NBER WORKING PAPER SERIES

THE EFFECTS OF MANDATING BENEFITS PACKAGES

Olivia S. Mitchell

Working Paper No. 3260

NATIONAL BUREAU OF ECONOMIC RESEARCH 1050 Massachusetts Avenue Cambridge, MA 02138 February 1990

This project was funded by Purchase Order 99-9-4757-75-009-04 from the U.S. Department of Labor, Commission on Workforce Quality and Labor Market Efficiency. Opinions stated in this document do not necessarily represent the official position or policy of the U.S. Department of Labor, Commission on Workforce Quality and Labor Market Efficiency. Without implicating them, I would like to thank the following people for helpful comments: Emily Andrews, Deborah Chollet, Ronald Ehrenberg, Gary Fields, Daniel Hamermesh, Robert A. Hart, Michael Horrigan, Kathering Montalto, and Robert S. Smith. This paper is part of NBER's research program in Labor Studies. Any opinions expressed are those of the author not those of the National Bureau of Economic Research.

NBER Working Paper #3260 February 1990

THE EFFECTS OF MANDATING BENEFITS PACKAGES

ABSTRACT

This paper identifies and, where possible, quantifies potential labor market consequences of government mandating of employee benefits. The author argues that mandating benefits could increase benefit coverage and generosity for numerous workers and their families. However, even when mandating benefits does improve benefit provision, there will be offsetting effects including wage and other benefit cuts, reduced work hours, reduced employment, and possibly output reductions in covered sectors. Employer bias against "expensive to insure" workers may also result, producing labor market sorting and segmentation. In addition, many workers currently without benefit coverage are employees of small firms, women, part-time and minimum wage workers. Frequently, mandated benefit proposals exclude or reduce coverage for these workers to alleviate the financial burden on small firms. As a result, many uninsured people will not be helped by the type of mandated employee benefit program currently under review. A separate approach would probably be needed to meet the needs of those not covered by mandated benefit programs.

Olivia S. Mitchell
Department of Labor Economics, ILR
266 Ives Hall
Cornell University
Ithaca, NY 14853
(607)255-2743
and
NBER

1050 Massachusetts Avenue Cambridge, MA 02138 (617)868-3900 The purpose of this paper is to evaluate the potential labor market consequences of government mandating of employee benefits. Both theoretical and empirical economic arguments for and against benefit mandating are presented and assessed. In view of the continuing policy debate over health care and parental leave, these two areas are the focus of special attention in the discussion below.

It should be stated at the outset that the paper's objective is to evaluate rather than to support or undermine policy proposals to mandate benefits for US workers. First we examine the role of employee benefits in the US labor market, seeking to explain why some firms and workers are less likely to have particular benefits, or have less generous benefits, as compared to others. Next, we discuss several rationales for mandating benefits, presenting the pros and cons from an economic policy viewpoint. Having established the policy context, the third part of the paper then outlines the likely effect of mandating benefits on key labor market outcomes. Available evidence from related literature is provided, and where possible special problems specific to small firms are emphasized. A final section summarizes issues that should be considered when designing mandatory benefits policy. We also identify important remaining research questions for the benefits fields and describe the data necessary to address these. I

I. Understanding Why Employee Benefit Coverage is Uneven

Broadly defined, an employee benefit is any form of nonwage compensation. In this paper we narrow our focus to what is conventionally termed "voluntarily-provided benefits" which include payments in kind such as employer-provided group life, health and disability insurance programs; deferred compensation, primarily in the form of company-sponsored pensions and other retirement savings vehicles; and more recent arrivals to the benefit scene such as subsidized child care arrangements, health spas, legal assistance in divorces and house closings, and flexible

(cafeteria) benefits, among others. All told, voluntarily provided benefits constitute 25-30% of private sector payrolls (US Chamber of Commerce, 1988). This category of benefits must be distinguished from "legally required" benefits mandated by law and funded through special payroll taxes (e.g. Social Security, Workers' Compensation, Unemployment Insurance); these latter comprise roughly 10% of private sector compensation. Company contributions for both types of benefits have grown steadily over time until the last five years, when employer benefit outlays have moderated somewhat (Andrews, 1988; Woodbury, 1989).

There are marked differences in the distribution of voluntarily provided benefits across workers and firms. For instance, a unionized male worker with a long-term and full-time attachment to his job is far more likely to have life and health insurance coverage and a pension plan, as compared to a lower-wage female worker, or a black employee, or a short-term or part-time worker. Researchers have also documented the fact that large firms tend to offer more nonwage benefits and a wider variety of such benefits than do small firms (Andrews, 1989; Frumkin, 1986; Bell and Marclay, 1987). For instance, over 80% of small as well as medium and large firms offer paid vacation time, but the prevalence of health and retirement coverage is much smaller among firms with fewer than one hundred employees, as compared to larger firms (see

This pervasive unevenness in benefit coverage is partly a reflection of worker and firm differences in their valuation of employee benefits. High-wage employees value benefits which permit them to shelter compensation from tax: for instance, if an employer picks up a \$2000 health insurance premium, this health benefit is currently not taxable while the equivalent in cash income would be subject to Federal, state, and Social Security tax.² Similarly, pension contributions and investment earnings on those contributions are tax-free until retirement, when the individual will be in a lower tax bracket. Hence one reason employee benefits are more prevalent among higher-paid workers is that they shield some compensation from higher marginal tax brackets.

There are additional reasons why workers value non-wage benefits in the compensation package. Some employee benefits are designed to help workers accumulate funds that they might

otherwise be tempted to spend (Thaler and Shefrin, 1981). Insurance costs are also lower among larger groups of people due to scale economies, administrative cost savings, and risk pooling, making group provision of benefits especially appealing (Mitchell and Andrews, 1981). Insurers prefer to work with groups formed for purposes other than the purchase of insurance to avoid unusual expenses due to adverse selection, so that employee groups have a special advantage in this regard (Beam and McFadden, 1988). One explanation for why union workers have employee benefits is that labor unions appear more responsive to older and stable employees' demands (Freeman, 1981). Putting all these factors together, it seems clear that part of the unevenness in benefit coverage across the working population is due to a concentration of worker demand among high-wage and unionized employees in large firms. Conversely, demand for benefits has been the lowest among low-wage workers for whom the tax shield is worth less, and for whom the need for cash compensation is the greatest.³

Another reason that benefit coverage is not universal in the US labor market is that companies differ in the way they perceive the value of employee benefits. Some employers are indifferent between devoting a given sum to wages, say \$1000, versus allocating the same sum of \$1000 to non-wage benefits: in both cases the expenditure is treated as labor cost and deductible as a business expense. On the other hand, Mumy (1985) finds that some companies perceive benefit expenditures as being worth "more" since contributions reduce payroll taxes such as Social Security and Workers' Compensation payments. In addition, firms also use benefit packages to achieve certain employment objectives: deferred compensation attracts stable workers, pensions are structured to induce early retirement, health insurance plans are tailored to attract and retain certain types of workers, and child-care subsidies may be offered to reduce absenteeism and turnover (Gustman and Steinmeier, 1989; Mitchell, 1982; Sindelar, 1982; EBRI 1989). Firms also structure stock ownership and profit-sharing benefit plans to induce more productivity and serve as a work incentive tool (U.S. General Accounting Office, 1986) More complex analyses have also identified the fact that corporations alter their benefit plans so as to enhance their balance sheets and meet overall corporate goals (Bulow, 1982; Ippolito, 1986).

In overview then, surveys confirm that benefits and wages appear in different mixes from one firm to the next. Labor market research contends that this is the result of differences in employees' demands for benefits, interacting with employers' differential willingness to provide benefits of various kinds. Dollars devoted to benefits come at the expense of dollars that could have gone to wages, though the exact degree of substitutability between the various forms of compensation will vary from one workplace to another.

II. Mandating Employee Benefits: The Policy Context

The uneven distribution of employee benefits in the US labor market has for many years generated controversy among labor analysts. Some argue that no intervention in the market is justified, believing that cross-sectional benefit differences are simply the natural outgrowth of differences in firms', workers', and labor unions' valuation of nonwage compensation (Becker, 1988). Others take issue with this conclusion, suggesting instead that the government should influence or even dictate which benefits should be provided as well as who should receive them. ⁴ In this section we examine several rationales for and against government intervention in the employee benefit arena, with the goal being an assessment of the issues which must be considered in making sensible government policy.

To clarify arguments, we organize the discussion around two questions: (1) When, if at all, should the government intervene in firms' and workers' election of nonwage compensation such as health or life insurance, pension, or other benefits? and (2) What are the pros and cons of having the government mandate that firms provide nonwage benefits, on the assumption that there is a rationale for government intervention? Each question is taken up in turn.

When, if at all, should the government intervene in firm's and workers' election of nonwage benefits?

Analysts of different political and economic persuasions arrive at very different conclusions about the need for government involvement in benefits provision. We begin by evaluating various rationales offered to justify government intervention in the nonwage benefits area, and then go on to do the same for arguments against the proposition.

One motivation for government involvement in the benefits area is paternalism. Supporters identify a list of "merit goods" or "minimum labor standards" and contend that all should be covered by these; the next step is to argue that the government must require that these be provided "even if the members of the society do not demand them" (Rosen, 1985; p. 64). Inevitably there is disagreement about which items should and do fall into the merit good category. One merit good about which there is relatively little debate at present in the United States is public education, which the government requires (virtually) all school-age children to consume. However in the benefits context there is far more disagreement. If "health" is identified as a merit good, it then follows that healthcare insurance is a benefit to which the government must guarantee access. On the other hand, good health is an elusive concept and insurance expensive. Furthermore, calling something a merit good "is not really a justification for (public) support -- it merely invests a bit of terminology to designate the desire to do so" (Baumol and Baumol, cited by Rosen, 1985, p. 65). In short, the merit good argument does not stand on economic grounds as a rationale for a government benefit mandate. On the other hand analysts recognize that there are other philosophical and perhaps ethical reasons to support (or to oppose) the proposal.

A different justification for government intervention in the provision of benefits stems from information problems. Specifically, when workers and/or firms are poorly informed of the important advantages versus costs of nonwage benefits, they will demand suboptimal levels of such benefits as compared to what would be socially efficient. This may arise, for instance, when people fail to buy health insurance because they are not aware of possibly catastrophic medical costs or cannot accurately judge the long term consequences of not having the insurance coverage. A similar case might be made for family or child care benefits: prior to having children, most people are probably unaware of their future demand for parental leave and high-quality childcare. Another example arises from the fact that even highly educated workers misestimate their expected lifespans (Hamermesh, 1979); as a consequence they will tend to make incorrect retirement savings plans. In such cases, the most clear-cut role for government is to rectify the information gaps where possible by publicizing relevant risks and costs (Mitchell, 1988). In unusual cases when

information problems are not easily corrected, the government may perceive a need to require benefit coverage directly. Interestingly, no research has yet shown that this is a serious problem in the health care or family leave area.

A third rationale for government intervention in the benefits arena is externalities. For example, government intervention in the unemployment insurance area is often rationalized on grounds that UI is necessary to force firms to internalize costs of layoff which produce negative spillovers for the economy at large (Ehrenberg and Schumann, 1982). In the medical care area, similar spillovers may occur. When someone stays in the hospital longer or consumes more medical care than medically necessary simply because health insurance picks up most of the tab, that individual is imposing higher medical care costs on others. A related problem arises because the medically indigent are frequently subsidized by taxpayers and private insurers (Pauly, 1988). Here the externalities are negative, since indigent peoples' demand for health care is met by hospitals and medical practitioners who then must raise prices for those having health insurance coverage. Recently supporters of parental leave bills have offered similar justifications for their proposals: for instance Sen. Christopher Dodd (D-Conn) recently argued that insufficient maternal leave imposes costs on society later in the form of greater need for remedial education (Bureau of National Affairs, 1989). In such instances an appropriate role for government may be to alter incentives so that individual decisions about how much to demand and supply incorporate spillover effects on others.

A fourth rationale for government intervention in the benefits area is that sometimes private markets are unable to provide insurance coverage very effectively or cheaply. For instance, adverse selection makes it prohibitively expensive for the chronically ill to obtain low-cost health insurance on their own. However if risks of poor health were pooled over a large enough group, and if people agreed to precommit to such insurance before their adult health status was fully known, the risk spreading so achieved should lower costs for all. It has been argued that the government is needed to create such risk pools for insurance purposes because it has more information than do individuals, or because the government can benefit from scale economies of

large-scale operation.⁵ In both instances, government operation might be cheaper than private sector initiatives. This may also characterize the market for nursing-home insurance: insurers only recently have begun to offer long-term care policies, partly because the older population has not fully recognized the high risk and high costs of such care. Here the argument is that the government may be able to redistribute and/or internalize risks in ways that the private sector cannot. Similarly, small firms seeking to purchase health care insurance often find that obtaining health coverage for a handful of employees is prohibitively expensive, or else simply not possible if the workgroup is too small. This is because of insurers' fear that risks cannot be adequately pooled over small groups, particularly if there is the possibility for adverse selection on the part of prospective employees. Here again, the argument is that the government can intervene when private markets fail to provide needed insurance.

A final motivation for government involvement in the benefits area is equity. Current tax law shelters benefits from income and payroll taxes, which comprise a relative high share of high-income workers' compensation. In most cases company contributions to health and disability insurance plans are not taxed at all, while employer contributions to pension plans are taxed only after retirement (generally at lower rates). Some who favoring benefit mandating claim that this is necessary to restore progressivity to the tax system; instance, benefits nondiscrimination requirements were justified in Congress on grounds that plans qualifying for tax-exempt status would have to provide benefits irrespective of employees' pay levels (Beam and McFadden, 1988). Many economists contend that equity and efficiency would be better served by taxing all forms of compensation similarly (Munnell, 1989), though real-world policymakers may not have the political leeway to achieve a "first-best" solution to efficiency and equity concerns.

What are the pros and cons of having the government mandate that firms provide nonwage benefits?

Assuming that government intervention can be justified on the grounds just discussed, the question remains as to who can most efficiently and fairly provide these benefits to the relevant population. In other words, one must judge whether the advantages of mandating that employers provide these benefits outweigh the costs of having them do so, or whether some other entity might do it more effectively and in a less costly way.

Arguments in Favor of Employer Provision: Some analysts would contend that requiring firms to provide a specific benefits package permits tailoring of the offerings to employees' and firms' needs, while still taking advantage of cost-savings due to group benefit purchase (Mitchell and Andrews, 1981). In contrast, if a government agency were to offer similar benefits, standardization could limit the adaptation of benefits to specific employee and firm circumstances (Summers, 1988). An additional factor is that employers may also have better information than governmental agencies regarding workers' risks, insurance costs, and benefits; this might make employer-provided plans cheaper as a result of lesser moral hazard.

Several additional arguments have been offered in support of requiring that employers offer mandated benefits. First, some political pragmatists argue that at present there is no more direct way to extend benefit coverage to uncovered employees, in view of current budget deficits. A second rationale recognizes that some benefits are already offered voluntarily in the labor market, and it may be that requiring employers to offer a mandatory benefits package could be less disruptive than would a government tax/transfer program requiring the same general set of benefits. This is because at least the most immediate impact of a mandate would be limited to workplaces where such benefits are not currently offered. In addition, several commentators have noted that the political appeal of a mandate rests on the assumption that putting the burden on company shoulders both preserves the benefits providers market, and also keeps "big government" from growing even larger than it already is (Pauly, 1988; Quayle, 1987). Offsetting this effect is the

possibility that for some, labor supply might actually increase under a mandated benefits approach. Empirical evidence on this latter point appears in the next section.

Criticisms of Employer Provision: Though the arguments in favor of requiring that employers provide benefits are numerous, there are also some important criticisms of such proposals which policymakers must confront. Some analysts argue that any government intervention is per se coercive and thus must be discouraged; others highlight government enforcement and administration costs. Opponents of the mandated benefits idea have also emphasized equity problems with the proposals: that is, people who do not currently hold jobs would not be helped by mandated employee benefits, for the most part. Certain employers would also be more affected than others: in particular, small firms currently offer fewer nonwage benefits, appear the most constrained by minimum wage laws, and probably face more competitive constraints than their larger counterparts (Small Business Administration, various years). In addition small firms hire more women than do larger companies, so that some worry that the incidence of mandating benefits might fall most heavily on groups others wish to protect (Becker, 1988; Smith, 1988).

Objections raised on efficiency grounds are also worrisome. Mandating benefits raises labor costs for firms without benefits, with eventual negative consequences for wages and employment levels. Affected employers, seeking to pass on the increased labor costs to their workers, will reduce wages (or wage growth) to offset new benefit costs. In some instances all that is required is that employers rearrange the components of compensation moving away from cash toward more benefits, and on net when this can be done in a costless manner there will be relatively little impact on employment, product prices and profitability. It should be noted that even in this instance, some employees' wellbeing will decline when they would have preferred to receive cash wages over the additional benefits they are forced to consume with the benefit mandate. In other instances employers will find it impossible to increase benefits by reducing cash pay, especially where pay rates are constrained by the legal minimum wage. In these cases, requiring higher benefits pushes up labor costs which in turn introduces incentives for affected

firms to alter their overall employment levels, curtailing labor usage and eventually reducing production and raising consumer prices.

Fixed versus Variable Cost Benefits Packages

The precise manner in which employers respond depends on how a given policy mandate is structured. One way to frame a benefit mandate is to require that all employees be provided with the same benefit package irrespective of whether that employee works part- or full-time. In this case benefit takes on "fixed costs" characteristics; that is, the employer must bear the same benefits cost irrespective of how many hours that employee actually works. Fixed-cost benefits of this type increase low-wage workers' compensation relatively more than highly-paid employees, so employers will tend to substitute away from low-skilled toward high-skilled labor (Hamermesh, 1988). In addition, those affected will utilize more hours per worker, and probably fewer total worker hours overall (Ehrenberg, 1971; Hart, 1984). How much the total number of employees varies depends on firms' ability to substitute labor for capital and is not theoretically determinable.

The "fixed cost" approach to mandated benefits is not merely a hypothetical notion: in fact, several mandatory health insurance bills discussed in Congress over the last few years take exactly this form. Many of the plans required that a specified set of health care items be provided: for example, one stipulated that employers offer health insurance coverage for physician and hospital services, prenatal and maternity care, limited mental health services, and catastrophic coverage limiting worker out-of-pocket expenses to \$3,000. These specific coverage requirements were to be combined with government-set deductibles, co-payment rates, and exclusion restrictions.

Another example of a "fixed-cost" viewpoint was found in many of the parental leave bills before Congress in 1988 and 1989. These bills typically would entitle employees to 10 weeks leave during which health benefit coverage must continue, and this benefit was seen as a per-worker entitlement rather than accruing according to hours worked.

An alternative method of structuring a mandated benefit proposes a "variable cost" approach, tying benefit entitlements to hours of work rather than having them accrue on a flat perworker basis. Those who tout this idea note that a mandated benefits program where benefits are

tied to the number of hours worked would probably cost employers and society as a whole less, than would regulation mandating that all employees must be provided with a common set of benefits (Bell and Hart, 1988; Summers, 1988). This prediction assumes that a tax increase would be required to pay for the plan which in turn would induce an across-the board reduction in labor supply. In contrast, under the mandating approach, only the subset of newly covered workers would be immediately affected.

Again, the variable cost approach is not merely hypothetical: a variant of it was proposed by President Carter's Commission on Pension Policy when this body sought to design a mandatory pension proposal over a decade ago. The plan called for a minimum of 3% of each worker's pay to be deposited into a defined contribution pension plan (or something producing equivalent retirement income if it were a defined benefit plan).

In analyzing the likely effect of this and other variable cost mandate proposals, it must be recognized that some portion of the benefit cost increase must be passed on to workers in the form of lower wages. In addition, to the extent that cost increases due to mandated benefits could not be fully passed on to workers in the form of lower wages, some employment would probably be lost. On the other hand, the additional undesirable distributional consequences inherent in a fixed-cost benefit would not apply. From this perspective, then, the variable-cost method of assigning mandated benefits has a somewhat greater appeal on equity grounds. An example recently appeared in an article about Brazil's decision to mandate maternity leave of four months for all employees. As a consequence of this action, many women were "told they would not be hired because they were pregnant and others...were warned they would lose their job in case of pregnancy...many employers had already signaled that they want to replace young women with men" (Simons, 1988).

Allowing Small Firms To Remain Exempt or Provide Reduced Coverage

It becomes more difficult to predict the likely labor market consequences of mandating either per-worker or variable benefits when portions of the workforce are exempted from the benefit mandate. In point of fact, however, real-world proposals usually have a partial coverage

feature because part-timers and/or workers in small firms are often exempted (or may be covered by a somewhat less generous package). Hamermesh (1988) finds that limiting a benefit mandate to a subsector of the economy produces strong incentives for firms to contract out employment, hire temporaries, and otherwise replace "protected" with "unprotected" workers. This could be a particular problem for the health insurance bills currently under consideration which propose to cover only people employed 17.5 hours a week or more. In a parallel manner the proposed parental leave bills before Congress are structured to include only firms with more than 35-50 employees.

Possible Labor Supply Responses

Not only does partial coverage affect demand for labor of different types -- labor supply too may be influenced. While establishing the size of the effect is primarily an empirical question to be addressed below, it is worth speculating about the likely direction of the expected changes. Some predict that women may be less likely to leave their jobs due to childbearing or might seek paid employment during childbearing years if paid maternity leave were mandated. On the other hand quit rates and absenteeism patterns may change for those newly covered by benefits, and in comparison to workers in the uncovered sector. In general, theoretical analysts conclude that it is probably impossible to predict the complete effect of a benefit mandate when these real-world and interesting extensions are incorporated (Hart, 1984). Empirical evidence is needed to explore whether these different effects are sizeable.

Are Other Policy Goals Thwarted?

A final caution raised about mandating benefit plans is that this policy alters labor costs across workers of different types, which may unexpectedly undermine other public policy goals. For instance, employers required to offer a standard health insurance package or parental leave policy might find it more expensive to employ women workers (Becker, 1988; Cook, 1989). This cost differential might induce some firms to substitute men for women in employment. Similar selection problems could arise for low-income workers where health problems may be perceived to be more likely. In contrast, a publicly funded and operated program which provided the same

benefits would spread benefit costs across gender, health status, age, and other factors, removing employers' incentives to become more selective in hiring and retention of now more costly workers.

Overview

In conclusion, there are many reasons to both favor and oppose proposals to have the government intervene further in the employee benefits area, and the rationales differ from case to case. In the case of health insurance, three arguments for government intervention are emphasized in the literature: some people are uninsurable in the private market; some people have insufficient income to buy private health insurance; and externalities in medical care market appear to justify regulation. In contrast two arguments are frequently offered to justify mandating parental leave: some say it is a 'merit good' which all should receive, while others emphasize possible externalities (e.g. some say children who do not 'bond' after childbirth may cause social problems later). When it comes to pension provision, generally the argument is formulated as one where government action is required because improvident workers undersave, or workers overconsume due to insufficient information about their retirement needs. Despite these philosophical differences motivating those who favor mandating benefits of one kind or other, all in favor of the policy seem united in a pragmatic stance. That is, they unite in the belief that large-scale government provision of new benefits is unlikely in the current budget environment, and look to employers to begin to fill the gap. Those who oppose benefit mandating do so for very different reasons. Some analysts are philosophically opposed, preferring as little government intervention in the labor market as possible. Yet others point out that employment-linked benefit proposals still leave unprotected several million uninsured people who are not in the labor force, and whose family members are also without coverage (Chollet, 1987).

III. Evidence on the Labor Market Consequences of Mandating Employee Benefits

Having identified the key policy arguments for and against government mandating of employee benefits packages, we now move to an examination of empirical evidence on the likely

labor market consequences of mandated benefits. Rather than delving into specific legislative proposals, we take a more general approach and refer the interested reader to others' reviews of specific recent benefit proposals (See for instance Morgan, 1987; Meyer, 1988; Rix, 1987; US Congress, 1987; US General Accounting Office, 1988).

The discussion proceeds in two parts. First comes a review of evidence on the likely impact of mandated benefits on compensation and employment. We focus on what the empirical literature has to say on overall hours and employment level adjustments, and the length of time such adjustments might be expected to take. Also noted are differential adjustment patterns across sectors of the economy. Next, the discussion turns to an assessment of evidence on workers' likely responses to mandated benefits. Here we focus on changes in labor supply, turnover behavior, and sorting patterns of workers across the labor market.

Mandating Benefits: Consequences for Compensation Patterns and Employment

The first empirical question we investigate in the mandated benefit context is as follows; if the government mandates a new benefit, what effect will this have on other elements of the compensation package? One literature that might be thought helpful in answering this question examines tradeoffs between different forms of compensation in the workplace. Nevertheless the studies in this genre are often seriously limited by data and estimation problems. A careful study of the public sector found a one-for-one tradeoff between wages and employer-provided benefits (Ehrenberg and Smith, 1979). Taken literally, these results imply that mandating an employee benefit package costing 10% would depress affected workers' pay by the same amount. However private sector studies of wage/benefit tradeoffs tend to find no evidence in support of the compensating differentials theory, and indeed most often report a positive relationship between wage levels and benefits (Mitchell and Pozzebon, 1987; Smith and Ehrenberg, 1983). The jury is still out on whether these generally negative results prove that the theory is wrong, or that error-ridden data simply cannot be relied on to test the hypothesis.

Other forms of adjustment in the compensation package besides employment loss can occur. For instance a 1957 survey in New York state showed that raising retail stores' labor costs

for low-wage workers reduced a number of employee benefits including rest and meal breaks, year-end bonuses, paid vacations, sick leave, store discount privileges, premium pay, and other compensation (Wessels, 1980). Precise response magnitudes for this type of tradeoff have not yet been pinpointed, however.

A second line of inquiry on benefit/pay tradeoffs takes a different tack, comparing benefit patterns in states which currently mandate particular benefits with those in states which do not. One such study is that of Trzcinski (1988), who examines whether private sector workers are paid differently in states which mandated paid maternity leave policies as compared to states which do not. Her results do not paint a consistent picture. In states which treat maternity leave as a special medical disability, she finds that hourly wages for women in small firms are depressed by 0 to 7%, and benefit coverage rates are lower by 0 to 11%. The upper-bound responses seem unbelievably large.8 She also concludes that women's pay is apparently not depressed in states which treat pregnancy and childbirth leave like other disability leaves. (Men's pay was not depressed in any of her results). The author does not offer an explanation for the differential impact by type of benefit plan, but it may be that different funding methods under the two policies contribute to observed differences. When pregnancy leave is formulated as a special disability program with readily identifiable premiums tied to the number of women in a workplace, the funding method will highlight additional costs of hiring women and exert downward pressure on women's compensation and employment. In contrast, treating maternity leave as one of many covered events in an overall disability policy induces more risk-pooling and probably more crosssubsidization in premiums.9

In overview then, theoretical research on the pay/benefits tradeoff indicates that mandating benefits will reduce compensation for some groups of workers in the long run. Nevertheless the empirical evidence suggests that the full costs of mandated benefits may not be immediately passed on to private sector workers via reductions in their wages and benefits. In this event, mandating benefits increases employers' labor costs.

Following this line of argument, the next question to be addressed is: if mandating a new benefit raises labor costs, what happens to labor demand? The empirical labor economics literature is of some help in assessing likely response magnitudes. Research shows that there will probably be "only slight substitution away from workers and toward hours, holding total worker-hours constant" (emphasis added, Hamermesh, 1988, p. 24; see also Ehrenberg and Schumann, 1982). However overall labor demand in covered firms will decline if there is not a one-for-one tradeoff between increased benefits and reduced wages. In general, the literature suggests that when labor costs rise by 10%, overall labor demand will fall by 1-5%, with most of the adjustment taking place within one year (Hamermesh, 1988; Hart, 1988). Hence the econometric evidence implies that mandating benefits will certainly reduce employment in covered firms, though the exact magnitude depends on the cost increase embedded in any given benefit proposal.

As we have noted above, mandating benefits is likely to alter relative labor costs in addition to overall labor costs. Consider, for instance, the effect of dramatic changes in relative labor costs predicted in a recent assessment of a proposed mandatory health insurance bill (US Congress, 1988). The bill would boost minimum wage workers' total compensation by 15-20% as a result of imposing the mandatory health insurance plan, but would have virtually no effect on higher-wage employees' cash income (most in the highly paid group were asserted to be already covered by a plan meeting the minimum standards). A consequence of changing relative wages in this way would be to induce employers to substitute away from low-wage employees toward more highly-skilled labor and capital. Substitution is likely to be most feasible among lesser-skilled employees, many of whom are minimum wage earners. Indeed, recent estimates show that teenagers, women, and part-time employees comprise, respectively, 36%, 65%, and 66% of all minimum wage workers (Stout, 1988). These workers also tend to be concentrated in small firms and are the least likely to have employee benefits (Small Business Administration, various years).

Studies in a related genre have also noted that low-wage employers may not be able to pass on increased benefit costs when their employees are already at the minimum wage floor. The likely impact in this instance would be reduced employment. From econometric analyses of the

minimum wage, we know that that raising pay by 10% among minimum wage workers is associated with a 0.5 to 3% decline in youth employment (see Brown, 1988; Mitchell, 1982; Mitchell and Mikalauskas, 1988), so similar outcomes might be anticipated if benefit mandates of this magnitude were implemented.

Other researchers have simulated the disemployment consequences of pay increases using simulation models. While the models can be criticized on grounds on not representing the "real world" in important ways, they do tend to suggest similar response magnitudes as those unveiled in more conventional econometric studies. For example, Anderson's simulation exercise (1988) points to 160,000 workers losing their jobs as a result of mandating a 3% defined benefit pension; in subsequent years he finds the job loss rate would taper to some 60,000 employees. Anderson also contends that over half of the job loss would be concentrated in firms with fewer than 25 employees, and an additional twenty percent in firms with between 25 and 99 workers. Others have evaluated employment effects of benefit mandates without relying on specific simulation models. Extrapolating from some of their other work, Karen Davis and Edward Gramlich both testified before the Senate Committee on Labor and Human Resources that a mandated health insurance plan which raised low-wage workers pay by 15% would induce job losses for around 100,000 workers. In each of these cases cited, the figures represent more-or-less educated guesses since the assessments are only loosely linked to econometrically robust models estimated with appropriate data. Nevertheless, the fact remains that policy researchers clearly do not believe that job losses would be zero as a result of a mandated benefits plan. Whether disemployment effects are judged to be "large" or "small" depends, of course, on the observer: as (then Senator) Quayle stated, "We may talk in terms of 100,000 jobs as not being a lot, but if you take 100,000 jobs of minority teenagers, that population has suffered enough" (Quayle, 1987).

For reasons of political feasibility, mandated benefits proposals such as the health benefits or parental leave policies described above often exempt some portion of the labor market from coverage, on the argument that cost increases are simply too great for some employees and firms to bear. For this reason, small businesses are frequently allowed to avoid participating or in some

cases the benefits they must offer are permitted to be less comprehensive than those required of larger firms. Along the same lines, some reform bills suggest that benefits need not be provided to part-time employees at all, or in lesser amounts. Unfortunately in practice the definition of a "small" firm or a "part-time employee" appears to change from one version of a bill to the next without much attention to how benefit costs and disemployment patterns might vary. The end result, though, is the same: these exemptions have the effect of mandating benefit coverage across only portions of the labor market.

Mandating Benefits: Consequences for Labor Supply

Thus far the discussion has emphasized employers' likely responses to increases in labor costs due to mandated benefits. However there is a reasonable chance that workers also might alter their behavior if firms are required to provide health insurance, family leave coverage, or other benefits. Several different dimensions of labor supply response should be considered, though they are rarely (if ever) brought up in policy evaluations.

Increases in absenteeism may be one undesirable effect of devoting a larger fraction of compensation to benefits. This is particularly true when benefit entitlements accrue on a perworker fixed-cost basis and the value of the entitlement is not affected by a few additional absences from work. Research shows, for instance, that being eligible for sick leave increases workers' absenteeism rates (Allen, 1981; Ehrenberg et al., 1989; Winkler, 1980). Hence cost estimates of proposed family and medical leave plans which assume constant worker absenteeism are probably too optimistic: allowing workers to take a given number of family and medical leave days per year will probably increase absenteeism and should be included in cost forecasts. A similar prediction follows for mandated health benefits, though here the effect is more subtle. Increasing workers' total income by imposing a mandated health plan makes workers better off if wage cuts do not fully offset the new benefit. This produces an income effect inducing them to work less, without materially altering the cost of not working (wages foregone). The end result will be more absenteeism (Ehrenberg and Smith, 1988). On the other hand programs which tie benefit accrual to work time, using a variable benefit format, would have fewer incentives in this direction.

A different labor supply response to mandated benefits must also be examined: turnover. Benefits are frequently structured in such a way to discourage quits and tie workers to their jobs; for instance vesting and other rules make it costly to leave an employer if a worker is covered by a pension (Mitchell, 1982), while waiting periods and exclusion rules probably have a similar effect in the area of health insurance. Changing jobs would become much easier and probably more prevalent if health coverage were made mandatory and if, as some of the proposals were formulated, waiting periods and exclusions for pre-existing conditions were prohibited. However a rise in turnover brings with it higher search, recruitment and training costs, which in turn reduces net labor productivity and output. In other words, an overall decline in output and labor productivity would be a worrisome possibility if mandated benefits prohibited employers from using benefits to discourage job changing, now permitted in existing benefit plans.

Studies show that such partial coverage patterns will induce movements of workers from covered sector jobs to jobs without mandated benefits. Specifically, evidence from the US and several European countries indicate that increases in non-wage costs among "first-tier" workers contributed to more employment in the uncovered "second-tier", including temporary help, part-timers and subcontracted workers (Ehrenberg, Rosenberg and Li, 1988; Hamermesh, 1988; Mangum, Mayall and Nelson, 1985). Expansion of the uncovered sector is troubling in light of the fact that one important motivation for mandating benefits is to reach workers currently lacking such coverage. As yet there are no hard estimates of the likely growth in the uncovered sector given an increase in labor costs in the covered sector, which probably explains why policy studies to date have not accounted for these in any scientific way. What seems clear, however, is that workers in the "second tier" sector are significantly less likely to be covered by employee benefits of all kinds (Williams, 1989). Hence the possibility remains that mandating benefits might not increase benefit coverage among low-wage workers, if this combination of effects is large enough.

There is yet a different way that mandated benefits can and will affect labor supply.

Specifically, the chance to qualify for benefit coverage will induce some people to enter the labor force and to remain employed beyond the point they might have otherwise. This is especially

probable for new mothers receiving continuation of health care coverage and job reinstatement under the family and medical leave plan, who might have left their jobs (or perhaps been discharged) prior to the reform. While response magnitudes to these particular bills are not known, results from other benefits programs are informative. One study pertinent to this issue demonstrated that raising unemployment insurance payments by 20% increased the fraction of women working by about 1% and women's work hours grew by about 12%. The latter is an entitlement effect: women worked longer so as to meet the minimum income level for unemployment program coverage (Hamermesh, 1979). A related study by Ehrenberg, Rosenberg and Li (1988) also concluded that "supply side responses exceed demand responses" when part-time compensation was raised in the United States over time. In consequence, it must be concluded that coverage-induced increases in labor supply are very likely among groups of people who previously were not offered benefit coverage. Designers of mandated benefits packages must recognize such downward pressure on pay attributable to the supply-side responses, since as we showed above, these tend to be low-wage, low-skilled workers.

A final labor supply response to mandated benefits worthy of consideration here is an issue that arises because workers and firms differ in their valuation of benefits packages. If the government mandates that a fixed-cost benefit be provided to a portion of the labor force, yet workers differ in the way they value it, those valuing the benefit least will tend to move to jobs exempted from the mandate. Evidence of this is offered by Scott, Berger and Black (1989), who warn that "enactment of this legislation would increase the amount of labor market segmentation faced by low-income workers" (p.228). Unfortunately likely response magnitudes cannot be computed from the numbers given in that study.

Despite the importance of supply-side responses, few policy analysts have recognized them when discussing the potential consequences of mandating benefits. This is certainly an area where more research would be valuable. Inevitably, those interested in labor market efficiency must be troubled by the finding that mandated benefits probably increase absenteeism and turnover. Those focusing on equity would, in addition, be concerned about likely increases in labor supply due to

mandated benefits, which have the beneficial effect of tying low-wage workers to the market more closely, but also of driving down this group's wages. In addition, it appears that mandating a fixed-cost benefit would probably have the largest supply-side effects, while allocating benefits on a variable per-hour worked basis might well have smaller labor supply consequences.

IV. Conclusions and Policy Options

Conclusions:

This paper identifies and, where possible, quantifies potential labor market consequences of government mandates of employee benefits. Policy analysts should consider two questions when contemplating mandated benefits: (I) What relative importance should be attached to those who gain under the mandate versus those who lose? (2) Could feasible alternative policies have more beneficial outcomes? Existing policy research suggests the following conclusions:

- Mandating benefits will increase benefit coverage and generosity for numerous workers
 and their families. Nevertheless, many people lacking insurance coverage will not be helped by
 this type of mandated employee benefit program.
- Even when mandating benefits does improve benefit provision, there will be offsetting effects. These include wage and other benefit cuts, reduced work hours, reduced employment, and possibly output reductions in covered sectors. Employer bias against "expensive to insure" workers may also result, producing labor market sorting and segmentation.
- Most workers currently without benefit coverage are employees of small firms, women,
 part-time and minimum wage workers. Nevertheless, most mandated benefit proposals exclude or reduce coverage for these workers to alleviate the financial burden on small firms.

Policy Options

While a full discussion of each of these questions in the present context goes beyond the purview of this paper, it should be emphasized that deciding whether or not to mandate a given benefit or set of benefits requires the analyst to evaluate and weigh increases in wellbeing afforded to workers (and their families) that would be newly covered by such a mandated benefit, with the pay and the employment cuts borne by the less fortunate. In addition it must be asked what other

feasible alternative policy scenarios might be if Congress did not mandate benefits. An option popular with some would be to keep the status quo, letting the market generate its continuing uneven pattern of voluntarily-provided benefits. Others concerned about gaps in insurance coverage instead advocate a greatly expanded government role in the health and pension field supported by taxes and providing benefits for the population at large. Alternatively Congress might take a middle road offering incentives such as tax subsidies for employers who expand benefit coverage, without directly mandating additional specific benefits. While this last approach has the virtue of encouraging insurance coverage among employees, it would not help those without jobs. It does seem that proposals which cost the Treasury will be sternly regarded in this era of "no new taxes".

Given that mandating employer-provided benefits remains a viable option after having done this broader analysis, it remains true that mandates raise labor costs and produce job losses which will probably be concentrated among low-wage workers in smaller firms. However there may be ways to design a mandated benefit so as to reduce these negative effects somewhat. We have argued above that the variable-cost approach -- requiring that benefits accrue at a percentage rate per worker-hour -- has the advantage of reducing the bias against low-wage employees currently without coverage. In contrast, the fixed-cost approach such as that inherent in most current health and family leave proposals makes low-wage workers and the firms that employ them proportionately much more vulnerable to the negative consequences of cost increases. On the other hand, some critics would suggest that a variable-cost approach in the health insurance area would not insure all workers' access to basic and major medical insurance at affordable rates. Similarly, variable-cost pension contributions would not ensure high levels of retirement income for part-time or part-week workers, and along the same lines, pro-rated family leaves would not ensure that all employees get ample paid time off with infants or sick children. Hence those concerned with providing a basic level of social insurance might judge the fixed-cost approach preferable even with its greater potential for more severe disemployment effects among particular sectors of the economy.

The analysis above suggests that the following issues are worth further attention:

- While mandating benefits using a fixed-cost structure is viewed positively by some, it
 raises labor costs most for low-wage workers, inducing substitution away from them toward more
 skilled employees. Fixed-cost benefits also reduce flexibility in designing benefit packages and
 are not responsive to worker and firm differences in the demand for benefits. In contrast, a
 variable-cost format where benefits accrue according to hours worked somewhat mitigates these
 drawbacks.
- Many firms claim they require tax incentives to help them provide benefit coverage. If
 tax incentives become necessary for political reasons, they could be paired with a cap on the overall
 fraction of payroll used for tax-shielded employee benefit contributions; this would make the tax
 and the benefit system more equitable as a whole.
- If government decides to mandate more employee benefits, a gradual approach has the advantage of permitting each step to be evaluated sequentially. Components of a target mandated benefit package might be ranked in a priority list and justified on both efficiency and equity grounds. Subsequently, after evaluating the labor market consequences of implementing one such benefit, additional benefit mandates could be considered.
- Many people will not gain coverage even if employer-provided benefit programs are mandated. Separate programs could be designed to address their needs.

Remaining Research Questions

Several questions must be addressed in future research if policy analysis is to be useful in guiding decisions on mandatory employee benefits packages. Researchers would benefit from learnings more about why workers differ in their demand for benefits, and why some firms supply benefits of particular types and levels of coverage, while others do not. Only armed with this information will it be possible to understand why voluntarily provided benefits are so unevenly distributed across the labor market.

More research could also be done on the labor market impact of state-level regulations regarding the form and content of benefits. Additional analysis wouldbe useful on different ways

to structure benefits, following up on the variable versus the fixed-cost format. Last but not least, more research would be beneficial on the extent to which the low-wage population regards public sources of insurance as a good substitute for private/employer-provided benefits.

To understand these and other important questions in the benefits arena, the research community needs new and improved datasets containing information on both workers and their employers, as well as detail on their wage and benefit compensation packages. In addition, longitudinal surveys on worker consumption of and perceptions of insurance would be most valuable.

Table 1

Fraction of Full-time Employees Participating in Company Benefit Plans by Firm Size (1987)

	Fraction of Employees Participating in Benefit Plan in:	
Benefit Plan	Medium & Large Firms	Small Firms
Retirement /Pension	91%	43%
Health Insurance	96	75
Life Insurance	96	59
Paid Time Off		
Vacations	99	81
Paid Lunch Break	10	19
Sick Leave	67	26
Disability Insurance (Long ter Other	m) 48	26
Educational Assistance	76	23
Employee Discounts	57	35
Child Care	1	4

Note: Taken from Andrews (1988). Medium and large firms are those classified as having 100-250 employees, depending on the industry. Small firms are classified as those with fewer than 100 employees.

⁴A succinct summary of these arguments appears in McArdle (1987); that same conference volume also reports additional perspectives on mandating health and pension benefits.

5Kotlikoff, Spivak and Summers (1982) examine many of these arguments in the pension context. See also Kotlikoff (1987).

⁶The size of the uncovered population depends on the benefit in question. See Chollet (1988), Andrews (1989), and EBRI (1988).

7Of course in practice, mandated benefit proposals often have both variable and fixed elements.

8The author's upper bound wage responses seem improbably large assuming that a four month maternity leave for a woman having two children would probably cost an employer no more than 3% of her lifetime earnings if the woman remained with that employer twenty years (the effect would be far smaller if discounting were taken into effect). Shorter completed tenure spells would raise the estimate somewhat, but over time women are becoming more committed to the labor force and to their jobs (Mitchell, 1986).

⁹The fact that funding policies matter in the mandated benefit context is also emphasized in some interesting work by Jensen and Gabel (1988) and Jensen, Morrissey and Marcus (1987). They find growing self-insurance of employer-provided health benefits plans; one explanation is that that firms self-insure to avoid state mandates of coverage for specific services including alcoholism, drug and mental health treatment, and chiropractors when they self-insure. An additional

¹Space constraints preclude a discussion of benefits offered to inactive workers such as retiree health insurance benefits.

²This is true as long as the employer-provided plans meet nondiscrimination requirements; see Beam and McFadden (1988).

³Some of the demand for insurance programs among low-wage workers may be met by social insurance programs. However many low-income individuals are ineligible for Medicaid, and those out of the labor force cannot receive Social Security; see Chollet (1988).

explanation for this pattern is that self-insured firms are not required to participate in state risk pools covering people who cannot buy insurance on their own.

10A nationally funded and operated health plan would reduce incentives to select against 'expensive' employees, and reduces labor market segmentation due to employee sorting. Specific suggestions to expand the role of Medicaid for the medically needy uninsured population are discussed and evaluated by Chollet (1988) and Meyer (1988).

REFERENCES

- Allen, S.F. "Compensation, Safely and Absenteeism: Evidence from the Paper Industry".

 Industrial & Labor Relations Review 33 (January 1981):207-218.
- Anderson, J. "Effects of Mandatory Pensions on Firms, Workers and the Economy." In

 <u>Government Mandating of Employee Benefits</u>. Edited by Dallas Salisbury. Washington,
 DC: Employee Benefit Research Institute, 1987.
- Andrews, E.S. The Changing Profile of Pensions in America. Washington, D.C.: Employee Benefit Research Institute, 1985.
- Andrews, E.S. "An Overview of the Employee Benefit System". Employee Benefit Research
 Institute. Paper presented at the National Research Council, November 1988.
- Andrews, E.S. Pension Policy and Small Employers: At What Price Coverage? Washington,
 D.C. Employee Benefit Research Institute, forthcoming 1989.
- Beam, B.T Jr., and J.J. McFadden. Employee Benefits. 2nd ed. Homewood, Il: Irwin, 1988.
- Becker, G.S. "If It Smells Like A Tax and Bites Like A Tax...". <u>Business Week</u> (August 22, 1988).
- Bell, D.N.F. and R.A. Hart. "On-the-job and For-the-job Efficiency Labour Payments".

 University of Glasgow Discussion Papers in Economics. No. 8806. May, 1988.
- Bell, D. and W. Marclay. "Trends in Retirement Eligibility and Pension Benefits". Monthly Labor

 Review (April 1987).
- Brown, C. "Minimum Wage Laws: Are They Overrated?" <u>Journal of Economic Perspectives 2</u> (Summer 1988): 133-145.
- Bulow, J. "What Are Corporate Pension Liabilities?" <u>Quarterly Journal of Economics</u> (August 1982): 435-552.
- Bureau of National Affairs. Daily Labor Reporter 21 (February 2, 1989).
- Chollet, D. "A Profile of the Nonelderly Population Without Health Insurance." In Government

 Mandating of Employee Benefits. Edited by Dallas Salisbury. Washington, DC:

 Employee Benefit Research Institute, 1987.

- Chollet, D. "Public Policy Options to Expand Health Insurance Among the Nonelderly Population." In Government Mandating of Employee Benefits. Edited by Dallas Salisbury. Washington, DC: Employee Benefit Research Institute, 1987.
- Cook, A.H. "Public Policies to Help Dual Earner Families Meet the Demands of the Work World." Industrial and Labor Relations Review 42. (January, 1989): 201-215.
- Davis, K. "Testimony" before the U.S. Senate Committee on Labor and Human Resources, 100th Congress, November 4, 1987.
- EBRI Issue Brief. "Dependent Care: Meeting the Needs of a Dynamic Work Force." Washington, DC: Employee Benefit Research Institute, December 1988.
- Ehrenberg, R.G. Fringe Benefits and Overtime Behavior. Lexington, MA: Lexington Books, 1971.
- Ehrenberg, R.G., R.A. Ehrenberg, D.I Rees, and E.L. Ehrenberg. "School District Leave Policies, Teacher Absenteeism, and Student Achievement". Dept. of Labor Economics, Cornell University (February 1989).
- Ehrenberg, R.G., P. Rosenberg, and J. Li. "Part-Time Employment in the United States". In Employment, Unemployment, and Labor Utilization. Edited by R.A. Hart. Boston: Unwin Hyman, 1988.
- Ehrenberg, R.G. and P.J. Schumann. <u>Longer Hours or More Jobs?</u> Ithaca, New York: ILR Press, 1982.
- Ehrenberg, R.G. and R.S. Smith. <u>Modern Labor Economics</u>, 3rd ed. Glenview, IL: Scott, Foresman Company, 1988.
- Ehrenberg, R.G. and R.S. Smith. "Who Pays for Pensions in the State and Local Sector:

 Workers or Employers?" IRRA 32nd Annual Proceedings, Madison, WI: IRRA, 1979.
- Freeman, R. "The Effect of Unionism on Fringe Benefits". Industrial and Labor Relations Review 34 (July 1981): 489-509.
- Frumkin, R. "Health Insurance Trends in Cost Control and Coverage". Monthly Labor Review (September 1986).

- Gramlich, E.M. "Testimony" before the U.S. Senate Committee on Labor and Human Resources, 100th Congress, November 4, 1987.
- Gustman, A.L. and T.L. Steinmeier. "An Analysis of Pension Benefit Formulas, Pension Wealth, and Incentives from Pensions". In <u>Research in Labor Economics</u>. Edited by R. Ehrenberg. Greenwich, Conn: JAI Press, forthcoming.
- Hamermesh, D.S. "The Demand for Workers and Hours and the Effects of Job Security Policies:

 Theories and Evidence." In Employment, Unemployment and Labor Utilization. Edited by

 R.A. Hart. Boston: Unwin Hyman, 1988.
- Hamermesh, D.S. "Entitlement Effects, Unemployment Insurance and Employment Decisions." Economic Inquiry 17. (July 1979): 317-332.
- Hart, R.A. The Economics of Non Wage Labour Costs. London: George Allen and Unwin, 1984.
- Hart, R.A., D.N.F. Bell, R. Frees, S. Kawasaki, and S.A. Woodbury. Trends in Non-wage Labour Costs and Their Effects on Employment. Commission of the European Communities, Programme for Research and Actions on the Development of the Labour Market. Luxembourg: Office for Official Publications of the European Communities, 1988.
- Ippolito, R. Pensions, Economics, and Public Policy. Homewood, IL: Dow Jones Irwin, 1986.
- Jensen, G.A. and J.R. Gabel. "The Erosion of Purchased Health Insurance." Inquiry 25 (Fall, 1988).
- Jensen, G.A., M.A. Morrisey, and J.W. Marcus. "Cost Sharing and the Changing Pattern of Employer Sponsored Health Benefits." <u>Milbank Quarterly</u> 65(4), 1987.
- Kotlikoff, L. "Justifying Public Provision of Social Security". <u>Journal of Policy Analysis and Management</u>, 1987.
- Kotlikoff, L., A. Spivak, and L. Summers. "The Adequacy of Savings". American Economic Review 72 (5), 1982.
- Mangum, G., D. Mayall, and K. Nelson. "The Temporary Help Industry: A Response to the Dual Internal Labor Market". Industrial and Labor Relations Review 38 (1985): 599-611.

- McArdle, F. "The Pressure for New Legislated Mandates".In <u>Government Mandating of Employee</u>

 <u>Benefits</u>. Edited by Dallas Salisbury. Washington, DC: Employee Benefit Research
 Institute, 1987.
- Meyer, J. "Mandated Benefits for Employees: A Policy Analysis." Report Prepared for the National Chamber Foundation. Washington, DC, 1988.
- Mitchell, O.S. "Employee Benefits in the U.S. Labor Market." In <u>IRRA 40th Annual</u>

 <u>Proceedings</u>, Madison, WI: Industrial Relations Research Association, 1987.
- Mitchell, O.S. "Fringe Benefits and Labor Mobility". <u>Journal of Human Resources</u> 17 (Spring 1982): 286-298.
- Mitchell, O.S. "How Does Job Tenure Vary With Sex and Age?" Department of Labor Economics Working Paper, Cornell University, January 1986.
- Mitchell, O.S. "The Labor Market Impact of Federal Regulation: OSHA, ERISA, EEO, and Minimum Wage." In Industrial Relations Research in the 1970's: Review and Appraisal. Edited by T. Kochan, D. Mitchell, and L. Dyer. Madison, WI: Industrial Relations Research Association, 1982.
- Mitchell, O.S. "Worker Knowledge of Pension Provisions" <u>Journal of Labor Economics</u> 6 (January 1988): 21-39.
- Mitchell, O.S. and E.S. Andrews. "Scale Economics in Multiemployer Pension Plans". <u>Industrial</u>
 and <u>Labor Relations Review</u> 34 (July 1981):522-530.
- Mitchell, O. S. and A. Mikalauskas. "The Impact of Government Regulation on the Labor

 Market." In Government Mandating of Employee Benefits. Edited by D. Salisbury.

 Washington, DC: Employee Benefit Research Institute, 1988.
- Mitchell, O.S. and S. Pozzebon. "Wages, Pensions and the Wage-Pension Tradeoff". Department of Labor Economics Working Paper, Cornell University (revised August 1987).
- Morgan, G.G. "Parental Leave and the Child Care Issues." In Government Mandating of Employee Benefits. Edited by Dallas Salisbury. Washington, DC: Employee Benefit Research Institute, 1987.

- Murny, G.E. "The Role of Taxes and Social Security in Determining the Structure of Wages and Pensions" Journal of Political Economy 93 (June 1985): 574-585.
- Munnell, A. "It's Time To Tax Employee Benefits". New England Economic Review July-August. 1989.
- Pauly, M.V. "The Incidence of Health Insurance: Is Everyone Out of Step but Economists?"

 Paper presented at the Industrial Relations Research Association Meetings, New York.

 1988.
- Quayle, Sen. D. Hearings on S. 1265 before the Committee on Labor and Human Resources, U.S. Senate, November 4, 1987.
- Rix, S. "Mandated Benefits and the Work/Family Dilemma." In Government Mandating of Employee Benefits. Edited by Dallas Salisbury. Washington, DC: Employee Benefit Research Institute, 1987.
- Rosen, H.S. Public Finance. Homewood, IL: Richard D. Irwin, Inc., 1985.
- Scott, F.A., M.C. Berger, and D.A. Black. "Effects of the Tax Treatment of Fringe Benefits on Labor Market Segmentation." <u>Industrial and Labor Relations Review</u> 42. (January, 1989): 216-229.
- Simons, M. "Brazil Women Find Fertility May Cost Jobs". New York Times, December 12, 1988.
- Sindelar, J. "Differential Use of Medical Care by Sex". <u>Journal of Political Economy</u> 90 (October, 1982):1003-1019.
- Smith, R.S. "Comparable Worth: Limited Coverage and the Exacerbation of Inequality."

 Industrial and Labor Relations Review 41. (January 1988): 227-238.
- Smith, R.S. and R. Ehrenberg. "Estimating Wage-Fringe Tradeoffs: Some Data Problems". In <u>The Measurement of Labor Cost</u>. Edited by J. Triplett. Chicago: University of Chicago Press, 1983.
- Stout, H. "Propping Up Payments at the Bottom". New York Times. January 24, 1988.
- Summers, L.H. "Some Simple Economics of Mandated Benefits." <u>American Economic Review Papers and Proceedings</u>, May 1988.

- Thaler, R. and H.M. Shefrin. "Pensions, Savings and Temptation" Graduate School of Business Working Paper No. 81-26, Cornell University (November 1981).
- Trzcinski, E. "Incidence and Determinants of Maternity Leave Coverage." University of Connecticut, Department of Economics, April 1988.
- Trzcinski, E. "Wages and Employment Effects of Mandated Leave Policies." University of Connecticut, Department of Economics, April 1988.
- U.S. Chamber of Commerce. <u>Employee Benefits 1987</u>. Washington, D.C.: U.S. Chamber of Commerce, 1988.
- U.S. Congress, Senate Committee on Labor and Human Resources. <u>Background Information on S. 1265</u>, May 11, 1988.
- U.S. Congress, Senate Committee on Labor and Human Resources. <u>Hearings: Minimum Health</u> <u>Benefits for All Workers Act of 1987: Part II.</u> Washington, DC: USGPO, November 4, 1987.
- U.S. General Accounting Office. <u>Employee Stock Ownership Plans</u>. Washington, D.C.: US GPO. 1986.
- U.S. General Accounting Office. Parental Leave: Estimated Costs of the Revised Parental and Medical Leave Act. Washington, DC: USGPO, May 1988.
- U.S. General Accounting Office. <u>Parental Leave: Estimated Costs of HR 925. The Family and Medical Leave Act of 1987.</u> Washington, DC: USGPO, November 1987.
- U.S. Small Business Administration. The State of Small Business: A Report to the President.
 Washington, DC: USGPO, 1984, 1985, 1987.
- Wessels, W.J. "The Effect of Minimum Wages in the Presence of Fringe Benefits: An Expanded Model" Economic Inquiry 18 (April 1980):293-313.
- Williams, H.B. "What Temporary Workers Earn: Findings from New BLS Survey". Monthly Labor Review. (March 1989): 3-6.
- Winkler, D. "The Effects of Sick Leave Policy on Teacher Absenteeism". Industrial and Labor Relations Review 33 (January 1980): 232-240.

Woodbury, S.A. "Current Developments in Employee Benefits". Paper Prepared for the Commission on Workforce Quality and Labor Market Efficiency, mimeo, March 1989.