THE IMPACT OF RETIREMENT POLICIES ON EMPLOYMENT AND UNEMPLOYMENT*

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Social policies aimed at the labor market, both those arrived at through the legislative process or those determined through collective bargaining in the private sector, tend to be piecemeal in nature and to evolve over time. Legislation is adopted at one point in time and typically is amended many times thereafter.[1] All the while, the economic environment that the legislation was designed to influence may be changing, and policies which were desirable when first adopted may prove ineffective or costly to society at later dates.[2]

Practically every piece of labor market legislation or social program has undesirable side effects, which often were not anticipated at the time of adoption. These may conflict either with the goal of the program *or* the goals of other social programs. For example, it is by now well-established that increases in the minimum wage, if complied with, not only will increase the wages of low-wage workers, but will also reduce their employment opportunities.[3] To take another example, the Davis-Bacon Act and other "prevailing wage" legislation require that construction workers on Federally funded, financed, or assisted (through loan guarantees) construction projects be paid the "prevailing wages" in an area.[4] Typically this is taken to be the union wage scales and low-wage nonunion contractors effectively are precluded from bidding on these projects. Regardless of the *current* merits of prevailing wage legislation, it is clear that an unintended consequence of them is an increase in the construction costs of hospitals and public housing programs. This results in an increase in the costs of providing these services to consumers. Indeed, to the extent that high construction costs increase the

monthly rental of public housing units above the levels which low-income families can afford, projects may be foregone and the level of employment in construction lowered.

SCOPE OF PAPER

Previous papers at this conference have suggested that aggregate demand policies alone will not be sufficient to move the economy to full employment with a nonaccelerating rate of inflation and have stressed that policies which alter the structure of labor markets are required. To illustrate how public policies may affect the structure of labor markets, my paper evaluates the influence of current public and private retirement policies on the level and distribution of employment and unemployment. The focus is on the Social Security System (OASDHI), the Employee Retirement Income Security Act (ERISA), the amendment to the Age Discrimination in Employment Act that raises the permissable mandatory retirement age to 70, and early retirement provisions negotiated in private collective bargaining agreements. Certainly, it would be difficult to criticize the *intent* of these policies which either provide for (or guarantee) retirement benefits, or allow older workers the freedom to extend their work lives. However, each of the *public* policies will be seen to have an adverse effect on the level of employment. As such, my paper also illustrates the more general point that because of the piecemeal nature of public policy, policies designed to promote one goal may well detract from achieving other goals.

In what follows, I sketch the ways in which the various retirement policies influence the level and distribution of employment and unemployment. Since my discussion of the Social Security system is relatively long, I treat the other subjects only briefly. I make no great claims to originality here; in the main I merely summarize the ideas of others. Moreover, the discussion relates primarily to the qualitative impacts of the policies on employment and unemployment; only limited evidence on their quantitative impacts is presented.

At the onset, I should stress that it would be incorrect for the reader to conclude that because I discuss the undesirable side effects of several public programs in this paper, that I oppose the programs or believe on balance that they have been negative factors in the economy.[5] Nothing could be further from the truth! Rather, my objective is to suggest that we need to find ways to marginally modify the programs so as to both preserve their benefits to society *and* to reduce their negative impacts on the level of employment. My concluding remarks give some examples of such modifications.

THE SOCIAL SECURITY SYSTEM

The Social Security system influences labor markets in a variety of ways that are related to the manner in which eligibility for and receipt of benefits

occurs, to the method of financing, and to the extent to which the retirement trust fund is funded. I first will sketch some of the important parameters of each aspect of the system and then discuss the labor market effects they produce.

For an unmarried male or female who retires at age 65, the level of benefits that the individual is eligible to receive is based upon his or her career average earnings in covered employment.[6] Women, and since 1961 also men, are eligible for reduced benefits at age 62, at a rate that is reduced less than an actuarially fair amount. A worker with a *dependent* spouse, or dependent children or grandchildren, is eligible to receive an additional 50 percent of his (or her) normal retirement benefit amount. The spouse may receive benefits based upon her (or his) previous work, but if this is done, the dependents' allowance is lost. Upon the death of the retiree, the surviving widow or widower, if over age 65, can elect to continue to receive the retiree's normal benefit amount and will typically do so *if* it exceeds the level of benefits which the survivor is eligible for as a result of her or his lifetime work in covered employment.

Given one's eligibility for a specific level of benefits, the level of benefits actually received is a function of one's retirement earnings. As of 1978, the first $4,000 of a retiree's labor earnings are disregarded in the calculation of the retiree's benefits. After this *earnings disregard,* the retiree faces an implicit *marginal tax rate* of 50 percent, as retirement benefits are reduced by one dollar for each additional two dollars that the retiree earns. For individuals older than 72, there is no earnings test for receipt of benefits.

Social Security retirement, disability and health benefits are financed by a payroll tax on both employers and employees on all covered earnings up until a *maximum taxable earnings* level. In 1978, the OASDHI combined tax rate *nominally* paid by both employers and employees was 6.05 percent of an employee's earnings, up to an earnings level of $17,700. No taxes are paid by an employee on annual earnings over this level.[7] Although there is a small trust fund, the Social Security system is an *unfunded* pay-as-you-go system.[8] Rather than the contributions made by employers and employees accumulating in an "individual account" for an employee over his work-life to be used to fund his annuity at retirement, contributions made by employers and employees today are used to finance the retirement benefits of current retirees.

These characteristics of the Social Security system interact to influence labor markets in a number of ways. First, the *retirement earnings test* for receipt of benefits discourages labor force participation and employment of the aged. Whether this discouragement effect has increased or decreased over time is an open question. On the one hand, since 1965 retirement benefits as a percentage of earnings in the year before retirement have increased substantially (Table 1). For example, a single male retiring at age 65 who had always been employed at the minimum wage would have received 37 percent

TABLE 1

Social Security Benefits as a Percentage of Earnings in Year Before Retirement for a Single Male Worker Retiring at Age 65

Retirement Date	Minimum Wage[a]	Retail Trade[a]	Service Industry[a]	Manufacturing[a]	Construction[a]
1965	37	35	31	28	22
1967	36	35	30	27	21
1968	35	34	29	27	21
1969	38	37	31	29	22
1970	43	40	34	32	24
1971	46	43	36	35	25
1972	45	42	34	34	23
1973	53	48	39	38	27
1974	51	47	38	37	26
1975	55	49	40	39	29
1976	58	51	41	40	31

[a]Based upon estimate of average annual earnings in the industry.

Source: Alicia Munnell [29].

of his final salary upon retirement in 1965. By 1976, his benefits would have risen to 58 percent. On the other hand, the *earnings disregard* has been liberalized, rising from $1,500 in 1966 to $4,000 in 1978. Furthermore, since 1973, the implicit *marginal tax rate* on earnings above the earnings disregard has been reduced from 100 to 50 percent.[9] Although these latter changes have decreased the incentives of older Americans to reduce their labor force participation, one can formally show that the *net* effect of the Social Security benefits payments, the earnings disregard, and the marginal tax rate is to induce older Americans to work less than they would in the absence of the Social Security system.[10] Of course, since the OASI portion of the system was intended to be a *retirement system,* this should *not* be considered an undesirable outcome.

The second set of influences of the system on labor markets operates via the share of the payroll tax nominally paid by employers. To the extent that employers cannot shift 100 percent of the burden of this tax on to employees in the form of lower wages (or lower wage increases), this share of the tax is likely to affect firms' employment decisions in a number of ways. Although evidence on the extent of shifting is mixed, two recent studies have concluded that less than 50 percent of employers' share of the payroll tax is

shifted onto labor.[11] As a result, firms' labor costs are increased by the tax, inducing them to reduce employment and adopt more capital intensive means of production.

Furthermore, the existence of a maximum taxable earnings level, with a flat rate payroll tax rate up until that point, suggests that payroll tax rate increases will increase the cost of low-wage employees (with annual earnings less than the maximum taxable earnings level) relative to the costs of high wage employees. If relative wages do not fully adjust to compensate for this change, increases in the tax rate should lead firms to substitute high wage for low wage employees, thereby shifting the burden of unemployment to less skilled workers. In contrast, increases in the taxable earnings level reduce the incentives for such substitution.[12]

Between 1960 and 1978, the OASDHI tax rate has more than doubled, rising from 3.0 to 6.05 percent. During the same period the maximum taxable earnings level rose from $4,800 to $17,700. As a result of the latter change, between 1960 and 1975 taxable earnings as a fraction of total covered earnings rose from .781 to .845 and the fraction of total covered employees with earnings at or above the maximum taxable earnings level fell from .280 to .151 (Table 2). Given the large increases in the maximum taxable earnings levels since 1975, it is likely that the effect of the change in the taxable earnings level has dominated the effect of the increase in the tax rate, causing a reduction in employers' incentives to substitute high-wage for low-wage employees.

The existence of a maximum taxable earnings level also provides an incentive for employers to reduce labor turnover.[13] To see this, consider the following simple example. Suppose, as was true in 1960, that the OASDHI tax rate was 3.0 percent and the maximum taxable earnings level was $4,800. If there was *no* labor turnover and all of a firm's employees were paid a monthly salary of $800, the firm's payroll tax liability per full-time employee-position would be $144 ($4,800 x .03). In contrast, if an employee quit after six months and was replaced by another equally paid worker, the payroll tax liability for that "employee-position" would be $288 ($4,800 x .03 x 2). Clearly employers can reduce their payroll tax liabilities by reducing labor turnover.

More formally, one can show that as long as the taxable earnings level is less than an employee's annual earnings, the Social Security tax provides an added incentive for the firm to take actions to reduce the probability that the employee will voluntarily quit his job. Moreover, one can also show that the marginal cost of labor turnover schedule is a nonlinear function of the taxable earnings level and reaches a maximum when the taxable earnings level is set equal to ½ average annual earnings.[14] Thus, if the taxable earnings level is greater than (less than) ½ average annual earnings, increases in the taxable

earnings level will increase (decrease) the level of labor turnover. Recent empirical evidence indicates that, other things equal, such a relationship does exist between firms' quit rates and taxable earnings levels under the *unemployment insurance* system.

During the last ten years, the fraction of total covered employees with earnings at or above the OASDHI maximum taxable earnings level has fallen (Table 2), while the ratio of OASDHI maximum taxable earnings to average

TABLE 2

Taxable Earnings and Total Earnings
For Employees Covered by OASDHI

Year	OASDHI Tax Rate	Maximum Taxable Earnings	Fraction of Total Covered Employees With Earnings at or Above Maximum Taxable Earnings	Taxable Earnings as a Fraction of Total Earnings in Covered Employment
1960	3.0	4800	.280	.763
1961	3.0	4800	.292	.774
1962	3.125	4800	.310	.758
1963	3.625	4800	.325	.746
1964	3.625	4800	.345	.728
1965	3.625	4800	.361	.713
1966	4.2	6600	.242	.800
1967	4.4	6600	.263	.781
1968	4.4	7800	.212	.817
1969	4.8	7800	.245	.801
1970	4.8	7800	.260	.782
1971	5.2	7800	.282	.763
1972	5.2	9000	.250	.783
1973	5.85	10800	.204	.817
1974	5.85	13200	.151	.851
1975	5.85	14100	.151	.845
1976	5.85	15300	*	*
1977	5.85	16500	*	*
1978	6.05	17700	*	*

Source: U.S. Social Security Administration, *Social Security Bulletin*, September 1977, Table Q2, and E. Cowan, "Carter Signs Social Security Tax Rise for 110 Million," *New York Times*, December 21, 1977, p. 51.

*Data not available yet.

annual earnings has increased for all major industry groups (Table 3). If the relationship between turnover and taxable earnings levels also does exist for the Social Security payroll tax, the former change should lead to a *reduction* in firms' quit rates while the latter should lead to an *increase*.[15] Hence, the net effect of these changes is ambiguous. Since the unemployment rate is intimately related to labor turnover, future empirical estimation of these relationships is warranted.

The third set of effects of the system on labor markets operates via the share of the payroll tax nominally paid by *employees* and the share implicitly paid by them in the form of lower wages. This share of the payroll tax has a differential impact on different classes of individuals. For individuals not in the labor force but contemplating entering it, the payroll tax has a pure substitution effect, reducing the *net current* return to employment and discouraging labor force participation. For employed individuals earning more than the taxable earnings level, the payroll tax has a pure income effect, stimulating increased work effort as total earnings, but *not* the reward to marginal work effort, are reduced. For employed individuals earning less than the taxable wage base, both income and substitution effects are present, and the net impact on work effort is ambiguous.

The large increases in the Social Security tax rate and taxable earnings levels during the past decade, in themselves, probably marginally retarded the growth of labor force participation and marginally reduced the work effort of those individuals who earned more than the taxable earnings level prior to its increase, but less after its increase. Although the impact of these changes on the *unemployment rate* is ambiguous, their net effect was probably to marginally reduce the growth rate of *employment*.

This effect *may* have been partially offset by the accompanying liberalization of promised future benefits (Table 1). Since eligibility for these benefits to some extent depends upon career work effort, promised higher future benefit levels may stimulate greater work effort on the part of non-aged workers. This *entitlement effect* is likely to be greatest for low-wage workers as the benefit/earnings ratio declines as earnings rise.[16] As noted earlier, however, married females have the option of receiving either their own OASI benefits or 50 percent (100 percent) of their husband's benefits while he is alive (after he dies). To the extent that a husband's earnings considerably exceed his wife's, the net additional OASI benefits which her lifetime work effort entitles her to is likely to be small or zero. Hence, the entitlement effect is less likely to be important for married women and the system unambiguously provides an incentive for them not to work.[17]

The final effect of the Social Security system on the level of employment operates through its influence on the level of private savings.[18] Recent econometric evidence indicates that the Social Security system substantially

TABLE 3

Ratio of OASDHI Maximum Taxable Earnings, to Average Annual Earnings, by Industry

Year	Private Nonagriculture	Mining	Contract Construction	Manuf.	Transportation, Communications Public Utility	Wholesale and Retail Trade	Finance, Insurance & Real Estate	Services
1966	1.283	.974	.868	1.126	.990	1.605	1.379	1.650
1970	1.256	.912	.767	1.122	.962	1.570	1.323	1.552
1974	1.644	1.149	1.019	1.439	1.163	2.145	1.812	1.992
1975	1.656	1.087	1.021	1.431	1.157	2.141	1.799	1.976
1976	1.669	1.071	1.033	1.416	1.142	2.127	1.845	2.016
1977	1.677	1.047	1.073	1.399	1.144	2.227	1.883	2.016

Source: Average weekly earnings of nonsupervisory workers from U.S. Bureau of Labor Statistics, *Employment and Earnings* (January 1978) and Bulletin 1312-10, *Employment and Earnings for the United States, 1909-1975.* Average weekly earnings are multiplied by 52 and then divided by the maximum taxable earnings to get the number in the table.

reduces private savings.[19] This occurs because workers consider their OASDHI contributions and promised retirement benefits as a form of savings, and reduce other savings accordingly. Apparently this effect is larger than the stimulative impact of the system on savings that occurs because the system encourages early retirement. Early retirement, other things equal, would require an individual to increase his savings per year over a shorter period of employment to provide for a longer period of retirement.

The net reduction in private savings is *not* offset by an increase in public savings because of the pay-as-you-go nature of the Social Security system. As a result, the level of total savings and capital accumulation in the economy is reduced. Reduced capital investment translates into reduced growth in productivity and output and ultimately into reduced rates of growth of employment and/or real wages. Recent increases in Social Security taxes and promised future retirement benefits have likely exacerbated this effect.

In sum, the parameters of the Social Security system interact to produce numerous effects on the levels and distribution of employment and unemployment in the economy. The reduction in labor force participation and employment induced by the structure of benefits is a *planned* effect of the retirement system and should not be judged a negative feature. In contrast, the OASDHI payroll tax on employers *and* employees and the nonfunded nature of the retirement trust fund probably serve to reduce both the labor force participation rates and employment levels of non-aged individuals. In addition, the parameters of the system were shown to differentially influence the distribution of employment and unemployment across sex classes and earnings classes of employees. Recent changes in the system's parameters probably have marginally reduced the growth rate in employment and also reduced employers' incentives to substitute high-skilled for low-skilled labor.[20] I view the latter as a socially desirable change.

EMPLOYEE RETIREMENT INCOME SECURITY ACT (ERISA)

In 1974, Congress passed a major piece of private sector pension reform legislation, the *Employee Retirement Income Security Act* (ERISA). ERISA was designed to increase the probability that private sector employees receive promised retirement benefits and included provisions requiring liberalized vesting rules, more stringent funding requirements, and increased fiduciary responsibility. The need for, and wisdom of ERISA-type controls over public employees' retirement systems is currently under debate.

No one can challenge the social desirability of guaranteeing that workers will receive promised retirement benefits. However, as with many government regulations, pension reform legislation has unintended side effects.[21] Because ERISA-type controls increase employers' costs of providing pensions, one would expect to observe employers shifting at least part of the increased costs to employees in the form of lower wages or lower wage in-

creases. If this occurs, it is not obvious that such legislation will be unambiguously beneficial to workers. Rather, the desirability will depend partially on the rate at which employees are willing to trade off current for future income. Although it is too early to assess ERISA's impact on wages, several recent studies have shown that a trade-off exists between wages, retirement system characteristics, and employees' pension contributions in both the private and public sectors.[22]

To the extent that employers can *not* fully shift ERISA's costs on to employees, either through lower wages or through termination of the pension plans, costs per unit of labor will increase. In this case, one unintended side effect of ERISA would be a reduction in the level (or rate of growth) of private employment. This reduction would not be uniform across all employers, but would be concentrated in those firms with pension plans whose pre-ERISA provisions did not meet the ERISA standards. Since the demand for public employees is negatively related to their costs, adoption of ERISA-type controls over public employees' retirement systems would have a similar negative impact on employment or employment growth in the public sector.[23]

ERISA-type controls also affect the level of pension plan funding and composition of pension funds' portfolios. On the one hand, by requiring pension plans to be fully funded, ERISA will increase the stock of current pension fund assets. To the extent that this is not offset by a decline in individuals' saving, this will increase the level of capital accumulation in the economy and ultimately the level of employment. On the other hand, by restricting the type of investments which pension funds may make, ERISA may prevent pension fund assets from being invested in projects with the highest expected rate of return (but also highest risk) and hence may reduce the rate of productivity growth. Without empirical evidence, one can not ascertain which of these effects is likely to dominate.

MANDATORY RETIREMENT

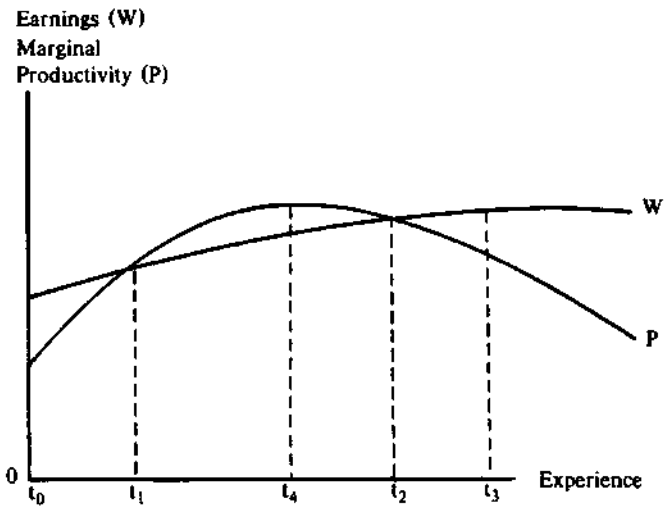
Congress has recently approved legislation that, subject to a few exceptions, raises from 65 to 70 the age which employers may compel their employees to retire. This amendment to the Age Discrimination in Employment Act was passed virtually unanimously and will clearly benefit those older Americans who wish to continue working at their current jobs. However, the legislation may potentially influence the level and distribution of employment in a number of ways.

Before discussing these effects, several points should be noted. First, mandatory retirement provisions do not force individuals to cease working, as such provisions are not universal. Rather they terminate employment with the existing employer at the *existing contract* terms.[24] Employees subject to such provisions can seek alternative employment and in some cases, on an

individual basis, may "recontract" with their employers and remain employed in the same, or different, position.[25] Second, unless the Social Security *retirement earnings test* rules are relaxed, the extension of permissible mandatory retirement ages still leaves a strong financial inventive for older Americans to retire at age 65. Third, mandatory retirement provisions tend to be found in large establishments which are unionized and where employees tend to have long job tenure.[26] It is these latter associations that provide the rationale for the existence of mandatory retirement rules which I now discuss.[27]

Consider a firm in which an implicit long-term contract exists between the firm and its employees. Figure 1 illustrates the relationship between earnings and productivity for a "typical" worker over his career with the firm. During the early years (t_0 to t_1) the worker undergoes formal or informal training, some of which is specific to the firm, and is typically paid in excess of his marginal productivity to induce him to undergo training. The firm recoups this by paying the worker less than his marginal productivity during the worker's peak productivity years. After some age, which varies widely across individuals and depends upon such factors as the employee's health and occupation, productivity starts to decline and eventually falls below the worker's wage.[28] Since informal rules or union contracts prevent wages from being cut, after that point (t_2) the firm is losing money on the employee, as

Figure 1 Life-Cycle Earnings and Productivity Profiles



his wage again exceeds his marginal productivity. Eventually, a point is reached (t_3) at which the present value of the excess of wages over marginal productivities in the first (t_0 to t_1) and third (t_2 to t_3) periods just equals the present value of the excess of marginal productivities over wages in the second period (t_1 to t_2). It is at this point (t_3) that the mandatory retirement age is established.

If we assume that some individuals actually postpone their retirement, the employment effects of a legislated change in the mandatory retirement age can be easily illustrated.[29] On average, the present value of wages will now exceed the present value of marginal productivities over workers' careers and firms will no longer be maximizing their present value of profits. One possible reaction of firms is to attempt to adjust wages to restore the equality, either by negotiating flatter or everywhere lower real wage profiles. If this occurs, the law would have no effect on the overall *level* of employment and would redistribute earnings over workers' life-cycles. However, because the average employee would have a longer worklife, new hires would be reduced. Thus, the law would redistribute some jobs from new hires, primarily youths, to the aged.[30] If, however, employers could not make adjustments on the age dimension, they would face incentives to reduce their *stock* of employees. The simultaneous reduction in employment levels and lengthening of durations of employment would lead to a *larger* reduction in new hires than in the previous case.

The increase in the retirement age may also discourage employers from hiring middle-age employees. To see this, note that prior to the legislated change a firm would be willing to hire middle-aged workers provided that the surplus (excess of marginal productivity over wages) that the firm could earn from the workers' initial years of employment would exceed or equal the deficit (excess of wages over marginal productivity) the firm would incur from the workers' later years of employment. In terms of Figure 1, with a mandatory retirement age of t_3, employers would be willing to hire workers up until age t_4. However, increases in the mandatory retirement age would discourage employment of this age workers since the firm would have no guarantee that they will retire at t_3 (their expected surplus in less than their expected deficit). Hence, employers would have incentives to reduce their hiring of middle-age workers. In the example, this would be reflected by a reduction in the maximum age at which they will hire new employees to an age below t_4.

In fact, this effect provides employers an added incentive to prefer young rather than middle-age new hires and thus partially offsets the negative impact on youth employment noted above. It is ironic that opponents of the change in the mandatory retirement age focused on its potential impact on youth employment because its major impact may well be on middle-aged

employment. Indeed, this probably explains why an increase in the legally permissible mandatory retirement age was favored by 51 percent of people over 65 *and* 68 percent of youths aged 18 to 29, but *opposed* by 52 percent of people aged 45 to 64 in a recent poll.[31]

The final effect of lengthening the mandatory retirement age on employment is likely to be felt in periods of declining demand. To the extent that the legislation reduces the number of retirees per year, employers may be forced to resort to layoffs to achieve their desired lower employment levels. This would cause a further redistribution of employment away from those with the least seniority and would increase the measured unemployment rate.

Of course, the magnitudes of all of these effects depend upon the number of employees who actually will postpone their retirement dates in response to the legislation. Growth in real incomes, private pensions, and Social Security benefits have reduced labor force participation rates of older males and reduced the average age at retirement. As long as the Social Security *retirement earnings test* rules are maintained, workers aged 65 face a substantial incentive to retire. One would suspect that although the legislated change in the Age Discrimination in Employment Act may marginally alter the distribution of employment and unemployment across age groups, its overall effect on the level of employment is not likely to be large.

EARLY RETIREMENT

The final retirement policy to be discussed is early retirement provisions, which are contained in many privately negotiated contracts. Typically, these allow early retirement at reduced benefits at a rate that is reduced less than or equal to an actuarially fair amount. In some cases, provisions calling for bonuses for people who elect early retirement in periods when product demand is low are also present.

Although provisions for early retirement in themselves are beneficial for employees, an added attraction to employers is their effect of redistributing employment losses across age groups of employees during periods of low or declining demand. This may well *reduce* employers' costs of reducing employment levels. Union contracts typically require that layoffs be based on seniority, with the least senior workers laid off first. However, there may be substantial costs to employers of pursuing such policies. The short-run costs of laying off the least experienced employees (those employed less than t_1 years in Figure 1) may not seem to be high, but if these workers then find employment elsewhere, firms lose the surplus they would obtain in later periods from employing them. In addition, due to the *experience-rated* nature of the unemployment insurance payroll rax, after some point increased layoffs imply that firms must pay a higher payroll tax.

Clearly it would be in employers' best interests if employment reduc-

tions could be concentrated among the most senior workers (those with experience levels greater than t_2 in Figure 1), since firms earn no surplus from employing them. Furthermore, if employers can convince these employees to voluntarily leave their jobs, in most states the employees will *not* be eligible for unemployment insurance benefits and the employers' unemployment insurance payroll tax rates will not increase. While most union contracts call for layoffs to be inversely related to experience, unions should not object to early retirement options which allow senior employees to *voluntarily* retire early.

Early retirement provisions thus allow employers to redistribute employment losses in periods of low or declining demand from younger to older workers and to reduce their UI payroll tax contributions. They also serve to reduce the measured unemployment rate since retirees tend not be labor force participants. Indeed, a recent econometric study indicated that retirement rates tend to be higher in unionized firms, where early retirement provisions are prevalent, than in nonunion firms.[32] Hence, these policies probably do reduce the measured employment rate. It is somewhat ironic, but perhaps quite telling, that of the four sets of retirement policies which I have discussed, only the policy which derives from *private sector* collective bargaining negotiations unambiguously has a non-negative effect on employment and unemployment.

CONCLUDING COMMENTS

This paper has focused on the impact of retirement policies on the level and distribution of employment and unemployment. All of the policies discussed, except for early retirement provisions in privately negotiated collective bargaining contracts were seen to have adverse effects on the level and distribution of employment. Hence, the paper illustrates the more general point that policies designed to promote one social goal may well detract from achieving other goals and suggests that more explicit attention should be given to the employment effects of social programs and legislation prior to their adoption.

Undoubtedly the effects I have discussed are only marginal. Moreover, one might respond that the government can compensate for the negative employment effects of such policies through appropriate aggregate demand policy. Unfortunately, such a response ignores the unfavorable trade-off between inflation and unemployment that we face. Most economists now agree that to reach full employment without accelerating inflation will require us to undertake many separate "structural" policies, which each may only marginally improve the trade-off, but which as a group will have a substantive impact on employment and unemployment. Certainly, consideration should be given to restructuring retirement policies, so as to reduce their negative

impacts on employment and unemployment, in a manner that will not conflict with the program's intended purposes.

Three examples of possible changes in the financing of the social security system should suffice to illustrate the types of restructuring one might consider. First, the use of general revenue financing from personal income tax and corporate tax revenues, rather than payroll tax financing, for future system revenue needs would reduce employers' incentives to substitute capital for labor.[33] Second, one might consider increasing system revenues by more than is necessary, to fund benefits in the short run, to build up a larger Social Security trust fund. If this fund were then used to buy outstanding government debt, the social rate of savings and capital accumulation would increase.[34] As noted earlier, increased capital accumulation ultimately results in increased rates of growth of employment. Third, raising the maximum taxable earnings level, rather than the payroll tax rate, to meet future system revenue needs would reduce employers' incentives to substitute high wage for low wage workers. To the extent that the overall rate of wage inflation is influenced more by the level of excess demand for labor in high wage labor markets than the level of excess demand in low wage labor markets, this change will also reduce the unemployment rate associated with each level of inflation.[35]

ENDNOTES

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1. For example, since the passage of the original Social Security Act in 1935, the Act has been amended at least 13 times to extend the categories of covered employment. See Alicia Munnell [29], Table A-1.

2. "Protective" labor legislation which limit females' hours of work or occupational choice are a prime example of this. Designed initially to "protect" the welfare of women, they are now seen to be sexist in nature and to interfere with females' freedom of choice.

3. Evidence on compliance with the minimum wage is presented by Orley Ashenfelter and Robert S. Smith [3]. Evidence on the disemployment effects of the minimum wage is discussed by Edward Gramlich [21].

4. See John Gould [20].

5. Sidney Cohen's comments on the version of my paper presented at the conference indicated that he incorrectly perceived that version as being both anti-social security and, more generally, anti-labor. His remarks have taught me that it is important for academics to explicitly state their beliefs when addressing the "real world" to avoid such misinterpretation. I have tried to do so above.

6. Extensions of coverage throughout the years have left federal, and some state and local government employees as the only major groups currently not covered by the system.

7. If an employee works for more than one employer in a year, *each* employer is liable for the payroll tax up until the taxable earnings level is reached in his employment. The employee's liability is based upon his *total* earnings from all employers.

8. The system currently has unfunded liabilities of more than $4 trillion, and the trust fund contains less than a year's worth of benefits for current recipients; see Feldstein [19].

9. Michael Boskin [5] presents econometric evidence which purports to show that a reduction in the Social Security implicit marginal tax rate from one-half to one-third would reduce the annual probability of retirement for married white males aged 61 to 65 by almost 60 percent.

10. Sid Cohen objected at the conference to my use of the word "induce" rather than the word "permit" above. I must apologize for being a prisoner of academic jargon and stress that my choice of words here implied no normative judgment about the desirability of this effect.

11. The recent studies are Ronald Ehrenberg, Robert Hutchens, and Robert Smith [14], and Daniel Hamermesh [23]. The earlier studies include John Brittain [9] and Wayne Vroman [36 and 37].

12. John Pencavel [30], among others, has made this point.

13. See Frank Brechling [6 and 7].

14. See Frank Brechling and Christopher Jehns [8]. To see this intuitively, consider the following example. Suppose, as above, that the tax rate is 3% and each full-time employee earns $800/month ($9,600/year). I have listed in Appendix Table 1 what an employer's OASDHI annual payroll tax per position would be for various taxable earnings levels and (a) a situation of no quits, (b) a situation in which each employee quit on June 30 and was replaced by another equally paid worker. The difference between the tax in (a) and (b) is the employer's reduction in payroll tax liabilities from eliminating labor turnover. As can be seen in Appendix Table 1 this is maximized when the taxable earnings level is equal to ½ the employee's annual earnings. Thus, the employer's incentive to reduce turnover is greatest at that point.

15. This assumes that the majority of employees earn more than ½ the taxable wage base.

16. Currently we have no evidence on the magnitude of the Social Security entitlement effect. However, Daniel Hamermesh [24] has presented estimates of the entitlement effect induced by the unemployment insurance system.

17. The argument is analogous for married males whose wives' earnings considerably exceed their own.

18. For details of this argument, see Martin Feldstein [17 and 19] and Alicia Munnell [29], Ch. 6.

19. See Martin Feldstein [15, 16 and 18] and Alicia Munnell [28]. The estimates

of the system's effect on personal savings varies considerably across these studies, however. For example, Feldstein [15] estimates an effect of $51.2 billion in 1969, while Munnell estimates one of $3.6 billion in the same year.

20. My discussion of the Social Security system's effects on employment and unemployment has been restricted to its retirement system aspects. However, in October of 1977 there were 2.8 million disabled workers under age 65 receiving disability benefits from the system (U.S. Department of Health, Education and Welfare [34]. If this number seems large to the reader, it may well be because there are substantial work disincentives built into the Social Security disability insurance program. On this, see Van de Water [35].

21. That ERISA itself had many "unintended" side effects is now widely recognized and studies of the Act's quantitative impact on a variety of areas, including administrative costs, nonadministrative costs, plan terminations, and collective bargaining, are currently being conducted under Labor Department funding. Dallis Salisbury [31] summarizes the studies being conducted.

22. See Ronald Ehrenberg [13], Alan Gustman and Martin Segal [22] and Randall Weiss and Bradley Schiller [39].

23. Ronald Ehrenberg [11 and 12] and Orley Ashenfelter and Ronald Ehrenberg [2] present estimates of the wage elasticity of demand for public employees.

24. A recent survey indicated that less than 50 percent of all males ages 45-59 were employed in firms with mandatory retirement rules. See James Schulz [32] and also Fred Slavick [33].

25. See Frank Dickinson's conference comments for an example of one Arizona company's policy in this area.

26. See Slavick [33] and Edward Lazaer [26].

27. The argument presented below is only one of several which have been recently offered by Edward Lazaer for why mandatory retirement provisions should exist. My attempt to simplify his argument may not capture all of its essential features.

28. This age may be well past 65 for some individuals. The analysis in the text focuses on a "representative" or "average" worker. Clearly employers have incentives to allow those employees who they can identify as being highly productive (relative to their wages) to remain with the firm after the mandatory retirement age.

29. Estimates of the legislation's potential impact vary and are not always based on hard evidence. The U.S. Department of Labor [38] estimated that some 200,000 aged employees would be added to the workforce in the first year after its passage, with smaller numbers added annually thereafter.

30. Some proponents of the legislation argue that there would be no impact on youth employment because the aged and youths do not perform the same jobs and are not substitutes. However, this line of reasoning misses the point entirely. The reduction in youth employment would occur because of a reduction in new hires *per se*, not because the new hires would have filled the same jobs as the older workers.

31. See *New York Times* [1].

32. See Medoff [27], who also cites statistics from Evan Hodgens [25] to back up the contention that early retirement provisions and bonuses tends to be found primarily in union contracts.

33. This would not necessarily reduce the system's effects on labor supply.

34. See Martin Feldstein [19] for details of this argument.

35. See Martin N. Bailey and James Tobin [4].

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APPENDIX TABLE 1

Hypothetical Employer OASDHI Annual Payroll Tax Liability Per Employee-Position (Assumed 3% Tax Rate, $800/month Earnings Level)

Maximum Taxable Earnings (MTE)	MTE As A Fraction of Annual Earnings	Annual OASDHI Tax/Position No Turnover	Annual OASDHI Tax/Position Turnover	Reduction in OASDHI Tax From Eliminating Turnover
0	0	$0	$0	$0
$2400	.25	$2400	$4800	$2400
$4800	.50	$4800	$9600	$4800
$7200	.75	$7200	$9600	$2400
$9600	1.00	$9600	$9600	$0

Source: Author's calculations.