The primary lesson of empirical studies is that any mandatory social welfare policy increases labor costs. The impact will be the greatest for small firms because they have the least flexibility to rearrange compensation packages.

The Impact of Government Regulation on the Labor Market: A Survey of Research Findings

The trend until recently has been for employers to expand and improve benefit packages, generally at little cost to the employees. The federal government has also imposed requirements on employers, such as the minimum wage and payment of Social Security taxes, to achieve specific social goals.

With lawmakers under increasing pressure to curb federal deficits, however, they have begun looking more closely at policy solutions that can be financed by employers. They must wrestle with the dilemma that mandated benefit programs intended to ensure wider access to benefits and expanded coverage could raise employer costs and thus could have a serious impact on job opportunities and the ability of American businesses to compete in the world marketplace.

This Issue Brief discusses the labor market impact of federal policies in the following six areas: minimum wage, workplace safety and health, overtime compensation, antidiscrimination legislation, increases in Social Security payroll tax, and employer-provided pensions. Each of the policies in these areas has served to increase the cost of labor. Federal regulations have had an impact on employment and wage levels, primarily for small firms, because they have the least flexibility with regard to wage levels.

The federal policies reviewed here have achieved uneven results in terms of their intended social goals. For example, antidiscrimination policies appear to have contributed to an improvement in the earnings of women and minorities relative to white males. But overtime pay policies that were intended in part to stimulate employment have resulted in only small employment gains.
◆ Introduction

How regulation affects labor markets is a topic of considerable current interest. This Issue Brief summarizes what economists do and do not know about the labor market impact of regulations.1

There is little research that speaks directly of the likely impact of current proposals to mandate health care, pension benefits, parental leave, or other social welfare policies. However, there has been a great deal of work on the question of how previous policies have affected the labor market. This Issue Brief summarizes what is known about the labor market impact of six specific regulations: 1) minimum wage legislation; 2) work place safety and health; 3) regulation of overtime compensation; 4) antidiscrimination legislation; 5) the Social Security payroll tax; and 6) employer-provided pensions.

Labor market regulation often increases the cost of one or more elements of employee compensation including wages, employee benefits, and perhaps working conditions. When regulation alters labor costs, some firms may be able to reallocate compensation to offset these new costs. Frequently, however, labor costs must rise as a result of a policy change, and hence production costs rise as well. Firms respond by raising product prices and/or reducing output. In general, then, labor market regulation may reduce total employment, and possibly firm profitability as well. The impact will be more pronounced on small employers who have less flexibility to rearrange compensation packages. As a result, small employers face greater competitive pressures because of their inability to deflect rising labor costs.

If a policy increases the cost of hiring one particular category of labor relative to other categories of labor and capital, employers will move away from the more expensive category to other categories (Hamermesh and Grant, 1979). Several researchers have attempted to measure the percentage change in the employment of one category of labor when the wage rate of other groups of labor (or the price of capital) changes. While the magnitudes of the estimates vary, several general conclusions can be drawn. In particular, production workers are substitutable with capital, as are production workers with nonproduction workers. In addition, skilled labor is less substitutable with capital; part-time workers are easily substituted for full-time workers; young workers are easily substituted for capital (Hamermesh and Grant, 1979). Within specific age and sex categories of labor, it appears that older males are substitutes for male teen-ageers; older females are substitutes for younger males; and women aged 20 to 34 are substitutes for teen-agers of both sexes (Levine and Mitchell, 1986). Of course, the extent to which any individual firm would be able to substitute among various categories of labor and capital would depend on its particular production process, union and labor contract constraints, and the pool of labor available for employment.

This Issue Brief provides a brief overview of the major regulatory developments in the six areas listed above, followed by a description of the policy’s labor market implications. Statistical evidence is presented on each policy’s labor market impact.

◆ Minimum Wage Legislation

Policy Overview—The Fair Labor Standards Act (FLSA) of 1938 established a minimum wage rate. Congress has changed the nominal value of this minimum several times over the years.2 On average it has been approximately half of the average hourly earnings in manufacturing, though its relative value declines during inflationary periods (Ehrenberg and Smith, 1985). Initially, the minimum covered approximately 40 percent of nonsupervisory wage and salary workers; coverage now stands at approximately 80 percent of all nonsupervisory workers. The FLSA is administered and enforced through a special division of the Department of Labor.

1 This Issue Brief draws heavily from a paper prepared for the EBRI-Education and Research Fund by Olivia S. Mitchell, associate professor of labor economics, and Angela M. Mikalauskas, graduate student, at the New York State School of Industrial and Labor Relations, Cornell University. The EBRI-ERF supported project updates and extends an earlier published survey article by Mitchell (1982b).

2 The 100th Congress is considering legislation to increase the minimum wage from the current level of $3.35 per hour to $4.65 per hour by 1990, and indexing the minimum after 1991 to 50 percent of the average industrial wage rate.
Implications for the Labor Market—When workers are employed in a competitive labor market, the equilibrium level of employment is determined by the supply and demand of labor (Ehrenberg & Smith, 1985). When a nominal minimum wage is imposed that exceeds the equilibrium wage, employment is reduced. To offset the resulting unemployment, the government tends to adopt expansionary fiscal and monetary policies, fueling inflation. Over time, nominal earnings increase, the relative value of the minimum wage decreases, and employment again rises to its initial prelegislation level. This suggests, therefore, that a legislated increase in the minimum wage triggers repeated cycles of unemployment and inflation.

In the case of incomplete FLSA coverage (Ehrenberg and Smith, 1985) a minimum wage higher than the equilibrium wage decreases employment in the covered sector. Workers displaced by the minimum wage legislation tend to seek employment in the uncovered sector. This influx of workers to the uncovered sector depresses wages and increases employment in the uncovered sector. Workers in the uncovered sector may withdraw from the labor force or choose to remain unemployed and wait for jobs in the covered sector in response to the depressed wage rates they face. This suggests that total employment and unemployment may rise or fall given a legislated increase in the minimum wage, though more workers may be paid less than the minimum. Specific outcomes depend on the extensiveness of coverage, and the level of the minimum wage relative to the equilibrium wage for unskilled workers. In addition, the ability of firms to substitute skilled labor or capital for unskilled labor determines the extent of disemployment effects induced by a rise in the minimum wage.

Statistical Evidence—Many studies have estimated the effect of minimum wage legislation on various labor groups. Most of the research has focused on youths and teen-agers, because they appear to be the most susceptible to the disemployment effects of the minimum wage (Brown, Gilroy, and Kohen, 1982; 1983).

Time series studies focusing on teens indicate that a 10 percent increase in the minimum wage results in a 1 to 3 percent reduction in total teen-age employment. Using 1985 employment figures (Mellor, 1986) for males and females aged 16 to 19, this would represent a decrease of approximately 19,000 to 57,000 teen-age jobs. The research also suggests that many teen-agers simply withdraw from the labor market once they become disemployed. Teen unemployment levels remain virtually the same as a result of the substantial labor force withdrawal triggered by a rising minimum wage. In addition, there is evidence to suggest that many employed teen-agers reduce their hours of work in response to minimum wage increases. Full time employment declines as the fraction of employed teens who work part-time increases. Studies examining the effects of minimum wages on teen-agers by sex and race are less conclusive.

Cross-sectional studies of the effect of the minimum wage on employment levels of teen-agers are less numerous, but produce a wider range of estimates. Although these studies vary methodologically, the estimates are not inconsistent with the time series results.

Time series studies on the effect of the minimum wage on young adults, age 20 to 24, indicate that a 10 percent increase in the minimum wage yields a less than one percent reduction in employment. This would amount to a loss of approximately 99,000 jobs among young males and females, age 20 to 24 (when 1985 employment figures are used; Mellor, 1986). In contrast to the results for teen-agers, there appears to be no labor force withdrawal among young adults who are disemployed as a result of an increase in the minimum wage. Consequently, the unemployment effects are greater for this group relative to teen-agers (Brown, Gilroy, and Kohen, 1982; 1983).

The impact of minimum wage increases on adults is difficult to measure with precision because this demographic group does not contain a large percentage of workers who would have earned less than the minimum wage in the absence of federal legislation. It comes as no surprise that empirical research has produced mixed and conflicting results (Mitchell, 1982b).

The minimum wage also affects firms' choices among various factors in the production process. Hamermesh (1981) indicates that increases in the minimum wage constrain the ability of firms to substitute adult labor for the labor of young adults and teen-agers. This suggests
that a youth subminimum wage rate would offset the level of disemployment among teens and young adults, while having little impact on adult employment.

Federally legislated wage floors have apparently decreased teen-age employment and to a lesser extent, the employment of young adults. Minimum wage increases induce teens to withdraw from the labor market rather than remain disemployed, which offsets much of the job loss, leaving unemployment statistics virtually unchanged.

Conclusion—Federally legislated wage floors have apparently decreased teen-age employment and to a lesser extent, the employment of young adults. Minimum wage increases induce teens to withdraw from the labor market rather than remain disemployed, which offsets much of the job loss, leaving unemployment statistics virtually unchanged. Young adults tend not to withdraw from the labor force in response to an increase in the minimum. Consequently, the minimum wage has larger unemployment effects for this group relative to teens. The impact of the minimum wage is inconclusive with respect to adult employment and differential effects by sex and race.

How minimum wages affect firm performance has not yet been adequately addressed in the literature. Increases in the minimum wage increase firms’ total labor costs. They respond by decreasing the employment of young workers and teen-agers. The size of the reduction has been shown to be relatively small, however. Two reasons may account for this empirical observation. First, employers may alter the total compensation package, thus minimizing the costs they bear as a result of the legislated increase in the minimum wage. By reducing nonwage compensation that is not covered by the legislation, the employment effects are probably smaller than they otherwise would have been.

Second, enforcement of the minimum wage is less than perfect and noncompliance carries limited penalties. The availability of workers willing to offer their labor services for less than the minimum, combined with low enforcement and sanctions, minimizes the disemployment effects that would otherwise have been present (Ehrenberg and Smith, 1985). Empirical research on the extent of noncompliance with the law and the ability of firms to cushion the impact of increases in the minimum is needed before the full impact of the legislation on firm profitability can be addressed. There is also some indication that increases in the effective minimum wage erode the ability of the firm to substitute adult labor for teen-agers and younger workers.

Occupational Safety and Health Regulation

Policy Overview—With the exception of federal standards aimed at a few specific industries, responsibility for safety in the work place lay within the jurisdiction of individual states until 1970. As a result, regulatory standards and enforcement were highly variable and erratic, and worker safety often depended on voluntary adherence to self-imposed industry standards. Concern with rising work-related injury rates led to the passage of the Occupational Safety and Health Act (OSHA) in 1970.

OSHA legislation provides employers with work place health and safety standards, and makes them responsible for protecting workers from hazardous conditions. The Department of Labor is responsible for the development and enforcement of national standards, although manpower limitations minimize the frequency with which a firm is inspected. The primary method of enforcement is on-site inspections of firms in targeted industries. Noncompliance is sanctioned through fines, although the size of the fine is often not large (Mitchell, 1982b). As a result, firms may deliberately violate OSHA regulations because the penalty associated with noncompliance is smaller than instituting the necessary health and/or safety changes. Violations of the standards may also be a form of protest by firms when the standards set by the regulatory agency are deemed too stringent or cost-prohibitive (Gray, 1984).

Implications for the Labor Market—Workers who are fully informed and able to judge the inherent dangers in their
work place will demand a wage premium reflecting the degree of on-the-job risk. A worker choosing not to accept the risk would be able to locate a different job, with lower wages but acceptable levels of risk. Employers can reduce the amount of on-the-job risk by implementing safety standards. Wages must be lowered to offset the costs associated with reducing the risk of injury. Consequently, low risk is associated with low wages and high risk is associated with high wages.

Available empirical evidence suggests that the cost of government implemented safety standards is high.

When the government mandates minimum standards of safety for all workers, labor costs increase. Some firms may adopt policies that reduce the total compensation package. To the extent that this does not fully offset the increase in safety costs, firms may also substitute capital for labor in their production process. If these measures fail, firms may seek to raise output prices. The subsequent reduction in demand is predicted to induce a decrease in profitability and employment and generate inefficiencies. Government-imposed standards may still be desirable if workers are unable to ascertain the level of risk associated with a job. Some studies indicate that workers are in fact poorly informed about work place hazards, while others show that workers receive wage premiums for high-risk jobs (Mitchell, 1982).

Statistical Evidence—Several researchers have attempted to address the impact of safety regulations on a firm’s choice of factor inputs and on productivity. Unfortunately, quantitative research in this area is hampered by the lack of appropriate data on workers’ exposure to risk, both before and after the passage of OSHA.

Gray (1984) examines the impact of government safety standards on productivity growth in the economy. Using 1958-1980 figures on 450 manufacturing industries, he shows that there was a slowdown in average productivity growth during the 1970s. It is estimated that safety regulations significantly contributed to this slowdown in productivity growth. There is also some indication, however, that the large impact of regulation on productivity in the 1970s represented a one-time cost of adjustment to new regulatory pressures. After this initial adjustment, the author speculated that continued regulation at the same level may not affect future productivity growth.

Elder (1985) examines the impact of workplace safety regulations on a firm’s choice of capital and labor in production. His results indicate that the cost of safety regulations strongly influences levels of capital and labor. As costs increase, firms reduce output, decreasing their levels of capital and labor utilization. In addition, there is evidence that firms also substitute capital for labor in the production process, thus further decreasing the level of employment. The magnitudes of these effects have not yet been established.

Conclusion—Available empirical evidence suggests that the cost of government implemented safety standards is high. Productivity levels in the economy are reduced, although this may be the result of initial adjustments to the new regulatory environment. Firms respond to increased safety costs by decreasing their output and substituting capital for labor. This creates a downward pressure on both profitability and labor utilization.

Research on the benefits of safety regulations are inconclusive due to data limitations. In general, it appears that OSHA regulations have little impact on worker safety. These results must be tempered, however, by the recognition that infrequent inspection and small penalties severely limit the effectiveness of the legislation. In addition, the perceived benefit of the regulation depends on the workers’ level of knowledge about work place hazards. Lack of appropriate data has generated inconclusive empirical evidence on this issue.

Overtime Compensation

Policy Overview—The Fair Labor Standards Act (FLSA) requires that all employees covered by the
legislation receive at least 50 percent of their regular hourly pay as a premium for overtime hours of work (in excess of 40 hours per week). Initially, this legislation applied to less than 20 percent of employees, but today approximately 60 percent of all employees are covered. The major categories of workers who are exempt from overtime premiums include executive, administrative, and professional personnel, outside salespersons, state and local government employees, and agricultural workers (Ehrenberg and Schumann, 1982; Ehrenberg and Smith, 1985).

The goals of the legislation were twofold. First, the legislation was concerned with protecting workers from excessive fatigue associated with long workweeks. A second motivation was the stimulation of employment. Although many overtime hours are worked because of conditions such as seasonal demand and absenteeism, a significant portion is regularly scheduled. The overtime pay premium can be viewed as a deterrent to scheduling overtime work and an inducement to substitute new employees for overtime work, in an effort to cover needed manhours of labor.

Administration and enforcement of the law is under the auspices of the Employment Standards Administration (ESA). The investigative resources of the ESA are limited. It rarely initiates investigations of noncompliance; most investigations arise from reports of alleged violations from employees. Penalties for noncompliance are generally limited to back payment of monies owed to workers.

Implications for the Labor Market—Given a level of capital stock and other production inputs, a firm's output is related to its level of employment as well as the average number of hours worked per employee. Fixed costs of employment, such as hiring and training costs, employee benefits, and employer contributions to insurance plans (i.e. unemployment insurance, Social Security) substantially increase the cost of employing a worker. These costs are employee-related, not a function of the number of hours worked. Sometimes the cost of hiring an additional worker is greater than the cost of extending the hours of the existing work force, and paying an overtime premium.

To minimize production costs, a firm wants to find the optimal combination of workers and average hours. When the fixed costs of hiring additional workers rise, it becomes cheaper to extend the hours worked of existing employees rather than hire new workers. This results in a decline in employment levels and an increase in the hours worked per employee. Government increases in the overtime premium offset the cost effectiveness of extending the hours of the existing work force. Consequently, increases in the overtime premium should stimulate employment levels.

The conclusion grows ambiguous, however, when other factors are considered. Increases in the overtime premium raise the average cost of hiring labor. This induces firms to substitute capital for labor in the production process. In addition, if higher labor costs are passed on to consumers in the form of higher prices, the demand for the firm's output may decrease. Both of these effects would reduce the total demand for hours of labor by the firm, and offset employment gains induced by an increase in the premium. Curtailing of overtime hours of work may also prompt currently employed workers to seek additional part-time jobs. This would reduce the employment gains of an increase in the overtime premium. Additionally, if the skill levels of the unemployed are dissimilar to the skill levels of those who are currently employed, a rise in the premium will undermine the goals of the proposed legislative amendment. Lastly, firms may not fully comply with the overtime pay provisions of the FLSA, weakening the law's impact (Ehrenberg and Smith, 1985).

Statistical Evidence—Early research on the overtime premium indicated that employment grew 0.5 to 1.5 percent in manufacturing, and 0.8 to 2.1 percent in nonmanufacturing, as a result of the law. Using 1985 employment figures (Mellor, 1986), this would represent an approximate increase of 91,000 to 274,000 jobs in the manufacturing sector; and 284,000 to 745,000 jobs in the nonmanufacturing sector. However, the assumptions underlying these estimates are questioned by Ehrenberg and Schuman (1982), who conclude that job creation estimates should be reduced by at least 10 to 20 percent, and possibly more.

Conclusion—Evidence suggests that employment gains associated with increases in the overtime premium are small. Although there have been no studies on how the
premium affects firm profitability and productivity, simulation evidence suggests that firms do pass on some of the increased labor costs to consumers (Ehrenberg and Schuman, 1982). In addition, firms may realign their capital/labor ratios in an effort to minimize their use of labor hours.

*Antidiscrimination Policy*

*Policy Overview*—Discriminatory labor market practices against women and minorities were first addressed by the federal government in the 1960s. Two major pieces of legislation and an executive order have outlawed discriminatory behavior by employers. The Equal Pay Act of 1963 requires “equal pay for equal work.” This legislation prohibits wage discrimination on the basis of sex, when men and women are engaged in work similar in skill level and job conditions. The legislation does not directly address equal opportunity in hiring and promotion. Title VII of the Civil Rights Act, enacted in 1964, goes beyond the Equal Pay Act by outlawing discriminatory practices based on an individual’s race, religion, gender, or ethnic origin. The legislation also addresses a broader range of employment issues, including hiring, discharge, promotion, and training. Title VII is enforced by the Equal Employment Opportunity Commission (EEOC), which has a mandate to investigate and mediate complaints of discrimination, as well as to initiate court proceedings on behalf of employees or the government (Beller, 1978; Mitchell, 1982b).

The federal government’s unique leverage as a purchaser of goods and services is also used to influence employment practices in firms holding federal contracts. Executive Order 11246, issued in 1965, stipulates that in addition to compliance with antidiscrimination law, federal contractors must commit to a schedule of affirmative action. Specifically, firms must formulate affirmative action goals and timetables with respect to the hiring, training, and promotion of women and minorities, in an effort to correct past unequal career opportunities. Enforcement is consolidated into the Office of Federal Contract Compliance Programs (OFCCP), which is authorized to cancel contracts or limit a firm’s eligibility for future contracts in cases of noncompliance. These measures are rarely taken, however (Ehrenberg and Smith, 1985).

**Implications for the Labor Market**—As noted above, federal antidiscrimination policy regulates labor market outcomes (wages, hiring, training, and promotion), rather than altering labor market interactions, *per se*. This approach relies on the belief that legislating outcomes will prompt corrective action on the part of the parties perpetuating market discrimination (Mitchell, 1982b).

The wage provisions associated with antidiscrimination laws generate both anticipated and unanticipated outcomes. Equal pay laws are expected to raise wages of women and minorities, in accordance with intentions. However, pay increases for these groups relative to other factors of production (including white males) make women and minorities appear more costly to employers. Consequently, firms with discriminatory attitudes are seen as hiring fewer women and minorities because they are viewed as relatively more expensive than white males (Beller, 1978; Ehrenberg and Smith, 1985). Consequently, the equal pay provisions are predicted to reduce employment among the groups suffering discrimination.

In contrast, the employment provisions of Title VII and compliance with affirmative action are expected to facilitate the removal of labor market barriers confronting women and minorities. If the probability of apprehension and the costs of violation are sufficiently high, a firm will respond to the policy by increasing its demand for female and minority workers. Hence, in addition to increasing employment levels of these groups, this regulation is predicted to diminish wage disparities relative to white male workers. As more qualified women and minorities are hired and trained, discriminatory attitudes held by employers, co-workers, and customers should be revised (Mitchell, 1982b).

The wage provisions of antidiscrimination legislation can actually reduce the relative employment and earnings of women and minorities, while employment provisions and affirmative action should increase their relative employment and earnings levels. Consequently, the net effect of antidiscrimination legislation is ambiguous.

**Statistical Evidence**—(1) *Affirmative Action: Analyses of the early years of affirmative action indicate that the*
contract compliance program was relatively ineffective for blacks. Black employment gains among federal contractors were modest and appear to have been concentrated in low-skilled positions. In addition, these employment gains were apparently not related to specific enforcement efforts such as contract compliance reviews (Mitchell, 1982b). While early studies unanimously concluded that affirmative action was ineffective in achieving occupational upgrading, Leonard (1984) argues that this was no longer true in the late 1970s. Specifically, the later years of affirmative action appear to have been more effective in increasing the employment of black males in skilled occupations. These advances may reflect the larger employment pool of skilled black males, as well as more aggressive enforcement of compliance by the OFCCP.

Antidiscrimination policy appears to have contributed to a decline in earnings inequality for both women and minorities, relative to white males.

Leonard (1984) also found that between 1974 and 1980, the proportional employment of white females, and black males and females, was larger in compliant firms relative to noncompliant firms. (Nonblack minority employment did not differ significantly based on compliance behavior.) In addition, firms subjected to compliance review appeared more likely to employ a larger proportion of black males and females, and were more likely to upgrade the occupations of all minority groups (results are less positive for white females). As affirmative action has increased the demand for minority workers across occupational groups, it has generated a rise in the wage earnings of minorities. Consequently, affirmative action has also contributed to a decline in earnings inequality.

(2) Equal Employment Opportunity (EEO): Empirical research on the effectiveness of EEO legislation has been hampered by the difficulty of quantifying relevant policy variables. Beller (1978) measures EEO enforcement based on the probability that a firm would be apprehended, and the costs associated with violating the law. In 1972, an amendment to Title VII strengthened the EEOC’s enforcement capabilities by granting the agency the right to initiate court proceedings against private-sector firms. This suggests that EEO policy should have had a stronger impact on relative earnings and employment after 1972, than before.

EEO policy appears to have narrowed the male/female earnings differential (Beller, 1978). Furthermore, postamendment enforcement narrowed the gap more than prior to the amendment. The effectiveness of EEO enforcement is more ambiguous with respect to minorities. Some studies find that black employment decreased, while the black/white differential remained virtually unchanged (Mitchell, 1982b). Other research claims that enforcement of EEO legislation has increased black earnings relative to whites (Beller, 1977).

The evidence, therefore, is inconclusive for minorities, though EEO enforcement does appear to have had a positive impact on the relative earnings of females.

Conclusion—Antidiscrimination policy appears to have contributed to a decline in earnings inequality for both women and minorities, relative to white males, although the impact is more pronounced for women (Levine and Mitchell, 1986). Affirmative action also increased the proportional employment of blacks in compliant firms and generated occupational upgrading among minority groups.

The policy impact on firm performance and the level of overall employment has not yet been demonstrated. Wage provisions of antidiscrimination laws will most likely increase total labor costs for discriminatory firms. Such firms will seek to replace the now higher-paid women and minorities with relatively less expensive labor or capital. Substitution to less expensive categories of labor and capital may be hampered, however, by the production process or the costs of employing white males and capital equipment. Furthermore, affirmative action and EEO legislation limit the degree to which covered firms can curtail employment of women and minorities. In lieu of substitution, such firms may attempt to increase their output price, and/or decrease production. Profitability and total employment at
discriminatory firms would be predicted to decline, though the magnitude of the decline will depend on the demand for such firms' output. Empirical estimates of these theoretical impacts are not available in the existing literature.

**Social Security Payroll Tax Increases**

*Policy Overview*—Social Security benefits were first paid to retirees in 1940. The basic structure of the program has remained unchanged since the system's inception. The public income security system is administered by the Social Security Administration and is composed of the Old Age, Survivors, and Disability Insurance (OASDI) program and the Supplemental Security Income (SSI) program. The former accounts for 95 percent of the combined benefit payments of the two programs (Thompson, 1983). Revenue used to pay benefits is derived primarily from a flat-rate payroll tax on annual earnings, up to a specified limit. In general, any individual 62 years of age or older who has worked for at least 71 1/2 years is eligible to receive benefits (Ehrenberg and Smith, 1985). Within limits, the size of the pension depends on the retiree's average monthly earnings while working and his/her age of retirement.

Concern with the solvency of the Social Security program has arisen in the past decade as a result of falling birth rates and increasing life expectancy. This has spurred Congress to legislate increases in the payroll tax and raise the retirement age prospectively, in an effort to align revenue and expense projections. The focus here is on the effect of increases in the employers' portion of the payroll tax.

*Implications for the Labor Market*—Both workers and consumers bear the burden of the employer's portion of the Social Security tax. An increase in the Social Security tax raises a firm's labor costs, which reduces the benefit of hiring an additional unit of labor. Firms respond by substituting capital for labor in the production process. To the extent that firms are unable to sufficiently reduce their utilization of labor, the additional labor costs are passed on to consumers in the form of higher prices, reducing demand. Both effects decrease total employment levels. The resulting excess supply of labor exerts downward pressure on wages. Depending on the relative responsiveness of the demand and supply of labor to changes in wage levels, the tax burden would be divided between those who lose their jobs and those whose wages are depressed.

*Statistical Evidence*—Studies of who bears the burden of the employer's share of the Social Security tax are few in number. Early research concluded that an increase in the employer's share of the payroll tax reduced the wage rate by roughly one for one, suggesting that no jobs would be lost (Brittain, 1972). More recent evidence suggests that half of the rise in labor costs generated by an increase in the tax is offset by depressed wage levels (Hamermesh and Rees, 1984). To offset the remaining increase in labor costs, firms reduce their work force. The extent to which the burden depresses wages versus employment is still subject to debate.

Both workers and consumers bear the burden of the employer's portion of the Social Security tax. An increase in the Social Security tax raises a firm's labor costs, which reduces the benefit of hiring an additional unit of labor. Firms respond by substituting capital for labor in the production process.

*Conclusion*—Research has been hampered by the complexity of the Social Security program and the need to quantify relevant variables for empirical analyses. No empirical study has yet been conducted linking firm profitability to payroll tax increases.

Economists have also disagreed on the precise conceptual framework with which to examine the question of who bears the burden of the payroll tax (Thompson, 1983). Nevertheless, evidence to date suggests that increases in the employer's contribution to Social Security taxes reduce wages and decrease employment, as well as increase product prices.
Pension Income Security

Policy Overview—Pensions have become an increasingly important source of retirement income since the mid-1940s. It is projected that two-thirds of the current full-time work force will be entitled to a private pension upon retirement (Andrews, 1985; Ippolito, 1983).

Several factors account for this growth, among them organized labor’s push for pensions. Another factor was the War Labor Board’s pay policies during World War II. Wage increases were restricted, but employees’ benefits were allowed to rise more freely. The Revenue Act of 1942 further enhanced the attractiveness of company-sponsored pensions by allowing pension contributions and investment earnings on these contributions to be tax-deferred.

After World War II, the federal government implemented several other regulations affecting the tax status of benefits, the ability of pension plans to integrate benefits with Social Security, and their responsibilities regarding disclosure of pension information. The most wide ranging was the 1974 Employee Retirement Income Security Act (ERISA). This law restricted multiple aspects of defined benefit pension plans and many features of defined contribution plans as well (Coleman, 1985). This legislation also liberalized vesting rules and established standards that would ensure an employee would receive promised pension benefits. In addition, the law imposed minimum standards for participation and vesting, liability for fund mismanagement, and reporting and disclosure requirements. Finally, the law established insurance provisions for cases of pension fund illiquidity through the Pension Benefit Guaranty Corporation (PBGC).

Three different entities monitor the administration and enforcement of ERISA policy. Issues regarding pension fund asset holdings and reporting and disclosure are under the jurisdiction of the Office of Pension and Welfare Benefit Programs of the Labor Department. Compliance with the policy’s standards for participation, vesting, and fund management are monitored by the Internal Revenue Service. Lastly, the PBGC, a nonprofit independent corporation, oversees the financial status of pension funds (Mitchell, 1982b).

Subsequent to ERISA’s passage, the pace of regulation has been rapid. New regulation has been imposed on company-sponsored pensions almost every year from the mid-1970s to the present (Rosenbloom and Hallman, 1986; Wyatt Company, 1986). Regulatory activity has emphasized continued eligibility for pension accrual at older ages (rules outlawing mandatory retirement and provisions requiring employers to continue pension benefit accrual after workers attain the age of 65), limits on integration (curtailing the ability of firms to reduce pension payments by a portion of retired workers’ Social Security benefits), and nondiscrimination rules (including ceilings on the amounts that can be contributed each year into a tax-qualified corporate pension plan on behalf of highly-paid employees).

Implications for the Labor Market—Understanding how pension regulation affects labor markets is facilitated by focusing on: (1) rules regarding contribution levels, benefit accruals, and benefit amounts, and (2) rules regarding the probability of benefit receipt.

Rules regarding contribution levels, benefit accruals, and benefit amounts have progressively limited the conditions under which a pension plan may maintain its tax-qualified status (Mitchell, forthcoming). From the employer’s perspective, such reforms make more workers eligible for pensions, thus raising pension costs. Where possible, the firm will offset these higher pension costs by adjusting other components of the total compensation package such as wages (Mitchell, 1982a; Ippolito, 1983; Ehrenberg and Smith, 1985). Alternatively, firms who cannot offset these costs may terminate their pension plans (Wendling et al., 1986), and/or substitute capital for labor.

Regulation raises the probability of benefit receipt by increasing the likelihood of vesting, increasing benefit accrual rates, making pension trustees liable for imprudent pension investments, increasing funding requirements, limiting circumstances under which a firm can avoid paying promised benefits, and setting up the PBGC. In essence, these rules provide a legal context for pension participants’ claim on retiree benefits, and define the terms under which promises must be backed either by corporate assets, if any, or tax revenue, if assets are insufficient (Ippolito, 1986; Logue, 1979; Mitchell, forthcoming; Tepper, 1981). Such measures
increase the expense of offering a pension plan and could, in some cases, lead to plan termination. In addition, some have speculated that the existence of the PBGC itself may induce more serious funding problems in the pension system as a whole, than already experienced. Several analysts have also pointed to the delicate financial position of the PBGC, wondering whether benefit security can be guaranteed in the long run (U.S. General Accounting Office, 1987).

Statistical Evidence—Empirical research on pension regulation has taken several tacks. Most frequently, researchers have sought to determine when and how more generous pensions tend to be offset by reduced wages (or wage growth rates). A recent review (Mitchell and Pozzebon, 1986) concludes that, on the whole, workers with pensions have higher rather than lower wages as compared to workers without pensions. This tends to call into question the notion that wages and pensions are traded off in the compensation package. However, that study also finds that among workers with pensions, wages are lower where retirement provisions are more generous and benefit security greater. For example, Smith (1981) finds a dollar-for-dollar tradeoff between pension underfunding and wage levels, suggesting that rules enhancing benefit security will directly lower wages. In overview, available studies disagree on the extent to which mandating more benefits will directly reduce wages.

A second strand of pension research uses existing evidence on the substitutability between various types of workers and capital, to infer the impact of pension regulations. For instance, some researchers argue that pensions are part of an optimal risk-sharing arrangement between workers and firms, and predict that government interference with a privately efficient contract between workers and their firms will have negative consequences for employment, compensation, and profitability (Lazear, 1979). However, evidence along these lines is mixed. For instance, Allen and Clark (1987) suggest that pensions have little measurable impact on firm profitability. The effect of reducing permissible pension vesting rules has also been studied (Andrews, 1985) and appears to be relatively small, on average. Other studies have focused on the elimination of mandatory retirement rules, which find a relatively small effect since most workers retire well before age 70 (Burkhauser and Quinn, 1983). It should be recalled, however, that this particular law does have a significant impact on subsectors of the economy; older employees at universities have tended to defer retirement in response to this new ruling. Also, pension plans appear to have increased their incentives for early retirement, just as the mandatory retirement rules were abolished (Mitchell and Luzadis, 1986; Lazear, 1983).

A third strand of pension research examines the overall impact of ERISA and the far-reaching pension regulations subsequent to that law. Some claim that pension termination patterns rose over time as a result of growing regulatory constraints (Cummins et al., 1979; Wendling et al., 1986), although others disagree (Ippolito, 1986). More research remains to be done on this broad regulatory question.

Labor market theory suggests that workers trade off wages for more secure and generous promises.

A fourth strand of pension research uses simulation analysis to investigate the impact of pension regulation. For instance, ICF Inc. has inserted a pension module into its complex multi-equation model of the U.S. economy. This was used to evaluate the likely effects of a mandatory universal pension proposal discussed in 1981 by the President’s Commission on Pension Policy (ICF Inc., 1981). The proposed policy would have required all employers to contribute a minimum of 3 percent of pay into a tax-deferred account, for all workers over 25 years of age. A five-year vesting rule was assumed and small firms were to be granted a tax credit to offset starting costs (President’s Commission on Pension Policy, 1981).

The ICF study found that some employers without pension plans would have responded to cost increases brought about by the mandatory pension scheme by reducing wages and employment. Specifically, pension costs were predicted to rise from 5 to 28 percent, which
in turn would lower overall employment by 58,000 to 160,000 jobs. The job loss was predicted to be concentrated primarily in small firms and in the service and trade sectors. The range of job loss estimates depended on how much workers' wages were assumed to absorb pension cost increases; that is, job loss estimates were larger, the less wages were assumed to fall. (Workers in larger firms already covered by more generous benefits were assumed not to be directly affected). Hence, the simulation analysis implies that mandating pension benefit improvements has an important effect on the labor market, and the impact is quite uneven.

**Conclusion**—Labor market theory suggests that workers trade off wages for more secure and generous pension promises. Consequently, mandating better and more certain benefits is predicted to have a negative effect on wages and employment.

Some available evidence supports this contention. Statistical studies on the wage-pension tradeoff show little effect on coverage, but much more response on wages to benefit security. Also, other pension regulations such as the banning of mandatory retirement seem to have had an impact on the way pension plans are structured. The simulation analyses also confirm the findings, implying that mandating pension benefit improvements both lowers wages and produces job loss concentrated among small firms. In general, pension regulation has had an important effect on the labor market, although the impact has been uneven.

**Overall Conclusion**

In overview, it appears that each of the regulatory policies reviewed above serves to increase the cost of labor to the firm. These costs can sometimes be minimized by rearranging elements of the compensation package, leaving total compensation unchanged. However, rigidity in one or more elements of employee compensation (wages, benefits, and/or working conditions) limits employers ability to offset policy-induced labor cost increases. In response, firms will substitute less expensive factors of production within technological limitations. Cost increases may also be passed on to consumers in the form of higher prices. To the extent that labor costs cannot be offset, employment and output levels will decrease.

Empirical studies reviewed here generally confirm the predictions regarding the impact of legislation on employment levels and the degree of substitution between types of labor and capital. The primary lesson of these studies is that any mandatory social welfare policy (e.g., health care, parental leave, pension benefits) increases labor costs. The impact will be the greatest for small firms because they have the least flexibility to rearrange compensation packages. Furthermore, large firms may already provide their employees with benefits such as pensions and health insurance. In contrast, small firms less frequently provide such extensive employee benefits. The greatest burden of mandated social welfare policies would fall, therefore, on small firms. Often, small firms employ the least skilled workers, such as females and teen-agers, who are concentrated in the service sector. As a result, negative impacts in the form of lost jobs will be shouldered by the least skilled categories of labor.

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