people who worked and were covered in an employer plan through another family member. Of the 55 million workers who were not covered on there own job, 21 million were covered in plans due to other family members (U.S. House of Representatives, 1989).

15. See Clark and Kreps (1989) for a review of these studies.

16. These studies include Employee Benefit Research Institute (1986), Leavitt (1985), Rappaport and Kalman (1986), U.S. Department of Labor (1986), and Washington Business Group on Health (1985).

17. Meisenheimer (1989) examines the 1988 EBS data on parental leave.

18. For other reviews of child care plans see Bloom and Steen (1988), Fierman (1988), and Levine (1989).

19. Reviews of several large companies offering these benefits are found in Nelson-Horchler (1989), Halcrow (1988), Wagel (1987), and Azarnoff and Scharlach (1988).

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