

# Employee Benefits, Retirement Patterns, and Implications for Increased Work Life

**EBRI**
**EMPLOYEE  
BENEFIT  
RESEARCH  
INSTITUTE®**
*Issue Brief*

- This *Issue Brief* examines why policymakers are concerned about the trend toward early retirement and how it relates to Social Security, Medicare, and employee health and retirement benefits. It reviews the rationale for the effects of economic incentives on early retirement decisions and includes a summary of empirical literature on the retirement process. It presents data on how employee benefits influence workers' expected retirement patterns. Finally, it examines the implications of public policies to reverse early-retirement trends and raise the eligibility age for Social Security and Medicare.
- An Employee Benefit Research Institute/Gallup survey indicates that there is a direct link between a worker's decision to retire early and the availability of retiree health benefits. In 1993, 61 percent of workers reported that they would not retire before becoming eligible for Medicare if their employer did not provide retiree health benefits.
- Participation in a pension plan can be an important determinant of retirement. Twenty-one percent of pension plan participants planned to stop working before age 65, compared with 12 percent among nonparticipants.
- Workers whose primary pension plan was a defined benefit plan were more likely to expect to stop working before age 65 (23 percent) than workers whose primary plan was a defined contribution plan (18 percent).
- Expected income replacement rates affect retirement patterns, indicating that as the expected replacement rate increases, the probability of expecting to stop working before age 65 increases. Twenty-two percent of workers with an expected income replacement rate below 60 percent expected to stop working before age 65, compared with 29 percent for those in the 60–69 percent replacement range, and 30 percent for those in the 70–79 percent replacement range.
- Workers expecting to receive retiree health insurance are more likely to expect to stop working before age 65 than workers who do not expect to have retiree health insurance. Twenty-one percent of workers with retiree health insurance expected to stop working before age 65, compared with 12 percent of workers not expecting to receive retiree health insurance.
- The Social Security Old-Age and Survivors Insurance (OASI) program depends on obtaining sufficient revenue from active workers' payroll taxes to fund the benefits received by retired beneficiaries. Funding the program in the past was in large part effortless because of the relatively large number of workers per retiree. Today, funding the program is a greater challenge because the ratio of workers to retirees has fallen. Policymakers have been able to agree that reform of the program is necessary for its survival; however, the debate over options to reform the program is just beginning, and it is likely to be a long time before a consensus emerges.

# Table of Contents

Introduction .....	3
(chart 1, chart 2)	
Economic Incentives .....	4
(chart 3)	
Retiree Health Insurance .....	5
Employment-Based Pension Plans .....	6
(chart 4, chart 5)	
Social Security .....	7
Previous Literature .....	8
Retiree Health and Early Retirement .....	8
Health Status and Early Retirement .....	10
(chart 6)	
Social Security and Early Retirement .....	11
Pension Plans and Early Retirement .....	11
Retirement Patterns .....	12
Health and Retirement Study .....	12
(table 1, table 2, table 3, table 4, table 5, table 6, table 7)	
Policy Implications .....	18
Conclusion .....	20
References .....	21

## Charts

Chart 1, Labor Force Participation Rate, by Age and Gender, 1948–1995 .....	4
Chart 2, Private Pension Plan Participation Rates, 1940–1995 .....	4
Chart 3, Employed Persons Ages 55–64 by Hours of Work, 1976–1995 .....	5

Chart 4, Prevalence of Normal Retirement Ages and Provisions among Defined Benefit Plans Sponsored by Medium and Large Private Establishments, 1993 .....	7
Chart 5, Percentage of Participants in Defined Benefit Plans Sponsored by Medium and Large Private Establishments, by Provision for Early Retirement, 1993 .....	8
Chart 6, Mortality Rates by Age, 1960–1994 .....	10
Chart 7, Expected Retirement Pattern, by Retiree Health Insurance Availability, Wage and Salary Workers, Ages 51–61, 1992 Primary Respondents Only .....	17

## Tables

Table 1, Expected Retirement Patterns, Wage and Salary Workers, Ages 51–61, 1992 .....	12
Table 2, Age at Which Workers Plan on Stopping Work or Reducing Work Hours, by Occupation and Union Status, Wage and Salary Workers Ages 51–61 Whose Intentions Were to Stop Work or Reduce Work Hours, 1992 .....	13
Table 3, Expected Retirement Patterns, by Pension Plan Participation Rate and Type of Pension Plan, Wage and Salary Workers, Ages 51–61, 1992 .....	14
Table 4, Expected Retirement Patterns, by Pension Plan Characteristics, Wage and Salary Workers with Primary Defined Benefit Plan, Ages 51–61, 1992 .....	15
Table 5, Expected Retirement Patterns, by Pension Plan Characteristics, Wage and Salary Workers with Primary Defined Contribution Plan, Ages 51–61, 1992 .....	16
Table 6, Average Household Net Worth, by Expected Retirement Pattern, Wage and Salary Workers, Ages 51–61, 1992, Primary Respondents Only .....	18

This *Issue Brief* was written by Paul Fronstin of EBRI with assistance from the Institute's research and editorial staffs. Any views expressed in this article are those of the author and should not be ascribed to the officers, trustees, members, or other sponsors of EBRI, EBRI-ERF, or their staffs. Neither EBRI nor EBRI-ERF lobbies or takes positions on specific policy proposals. EBRI invites comment on this research.

*EBRI Issue Brief* (ISSN 0887-137X) is published monthly at \$300 per year or is included as part of a membership subscription by the Employee Benefit Research Institute, 2121 K Street, NW, Suite 600, Washington, DC 20037-1896. Periodicals postage paid in Washington, DC. POSTMASTER: Send address changes to: *EBRI Issue Brief*, 2121 K Street, NW, Suite 600, Washington, DC 20037-1896. Copyright 1997 by Employee Benefit Research Institute. All rights reserved, Number 184.

## Introduction

Over the last three decades, the United States has experienced an extraordi-

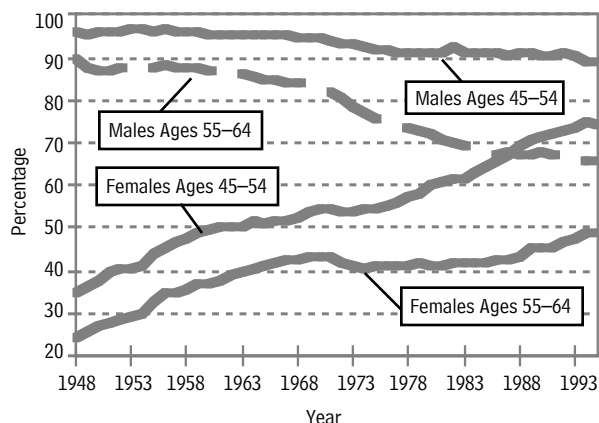
nary withdrawal of older males from the labor force (chart 1). In 1965, 84.6 percent of males ages 55–64 were participating in the labor force, compared with 65.5 percent in 1995. The labor force participation rate of males ages 45–54 also has declined during this time period, but close to 90 percent in this age group continued to participate in 1995. In contrast, the labor force participation rate of females ages 45–54 and ages 55–64 has been rising steadily.

The paradox facing public policymakers is that increased life expectancy has led to a U.S. policy that seeks to encourage a longer work life, while early retirement is more common today than in the past.<sup>1</sup> Public- and private-sector employee benefits may be playing a large role in the retirement process, a role that is working against increased work life. Between 1940 and 1970, the percentage of workers participating in a private pension plan increased from 15 percent to 45 percent, and it has remained at roughly 40 percent through the 1980s and 1990s (chart 2).<sup>2</sup> However, private wage and salary workers ages 51–61 have a higher likelihood of participating in a pension plan, and the trend has been increasing over time. In 1995, 54 percent of private wage and salary workers ages 51–61 were participating in a pension plan, up from 51 percent in 1988. This increases

<sup>1</sup> The phased-in increase in the normal retirement age for Social Security benefits along with the elimination of mandatory retirement both are examples of U.S. policy encouraging a longer worklife.

<sup>2</sup> Various researchers have found different trends in participation rates of private pension plans. While Beller and Lawrence (1992) found no change in the participation rate between the early 1970s and the mid 1980s, Yakoboski, et al. (1994b) found a declining participation rate through the 1980s and an increase in the early 1990s. Employee Benefit Research Institute tabulations of the March Current Population Survey also indicate that the participation rate in private pensions increased from 37 percent to 40 percent between 1988 and 1995.

Chart 1  
**LABOR FORCE PARTICIPATION RATE,  
BY AGE AND GENDER, 1948-1995**



Source: U.S. Department of Labor, Bureau of Labor Statistics.

to 59.3 percent among full-time workers ages 51-61 and 72.7 percent among full-time workers ages 51-61 working for firms with 100 or more employees. As a result, pension income as a share of total income is increasing for retirees. In 1979, pension income accounted for 15 percent of the income of the elderly, while in 1995 it accounted for 19 percent (Yakoboski and Silverman, 1994, and author tabulations from the March 1996 Current Population Survey). In addition, Social Security income as a share of total income remained fairly constant during this time period.

Public policy interest in early retirement derives from concern about the ability of the economy to support larger numbers of retirees with the resources produced by a proportionately smaller number of workers. Public obligations to provide benefits to early retirees are limited because Social Security does not provide *any* retirement benefits before age 62 and Medicare is not available until age 65. Nevertheless, early retirement is an issue for public programs because it reduces the earnings' base that supports Social Security and Medicare spending for older retirees.

This *Issue Brief* examines why policymakers are concerned about the early retirement trend and how it relates to Social Security, Medicare, and employee health and retirement benefits. It reviews the rationale for the effects of economic incentives on early-retirement decisions and includes a summary of empirical literature on the retirement process. It presents data on how employee benefits influence workers' expected retirement patterns. Finally, it examines the implications of public policies to reverse early-retirement trends and raise the eligibility age for Social Security and Medicare.

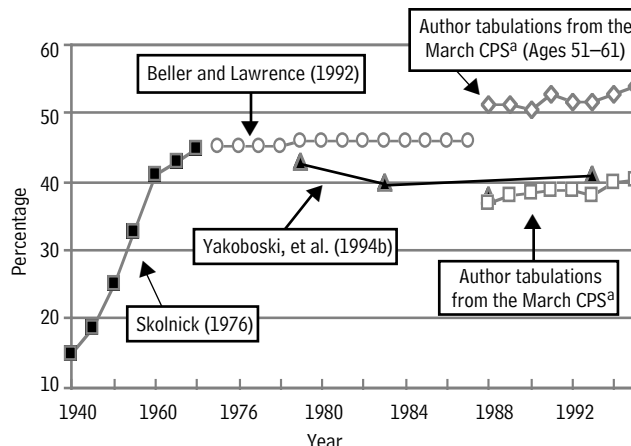
## Economic Incentives

The job-stopping process generally is initiated by the termina-

tion of career employment and frequently includes periods of post-career employment, part-time work, partial retirement, and temporary retirement (Ruhm, 1991). Previous research has established that retirement can be defined as a process, instead of a single event (Quinn and Kozy, 1996). Workers often use one or more transitional stages, or bridge jobs, between their career job and complete withdrawal from the labor force. One common transitional stage is the movement from full-time work to part-time work. This usually occurs for wage and salary workers when they switch jobs, but it also may occur for workers in their current job. In 1976, 13.3 percent of workers ages 55-64 were employed part time, compared with 18 percent in 1993 (chart 3).

Because individual preferences vary, retirement ages will vary depending upon individuals' predicted

Chart 2  
**PRIVATE PENSION PLAN PARTICIPATION RATES,  
1940-1995**



Source: Employee Benefit Research Institute.

<sup>a</sup>Current Population Survey.

future earnings, pension accruals, Social Security benefits, health, and preferences for leisure. A person's choice of retirement age may be made by weighing the combined benefits of the wages from continuing to work and the potential<sup>3</sup> increase in future income from accruing greater pension benefits against the costs of forgoing the increased leisure of retirement and the cost of forgoing future pension accruals. To be realistic, the decision should account for risks, including uncertain future income, inflation, and premature death. Testing whether people account for these risks, however, would be mathematically difficult (Fields and Mitchell, 1984).

Health insurance coverage also might help explain the retirement decision. Employer-sponsored health insurance in retirement can be a significant source of income security for early retirees because Medicare, the federal health insurance for retirees, is not available to people younger than age 65 unless they are disabled.<sup>4</sup> Although early retirees as a group are probably healthier than those ages 65 and over, the risk of medical need increases with age. Early retirees without health insurance may be vulnerable to costly medical expenses. Individually purchased health insurance can be expensive, may restrict coverage for certain services, and may be unavailable for those with preexisting conditions who lack prior creditable health insurance coverage. Group health insurance through an employer usually is the most affordable source of health insurance coverage for early retirees and may be an important variable in the retirement decision.

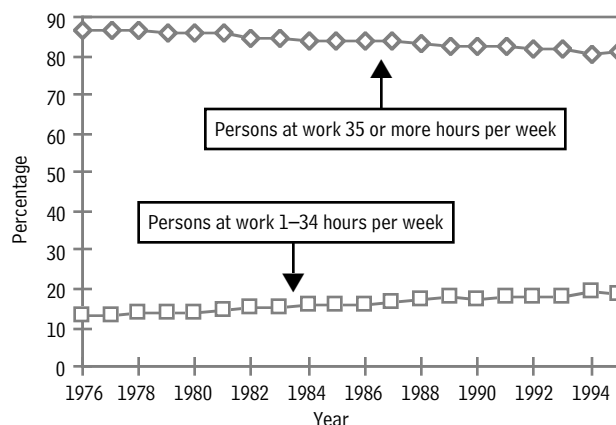
## Retiree Health Insurance

An Employee Benefit Research Institute (EBRI)/Gallup poll indicates that there is a direct link between a

<sup>3</sup> Many defined benefit plans, especially those integrated with Social Security, limit benefit accruals to 35 years.

<sup>4</sup> Individuals younger than age 65 with end-stage renal disease (irreversible kidney failure) also are eligible for Medicare coverage, although they are not disabled in the strict sense used by the Social Security Administration to determine eligibility for most other disability benefits.

Chart 3  
EMPLOYED PERSONS AGES 55-64 BY HOURS OF WORK, 1976-1995



Source: Bureau of Labor Statistics, Current Population Survey, unpublished data.  
Note: Data for 1994 and subsequent years are not directly comparable with data for 1993 and earlier years because of the introduction of a major redesign of the Current Population Survey.

worker's decision to retire early and the availability of retiree health insurance (Employee Benefit Research Institute, /The Gallup Organization, Inc. 1993). In 1993, 61 percent of workers reported that they would not retire before becoming eligible for Medicare if their employer did not provide retiree health benefits. Yet the same survey shows that 47 percent plan to retire before age 65, with a planned mean age of retirement younger than age 61. The survey also found that 76 percent of the respondents believed they would need additional health insurance coverage beyond what is provided by the Medicare program, and 54 percent expected their former employer to provide retiree health insurance.

The rationale for why availability of retiree health insurance should affect the retirement process is straightforward, as noted in Madrian (1994). Almost 75 percent of wage and salary workers, ages 18-64, have employment-based health insurance coverage (Fronstin, 1996). This insurance is portable only in the sense that some workers have the option of continuing their coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA).<sup>5</sup> Otherwise, without the availability of retiree health insurance, retirees may not have access to health insurance coverage until age 65.<sup>6</sup>

<sup>5</sup> The Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) requires employers with health insurance plans to offer continued access to group health insurance to qualified beneficiaries for up to 18 months when a covered employee terminates employment. COBRA does not apply to firms with fewer than 20 workers.

<sup>6</sup> Some individuals may have access to health insurance coverage through a spouse. Hence, married individuals and nonmarried individuals will face different choice sets in determining whether to retire early.

*Employment-based pension plans can facilitate or encourage workers' withdrawal from the labor force, including some workers who may not yet be eligible for Social Security benefits.*

While some workers have access to retiree health insurance, most do not or do not even know if they would have coverage if they retired. EBRI analysis of the April 1993 Current Population Survey found that 34 percent of workers ages 45 or over worked for an employer that sponsored retiree health insurance either throughout their retirement (29 percent) or only until age 65 (5 percent). While 15 percent reported that retiree health insurance was unavailable, 21 percent did not respond to the question or did not know the answer, and 30 percent did not have access to health insurance through their employer (Yakoboski, et al., 1994a).<sup>7</sup> If we assume that the 21 percent who did not know the answer or did not respond to the question do not have access to retiree health insurance, then 66 percent of workers ages 45 or over do not have access to retiree health insurance.<sup>8</sup>

Workers considering retiring early could obtain health insurance prior to becoming eligible for Medicare either through a spouse or in the private market for insurance. However, purchasing health insurance in the private market may not be affordable. Employers that provide access to group health insurance often are able to obtain lower premiums than individuals can because insurance companies spread risk across a larger group of people, and the average administrative costs are lower. In addition, the need for health insurance increases with age (Madrian, 1994). Older individuals are relatively more likely to be in fair or poor health, they are more likely to report having been diagnosed with a serious health condition, and they spend a greater proportion of their family income on medical expenses. As a result,

lack of health insurance during retirement could be an impediment to early retirement.<sup>9</sup>

## Employment-Based Pension Plans

Employment-based pension plans can facilitate or encourage workers' withdrawal from the labor force, including some workers who may not yet be eligible for Social Security benefits. From a conceptual perspective, employer pensions may be thought of as falling into one of two categories: defined contribution and defined benefit plans.<sup>10</sup> Defined contribution plans create different economic incentives than defined benefit plans. From the perspective of the employee, the defined contribution plan essentially is a savings vehicle and provides no incentives to retire at any particular age. The defined contribution account allows a worker to accumulate assets that may be sufficient to support retirement at an early age, but the worker need not attain any particular age to use those assets in retirement.

Although defined contribution plans have no intrinsic retirement age, the differing tax treatment of benefits from defined contribution plans at different ages may influence the retirement decision. Defined contribution plans commonly distribute assets to their participants in the form of lump-sum distributions. Before age 59½ the recipient may be subject to a 10 percent penalty tax on the lump sum (in addition to regular income tax). Therefore, participants planning to take such distribution may have an incentive to delay

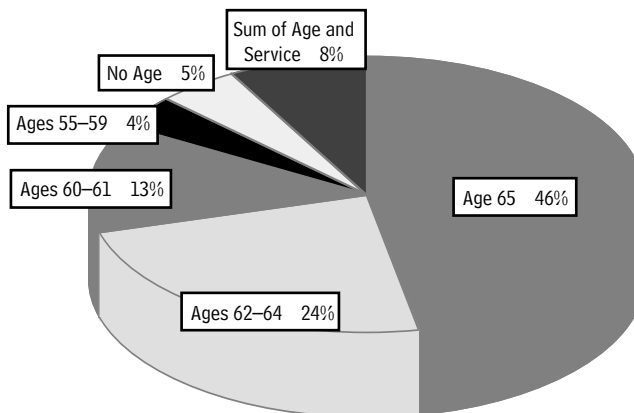
<sup>7</sup> The percentage of workers who did not respond to the question or did not know the answer varies by age cohort. More than 22 percent of workers ages 45–54 did not know or did not respond to the question, compared with 19 percent for workers ages 55–64 and 17 percent for workers ages 65 and over.

<sup>8</sup> Even among workers with health benefits in retirement, most would be required to pay at least a portion of the premium, and in some cases, all of the premium.

<sup>9</sup> Fronstin (1996) found that 15.8 percent of retirees ages 55–64 were uninsured compared to 13.4 percent overall for those ages 55–64 and 19.0 percent overall for those ages 18–64. However, 24.4 percent of the 55–64 age population was covered by public insurance, usually Medicare, indicating that health status may preclude insurance status as a reason for retiring early.

<sup>10</sup> However, from a plan design standpoint there are many variations on both of these general themes. For example, a defined benefit plan may base annual retirement benefits on either final average or career average pay. Moreover, sponsors of defined benefit plans differ on the extent to which they provide lump-sum distributions as an alternative to annuities for their retirees.

Chart 4  
**PREVALENCE OF NORMAL RETIREMENT AGES AND PROVISIONS AMONG DEFINED BENEFIT PLANS SPONSORED BY MEDIUM AND LARGE PRIVATE ESTABLISHMENTS, 1993**



Source: U.S. Department of Labor, 1995.  
 Note: All age groups may require a minimum service period.

retirement age until 59½. On the other hand, the defined contribution plan participant can avoid the penalty by rolling the distribution into a qualified annuity rather than receiving it as a lump sum. Moreover, the

penalty tax may be circumvented by taking distributions that are part of a series of substantially equal periodic payments made for the life (or life expectancy) of the employee or the joint lives (or joint life expectancies) of the employee and his or her beneficiary.

In a defined contribution plan, the employer may make a specified periodic contribution to the employee's pension account. Some plans accept or may even require employees' contributions as a condition of participation in the plan. Investment gains or losses in the plan are credited to the employee's account; the employer bears no investment risk. Once vested, the value of employees' pension assets is not contingent on how long they remain with the firm. As long as employees actively participate in the plan, they can continue to accumulate assets.

In contrast, defined benefit plans typically promise a specified benefit on retirement, typically based on the employee's earnings and length of service, for the life of the employee or surviving spouse.<sup>11</sup> Because increases in the employee's salary with continued work can raise the amount of pension benefits attributable to past service, the value of pension benefits accrued each year increases as the worker approaches retirement, a phenomenon known as "backloading."<sup>12</sup>

Typically, employer plans calculate early retirement benefits as a percentage of the accrued pension benefit that would have been paid at the normal retire-

ment date. The pension benefit is actuarially reduced to reflect the participant's longer benefit payout period and lost investment earnings on plan assets. A fair actuarial reduction gives full recognition to the

longer payout period and lost investment earnings (Allen, et al., 1992).

According to the Bureau of Labor Statistics, in 1993, 46 percent of participants in defined benefit pension plans sponsored by medium and large private establishments were in plans requiring them to wait until age 65 to commence receiving normal retirement benefits (U.S. Department of Labor, 1995). However, to begin receiving full benefits before age 65, participants often had to meet minimum service requirements (chart 4). Early retirement was allowed in most large employment-based defined benefit pension plans after attainment of a specified age and sometimes after completing a minimum period of service (chart 5). Nearly 55 percent of participants in medium and large employer pension plans could begin receiving reduced early retirement benefits at ages 55–59 after 10 years of service or less.

During limited "window periods," employers may offer enhanced retirement benefits to encourage early retirement to reduce the size of their work force. Cash bonuses, additional age and service credits, and continued insurance benefits may be offered to retire early.

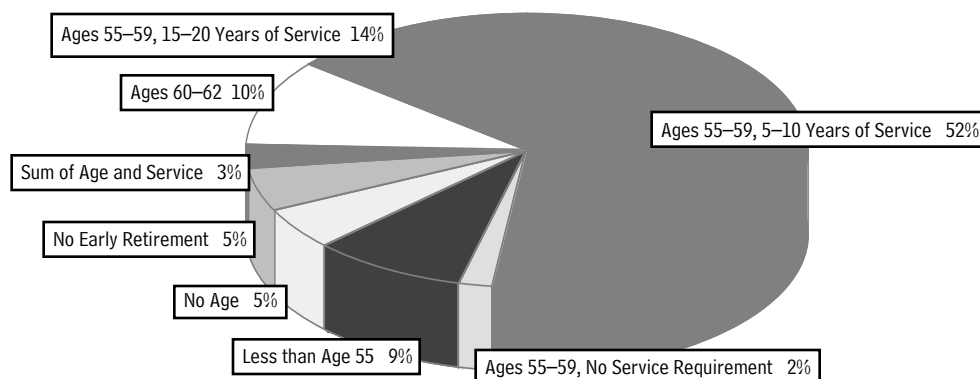
## Social Security

Some analysts argue that the structure of Social Security

<sup>11</sup> It is important to note, however, the trend toward so-called "hybrid" plans such as cash balance plans in which attributes of both traditional defined benefit and defined contribution plans exist. For more detail, see Sharyn Campbell, "Hybrid Retirement Plans: The Retirement Income System Continues to Evolve," EBRI Special Report SR-32/ Issue Brief no. 171 (March 1996).

<sup>12</sup> A career-average plan instead of a final-salary plan substantially reduces this effect (Clark and McDermid, 1988). All years of earnings are counted in the career average plan. In a final-salary plan, early years are dropped from the averaging period so the salary average rises more rapidly and pension accruals increase more rapidly with continued employment.

Chart 5  
**PERCENTAGE OF PARTICIPANTS IN DEFINED BENEFIT PLANS SPONSORED BY MEDIUM AND LARGE PRIVATE ESTABLISHMENTS, BY PROVISION FOR EARLY RETIREMENT, 1993**



Source: U.S. Department of Labor, 1995.

Note: All age groups may require a minimum service period.

benefits creates incentives for early retirement (Betley, 1990). The Social Security benefit received at retirement depends on age and earnings received in the highest-paid years of work. At age 62, covered workers can elect to receive 80 percent of the full retirement benefit available at age 65. For each month after age 62 that a worker postpones benefits, the reduction of 20 percent decreases 0.56 percent (or 8.3 percent of the age 62 benefit per year). In addition, the credit for delayed retirement will increase for each year the initial benefit is postponed up to age 70. Most studies have concluded that this benefit structure creates insufficient incentive to continue working.

Another disincentive to continue working is the “earnings test.” Social Security benefits of beneficiaries ages 65–69 are reduced by one dollar for every three dollars of earnings that exceeds an annual limit (\$12,500 in 1996). Retirees with substantial pension incomes, Social Security benefits, and savings may not have incentives to work anyway, and analysts believe that the earnings test by itself has a limited effect on work effort. However, a relatively small group of retirees (about 2 percent of retirees ages 65–69) appear to limit their work effort to avoid losing Social Security benefits. These people are most likely to increase their hours of work as a result of a change in the earnings test (Leonesio, 1990).<sup>13</sup>

The Social Security Amendments of 1983 will increase the normal retirement age incrementally from 65 to 67 by the year 2027, reduce the early retirement

benefits payable at age 62 from 80 percent of the full retirement benefit to 70 percent, and increase the credit for delayed retirement by one-half of one percentage point every other year, or from 3 percent to 8 percent per year after the year 2007. Although these changes make the Social Security benefit formula actuarially more fair, analysts have estimated that they are of insufficient magnitude to have a major effect on retirement decisions (Fields and Mitchell, 1987).

## Previous Literature

### Retiree Health Insurance and Early Retirement

Until recently, research on the effects of retiree health insurance on the decision to retire had not been examined. This is an area of increasing significance because of rising health care costs for retirees, the uncertain future of Medicare, and increased life expectancy. In general, results from the studies suggest that individual retirement decisions are strongly responsive to the availability of retiree health insurance.

Hurd and McGarry (1993) examined the retirement intentions of current workers, as opposed to the actual retirement patterns of individuals who already had retired. Specifically, this study examined the effect of the availability of retiree health insurance on the probability that a full-time worker will be working full

<sup>13</sup> Honig and Reimers (1989) found that a strong case cannot be made for either retaining or eliminating the retirement test when evaluating labor supply distortions and income distributions.



---

time beyond age 62. Using data from the 1992 Health and Retirement Study, workers in the survey were asked on a scale of 0 to 100 what the chances are that they would be working full time after they reached age 62 and age 65. Few studies on retirement behavior have used data on *prospects* for work change. Most studies focus on retired workers and how they responded, retrospectively, to various factors affecting the retirement decision. The study found that the availability of retiree health insurance that was at least partially funded by the employer reduces the probability between 18 percent and 24 percent that a worker would be working full time beyond age 62.

Karoly and Rogowski (1994) analyzed the effect of the availability of postretirement health insurance on early retirement behavior. Limiting the study to men, they found that the probability of retiring early would increase 50 percent, or approximately 9 percentage points. They also found evidence that the availability of health insurance coverage in addition to employer-provided insurance increased the likelihood of early retirement. This source of insurance was usually through the wife's employer. This study suffers from a number of shortcomings that may have affected the results.<sup>14</sup>

Madrian (1994) found that individuals with retiree health insurance retired between 5 and 16 months earlier than those without retiree health insurance, with most of the results occurring at about one year. This study also found that the probability of retiring before age 65 was between 7 and 15 percentage points higher for individuals with retiree health insurance. This study also suffers from a number of

shortcomings. An attempt is made to control for participation in a pension plan, but the results are inconclusive. While Madrian can observe the actual retirement behavior of a group of retirees, some of the retirees in the sample have been retired for as many as 15 years and must remember their health insurance and pension status at the time of retirement. As a result, the study must infer that what individuals refer to as private health insurance through a former employer is in fact retiree health insurance. In addition, the data include pension and Social Security wealth, but they are unclear how these data were used in the analysis.

Gustman and Steinmeier (1994) use a life-cycle model of retirement that incorporates the value of retiree health benefits and also includes information on pension accruals. They find that employment-based health benefits lowered male retirement age by approximately 1.3 months. As the authors point out, their life-cycle model approach may tend to underestimate the effect of retiree health insurance on withdrawal from the labor force.

Finally, Gruber and Madrian (1995) take a different approach than the previous studies. They examine the effect of state and federal mandates to continue coverage on the decision to retire.<sup>15</sup> These mandates allow individuals to continue purchasing health insurance through a previous employer at group rates. While this health insurance coverage is technically not considered retiree health insurance, it does benefit individuals by allowing them to purchase health insurance at a group rate. Typically, health insurance purchased directly from an insurance company will be

---

<sup>14</sup> First, the study does not use actual reported data on retiree health insurance. Instead, the availability of retiree health insurance is imputed based on firm size, industry, and region. As a result, the estimated retirement effects of retiree health insurance may be overestimated because firm size and industry may be highly correlated with retirement decisions for reasons other than health insurance, such as pension plan provisions. Second, the results may be overstated because the study does not take into account accumulated pension or Social Security wealth. Defined benefit plans may contain strong economic incentives to retire early. Because this study does not capture the influence of these types of plans, the effect of retiree health insurance may actually represent the combined effect of retiree health benefits and pension

benefits. While the study does attempt to control for pension eligibility, the ability to capture the effects of pension eligibility on early retirement is limited by the fact that pension eligibility is missing for 26 percent of the sample. Third, the study is not able to control for union status. Union members are typically eligible for additional retirement benefits at age 60 or age 62 to supplement their income until they reach full Social Security eligibility.

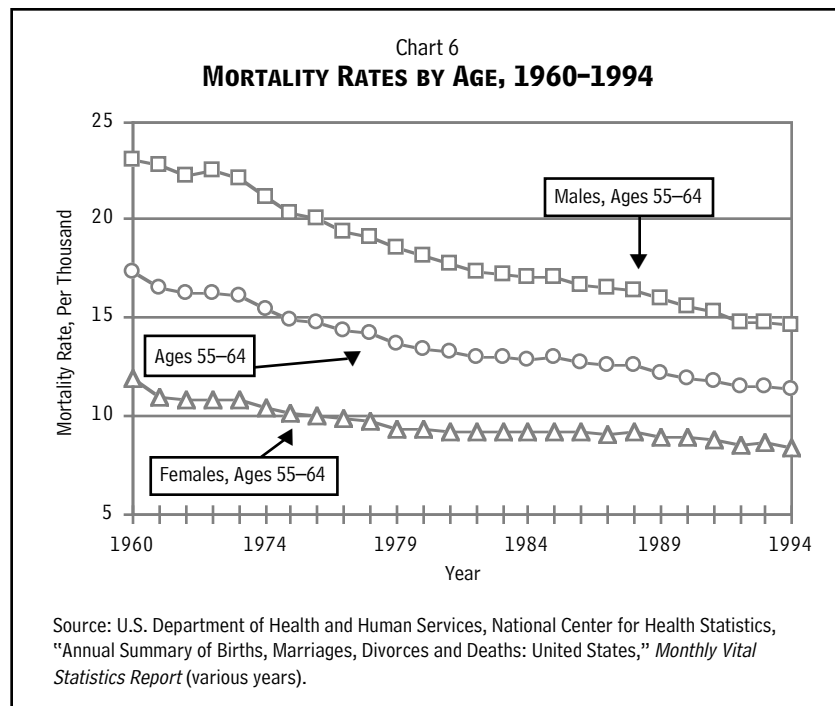
<sup>15</sup> Because COBRA does not apply to employers with 20 or fewer workers, a number of states have enacted COBRA-type continuation of coverage mandates that apply only to the small group market.

more expensive than health insurance purchased through an employer, especially for older individuals who are not eligible for Medicare. The implicit group rate subsidy may allow an

individual to continue health insurance coverage after retiring, in effect, encouraging early retirement, especially if they do not qualify for Medicare benefits. This study found that the probability of retiring increases 32 percent (2.2 percentage points) for each additional year of continuation of coverage.<sup>16</sup> However, the study may overestimate the effects of continuation of coverage on retirement, if individuals are using continuation of coverage benefits as a bridge to future employment, as opposed to a bridge to Medicare eligibility. In fact, the study finds that approximately 16 percent of the retirement effect is accounted for by job changes.

## Health Status and Early Retirement

Most researchers attribute the increased rate of early retirement to greater preferences for leisure and the increasing availability of Social Security and other pension income. Lower mortality rates and increased life expectancy suggest that retirees are becoming healthier. For example, the mortality rate among individuals ages 55–64 was 17.4 per thousand in 1960 (chart 6). By 1994, the mortality rate had fallen to 11.4 per thousand. The decline has been even more pronounced among males than among females. Nonetheless, reduced mortality rates may not improve individuals' willingness or ability to work. One hypothesis argues that more people are left



disabled as medical advances save them from what were once fatal illnesses. Some researchers suggest that increasing disability leading to labor force withdrawal explains part of the trend toward

early retirement. However, technological innovation also may allow disabled individuals to maintain employment assuming employment opportunities exist for individuals in older age cohorts.

While most cases of early retirement decisions appear to be voluntary, some may be motivated by health problems. For example, Gordon and Blinder (1980) found that poor health increased the probability of retirement between 14 and 18 percentage points, with the largest effect for workers ages 62–64. Gustman and Steinmeier (1986) also found the greatest effects for workers ages 62–64, with a 31 percent increase in the probability of being retired for that age group. Burtless and Moffitt (1985) found that individuals in poor health were predicted to retire 1.1 years earlier than individuals reporting normal or above-average health. While many studies do find a causal link between health status and retirement behavior, Quinn (1991) found that the proportion of retirees citing poor health as an important reason for retiring has declined over time.

Changes in mental health over a worker's lifetime also may affect the decision to retire early. One study found that symptoms of poor mental health appeared to be an important determinant of participation in the labor force (Mitchell and Anderson, 1989). This result may be explained by the low quality of economic and physical health measures in the data. While health is no doubt an important factor in the retirement decision, some researchers believe that other factors are more important than retirees seem to indicate (Sammartino, 1987). For example, Parsons (1980) finds

<sup>16</sup> The authors limited their sample to males between the ages of 55 and 64. Individuals were defined as being retired if they reported being retired at the time of the survey (March) and they had worked at least one week during the previous year. Almost 7 percent of the sample was defined as retired.

---

that the increased generosity of welfare alternatives to work, such as the Social Security disability program, is largely responsible for the decreasing labor force participation rate of older males. Individuals may justify early retirement by reporting failing health, especially when they have the means to stop working. In addition, retirees may cite poor health as the cause of their retirement if their health status qualifies them for disability benefits (Parsons, 1982). In fact, empirical evidence suggests that labor supply models are sensitive to the type of health measures used (Bound, 1991). Health seems to play a stronger role in retirement decisions when self-reported health status is used. When objective health measures are used in the analysis, health plays a smaller role, while economic factors play a relatively larger role.

## Social Security and Early Retirement

The effect of the Social Security program on retirement behavior has been the focus of a vast amount of research. This research has been reviewed in Danziger et al. (1981), Mitchell and Fields (1982), Hurd (1990), and Quinn et al. (1990). In general, the research can be categorized into two areas of concentration: an examination of changes in the Social Security program over time on retirement behavior and the effects of the current state of the program on labor force behavior. From a review of the research, one could conclude that there is considerable disagreement on the effect of Social Security on retirement behavior. For example, Burkhauser (1979) found that Social Security benefits encouraged workers to reduce their hours of work or completely withdraw from the labor force. Alternatively, Blinder et al. (1980) claimed that the Social Security program often provided incentives to work, which either canceled or outweighed the disincentives to work, despite the large peaks in the distribution in retirement ages at ages 62 and 65.<sup>17</sup> One reason for the conflicting conclusions is the definition of retirement. Many researchers have used different definitions of retirement in their analyses. As

Hurd (1990) points out, researchers have defined retirement as permanent withdrawal from the labor force, self-assessed retirement, sudden reduction in work hours, and departure from a career job. Another reason is that it is difficult for models to untangle the competing influences of many factors on retirement behavior.

## Pension Plans and Early Retirement

Gustman, et al. (1994) segment the research for the provision of employment-based pension plans into three categories: worker motivations for demand of a pension plan; employer motivation for providing a pension plan; and labor market outcomes influenced by pension plans. Workers' demand for pensions can be explained by a number of factors, with one of the primary factors being the tax preference given to pension plans. Employer motivations include the regulation of productivity, turnover, and retirement. Specific research can be categorized into studies on mandatory retirement, optimal retirement age, incentive provisions in pension plans, and involuntary retirement (Quinn et al., 1990).

Currently, researchers generally agree that pension plans exert a significant influence on individual retirement decisions (Quinn, et al., 1990). There is an emerging consensus that older workers respond to retirement incentives by leaving jobs and by leaving the labor market as well; however, the magnitude of the effect is still a subject of debate. Many researchers believe that the effects of large pension plans on retirement behavior may be overestimated and that the effect is actually picking up the influence of competing factors, mainly Social Security. Hurd (1990), Quinn, et al. (1990), and Gustman, et al. (1994) provide summaries of the vast early pension research on retirement behavior. In addition, recent studies by Lumsdaine, Stock, and Wise (1994, 1997b) have found that age-specific retirement

---

<sup>17</sup> The peak at age 62 exists among workers who do not have a special pension provision for retirement at age 62, and it did not appear until after the Social Security age 62 provisions were introduced in 1961 (Hurd, 1990).

Table 1  
**EXPECTED RETIREMENT PATTERNS, WAGE AND SALARY WORKERS, AGES 51-61, 1992**

	Stop Working	Never Stop Working	No Thought Given	No Current Plans; Continue As Is	Work Fewer Hours	Change Kind of Work	Work for Self Other Plans
Total	24%	7%	37%	6%	16%	9%	1%
Age							
51	18	6	44	6	13	12	0
52	19	7	41	4	17	10	1
53	21	4	43	5	15	9	1
54	22	6	39	7	17	9	1
55	24	6	40	7	14	8	0
56	27	7	35	5	15	8	1
57	24	8	37	6	16	8	2
58	26	8	32	7	19	6	1
59	25	10	33	8	15	9	1
60	29	4	32	4	18	10	2
61	31	9	28	6	20	6	1

Source: Employee Benefit Research Institute estimates from the 1992 Health and Retirement Study, Wave 1.

rates are highly related to pension plan provisions, changes in a private pension plan could have very significant effects on retirement, and Social Security changes will have a minimal effect on retirement patterns for workers with defined benefit plans.

## Retirement Patterns

Early economic research addressing the determinants of retirement

interviewed retirees to examine why they retired when they did (Quinn, et al., 1990). Researchers gathered subjective responses and were forced to conclude that retirement incentives were not a factor because they were rarely mentioned. As a result, modern research has focused on objective measures of retirement behavior by focusing on how retirees behaved. Overall, most recent research shows that economic incentives to retire play an important role in retirement decisions.

Another way to explore whether economic incentives play a role in retirement is by examining the workers' intended retirement patterns. With the exception of Hall and Johnson (1980), Anderson et al. (1986), Holtmann et al. (1994), and Hurd and McGarry (1993), there is little recent research focusing on a worker's *expected* retirement patterns. Employers and policymakers are interested in reliable forecasts of future retirement patterns because they are important in formulating public policy. The Health and Retirement Study (HRS) allows researchers to examine the role of the economic incentives of employee benefits on retirement patterns. This remainder of this section will examine data from the HRS.

## Health and Retirement Study

This study, originally conducted in 1992, is a national longitudinal study focusing on individuals born between the years 1931 and 1941. As a result, the age-eligible population was between the ages of 51 and 61 at the beginning of the study. A total sample of more than 9,000 age-eligible respondents were interviewed in 1992, and they will be followed and re-interviewed in future years to study their retirement patterns.<sup>18</sup> In addition, the survey collected data on demographics, physical health, housing and mobility, family structure, current and past employment, retirement plans, income, and insurance.

Workers were asked a series of questions about their anticipated retirement patterns, such as whether they planned to stop working altogether, never stop working, continue as is, work fewer hours, or change the kind of work.<sup>19</sup> Twenty-four percent of those workers surveyed expected to stop working altogether at some point in time; 7 percent planned never to stop working; 37 percent had not given much thought to their work plans; 6 percent planned to continue working as they were and had no current plans to make any changes; 16 percent planned to work fewer hours at some point in time; 9 percent planned to change the kind of work they were doing; and 1 percent planned to become self-

<sup>18</sup> The spouses of the age-eligible individuals were also interviewed in the survey, even if the spouse was not born between 1931 and 1941. We do not include spouses who are not age-eligible in the analysis in this Issue Brief.

<sup>19</sup> Workers were allowed to choose all of the options that applied. In our analysis, we do not allow workers to report more than one option. For example, if a worker reported that he or she planned to stop working, then that answer took precedent over all other options. The distribution of the reported answers did not change significantly after restricting the choice of options.

Table 2  
**AGE AT WHICH WORKERS PLAN ON STOPPING WORK OR REDUCING WORK HOURS,  
 BY OCCUPATION AND UNION STATUS, WAGE AND SALARY WORKERS AGES 51-61 WHOSE INTENTIONS  
 WERE TO STOP WORK OR REDUCE WORK HOURS, 1992**

Age	Stop Work Altogether					Work Fewer Hours				
	Total	White collar	Blue collar	Union	Nonunion	Total	White collar	Blue collar	Union	Nonunion
Before age 55	2%	2%	3%	3%	2%	4%	3%	4%	4%	3%
55	4	5	3	6	3	8	10	6	10	7
56	2	3	1	3	2	3	3	3	3	3
57	2	2	2	3	2	3	3	3	3	3
58	3	3	2	3	3	3	4	3	3	3
59	3	3	3	4	2	2	3	2	2	2
60	10	11	9	11	10	10	12	7	9	10
61	2	3	1	3	1	2	3	1	2	2
62	45	40	51	44	45	39	35	47	42	39
63	3	3	4	4	3	2	2	1	1	2
64	1	1	1	1	1	1	1	1	1	1
65	22	23	21	16	26	21	21	23	18	23
After age 65	2	2	1	1	2	3	4	2	2	3

Source: Employee Benefit Research Institute tabulations of the 1992 Health and Retirement Study, Wave 1.

employed (table 1).<sup>20</sup>

Planned retirement patterns vary significantly by age. Older workers are more likely than younger workers to plan to stop working altogether or work fewer hours at some point in time, while younger workers are more likely than older workers to have not given much thought to retirement. Of those age 51, 18 percent planned to stop working altogether, while 44 percent had not given any thought to their work plans. In contrast, 31 percent of those age 61 planned to stop working, while 28 percent had not given any thought to their work plans. It is interesting that such a large percentage of 61-year-olds had not even focused on withdrawal from the labor force.

Among workers who expect to stop working altogether, 44.6 percent planned to stop working at age 62 (table 2). An additional 22.1 percent planned to stop working at age 65. These age breaks are not surprising as they correspond to the eligible ages for early Social Security benefits and full Social Security benefits. With

respect to workers who planned to reduce their hours of work, 39.3 percent planned to make that change at age 62 and an additional 21.4 percent planned to make the change at age 65.

Age of retirement (as defined by complete withdrawal from the labor force) and the age at which workers will begin their gradual departure from the labor force can be influenced by a number of factors. Table 2 shows how work plans vary across occupation and union membership. With respect to workers who plan to stop working altogether, blue collar workers are more likely than white collar workers to plan to stop working at age 62, while white collar workers are more likely to plan to stop working at ages 60 and 65. For those workers planning on gradually leaving the labor force by reducing their hours of work, this gradual departure from work will occur at earlier ages for white collar workers than for blue collar workers. In addition, union workers are almost always more likely than nonunion workers to either stop working altogether or reduce their hours of work at age 62 or earlier.

Participation in a pension plan and the type of pension plan can be an important determinant of when and how a worker withdraws from the labor force. We would expect workers with pension plans to retire earlier than those not participating in a pension. In fact, participants in a pension plan are more likely to expect to retire early than nonparticipants (table 3). Among nonparticipants, 12 percent expected to retire before age 65, while among participants, 21 percent expected to retire before age 65.

Among those workers participating in a pension plan, those with a primary defined benefit plan were

<sup>20</sup> Two additional questions on expected retirement patterns also were asked in the study. Respondents were asked about the chances that they would be working full time after reaching ages 62 and 65. Answers were ranked from 0-10, with 0 representing "absolutely no chance" and 10 representing "absolutely certain." While we cannot determine the exact retirement pattern from these questions (we do not know whether these individuals are planning to work part time or not work at all), these questions were used to confirm the relatively large percentage of workers ages 51-61 who had not given any thought to retirement. We found that most of those individuals were absolutely certain that they would be working full time once they reached age 62. However, the majority also reported that there was absolutely no chance that they would be working full time once they reached age 65.

Results from the Employee Benefit Research Institute Retirement Confidence Survey (RCS) also confirm that many individuals have not given much thought to retirement. According to the 1996 RCS, 33 percent of retirees had given "a little thought" to their own retirement before they retired (See Yakoboski and Schifflbauer (1997) for more information about RCS).

Table 3  
**EXPECTED RETIREMENT PATTERNS, BY PENSION PLAN PARTICIPATION RATE AND TYPE OF PENSION PLAN,  
WAGE AND SALARY WORKERS, AGES 51–61, 1992**

	Total	Stop Working Before Age 65	Stop Working After Age 64	Never Stop Working; Continue As Is	No Thought Given	Work Fewer Hours	Change Kind of Work; Work for Self; Other Plans
Ages 51–61							
Total	100%	18%	6%	13%	37%	16%	10%
Non Participants	100	12	4	18	45	15	6
Participants	100	21	6	10	34	17	12
Primary defined benefit	100	23	7	10	32	17	12
With supplemental							
defined contribution	100	24	6	8	30	18	14
without supplemental							
defined contribution	100	23	7	11	33	16	12
Primary defined contribution	100	18	6	11	36	19	10
Ages 51–55							
Total	100	17	4	12	41	15	10
Nonparticipants	100	11	2	18	50	13	6
Participants	100	20	5	9	37	17	12
Primary defined benefit	100	22	5	8	36	16	13
with supplemental							
defined contribution	100	22	4	7	35	17	14
without supplemental							
defined contribution	100	22	5	9	36	16	13
Primary defined contribution	100	16	6	11	39	18	11
Ages 56–61							
Total	100	20	7	14	33	17	9
Nonparticipants	100	13	6	18	40	16	6
Participants	100	23	8	11	30	18	11
Primary defined benefit	100	24	9	11	27	17	11
with supplemental							
defined contribution	100	28	10	8	23	19	13
without supplemental							
defined contribution	100	23	8	13	29	16	11
Primary defined contribution	100	20	6	11	33	20	10

Source: Employee Benefit Research Institute tabulations of the 1992 Health and Retirement Study, Wave 1.

more likely to expect to retire before age 65 (23 percent) than individuals whose primary pension plan was a defined contribution plan (18 percent). Surprisingly, even among workers ages 56–61 with a primary defined benefit plan combined with a supplemental defined contribution plan, 23 percent still had not given any thought to their future work plans.

While participation in a pension plan and the type of pension plan are likely to affect workers' retirement patterns, the design of the pension plan and the expected benefits also may influence retirement patterns. Table 4 contains data on length of participation, expected benefits, and benefit eligibility for those wage and salary workers who reported their primary pension plan as a defined benefit plan. In general, workers who have been participating in their pension plan longer are more likely to expect to retire before age 65 than other workers.<sup>21</sup> The exception occurs for those workers with

30 or more years of participation in a defined benefit plan. These workers tend to be older than the workers with fewer years in the plan, may be better able to comprehend the value of their accrued pension benefits from additional years of service, and may realize that additional money is needed to live comfortably in retirement.<sup>22</sup> In addition, the other difference between workers with different years of participation in their pension plan occurs with respect to whether they have given their retirement any thought. The data indicate

<sup>21</sup> *Tenure patterns are obviously related to age. A recent EBRI study found that the median tenure for males ages 35–44 was 6 years, compared to 12 years for males ages 55–64. See Paul Yakoboski, "1996 Data on the Mobility of American Workers: Males More Mobile, Females Stable," Preliminary EBRI Study (January 1997).*

<sup>22</sup> *The choice of retirement age is determined by many competing factors. A more rigorous examination of the data is needed to sort out the relative contributions of these factors. A statistical analysis of this type is beyond the scope of this Issue Brief.*

Table 4  
**EXPECTED RETIREMENT PATTERNS, BY PENSION PLAN CHARACTERISTICS, WAGE AND SALARY WORKERS  
WITH PRIMARY DEFINED BENEFIT PLAN, AGES 51–61, 1992**

	Total	Stop Working Before Age 65	Stop Working After Age 64	Never Stop Working; Continue As Is	No Thought Given	Work Fewer Hours	Change Kind of Work; Work for Self; Other Plans
Total	100%	23%	7%	10%	32%	17%	12%
Years Participating in Plan							
1–9	100	16	9	12	39	16	8
10–19	100	19	7	9	33	18	14
20–24	100	27	7	9	30	17	11
25–29	100	33	4	7	24	17	15
30 or more	100	30	3	8	25	17	17
Expected Benefits							
Percentage of pay							
0–59	100	22	6	6	31	18	19
60–69	100	29	8	8	16	16	24
70–79	100	30	2	9	17	24	19
80–100	100	21	4	11	32	26	6
Annual amount per year							
\$0–\$2,500	100	22	14	10	31	16	6
\$2,501–\$10,000	100	25	7	8	31	19	11
\$10,001–\$50,000	100	28	6	7	27	17	15
\$50,000–\$250,000	100	28	6	17	28	11	11
Lump-sum distribution	100	17	6	14	28	16	19
Don't know	100	19	7	13	39	14	9
Earliest Age Eligible for Full Benefits							
Before age 55	100	30	4	7	27	14	19
55–59	100	27	3	9	21	21	19
60–64	100	30	5	8	30	16	10
65 and older	100	12	12	12	40	15	10
Don't know	100	18	5	12	43	14	7

Source: Employee Benefit Research Institute tabulations of the 1992 Health and Retirement Study, Wave 1.

that, as years of plan participation increase (worker's age), more workers have thought about their retirement expectations. As a result, years of participation may not be an indicator of expected retirement patterns as much as it is an indicator of rational decision making that occurs with age.

Workers who reported a defined benefit plan as their primary pension plan (41 percent of the sample) were able to report their expected benefits one of three ways: as a percentage of pay at retirement, as an annual dollar amount per year, and as a lump-sum distribution. More than 45 percent reported an annual dollar amount per year, while 15.6 percent reported their expected benefits as a percentage of pay, and 3.1 percent reported the lump-sum distribution amount that they expected to receive. More than 36 percent reported that they did not know how much to expect in retirement benefits. Among those workers who reported their expected annual replacement rate, the data indicate that as that expected replacement rate increases, the probability of expecting to retire before age 65 increases. Twenty-two percent of workers with an expected replacement rate below 60 percent expected to retire early, compared with

29 percent for those in the 60 percent to 69 percent replacement range, and 30 percent for those in the 70 percent to 79 percent replacement range. Workers with an expected replacement rate of 80 percent or above were least likely to expect to retire early. This may be a statistical inaccuracy as there were very few workers in this category. With respect to workers who reported the annual expected benefit in dollars, again, as the expected benefit level increases, the percentage expecting to retire early increases. Workers expecting a lump-sum distribution and those not knowing what to expect were least likely to expect to retire before age 65. Some workers are able to receive full retirement benefits from their defined benefit plan before age 65. The data indicate that workers who could receive full retirement benefits before age 65 were more likely to expect to retire before age 65 than workers who were not eligible for full retirement benefits until age 65.<sup>23</sup>

As mentioned above, defined contribution plans

<sup>23</sup> The Health and Retirement Study uses a combination of actual responses and bracketed responses. Brackets were used to reduce the size of the missing data problem in the measurement of financial variables that was due to

Table 5  
**EXPECTED RETIREMENT PATTERNS, BY PENSION PLAN CHARACTERISTICS,  
WAGE AND SALARY WORKERS WITH PRIMARY DEFINED CONTRIBUTION PLAN, AGES 51–61, 1992**

	Total	Stop Working Before Age 65	Stop Working After Age 64	Never Stop Working; Continue As Is	No Thought Given	Work Fewer Hours	Change Kind of Work; Work for Self; Other Plans
Total	100%	18%	6%	11%	36%	19%	10%
Years Participating in Plan							
1–4	100	15	7	11	41	17	9
5–9	100	15	4	11	35	25	10
10–19	100	21	6	9	37	15	12
20 or more	100	25	3	13	26	19	14
Employer Contributions							
Percentage of pay							
0	100	20	5	9	40	20	7
1%–3.99%	100	17	7	8	36	21	11
4%–6.99%	100	22	4	15	29	20	10
7% or more	100	15	8	7	35	21	15
Annual amount	100	22	6	8	32	23	10
Don't know	100	13	6	13	42	16	10
Employee Contributions							
Percentage of pay							
0	100	15	5	12	39	18	11
1%–3.99%	100	13	5	19	35	21	9
4%–6.99%	100	16	8	9	38	19	10
7% or more	100	20	6	9	29	25	10
Annual amount	100	22	3	11	39	16	9
Don't know	100	17	11	8	38	15	11
Amount Accumulated in Account							
\$0–\$2,500	100	12	6	12	42	19	8
\$2,501–\$10,000	100	19	6	11	36	21	7
\$10,001–\$50,000	100	16	3	10	37	23	12
\$50,000–\$250,000	100	22	5	13	26	18	16
\$250,001–\$1,000,000	100	39	15	23	8	8	8
Unknown	100	18	8	10	38	16	11

Source: Employee Benefit Research Institute tabulations of the 1992 Health and Retirement Study, Wave 1.

create different incentives than defined benefit plans. From the perspective of the employee, the defined contribution plan essentially is a savings vehicle that allows workers to accumulate capital for retirement. Defined contribution plans do not provide incentives to retire at any particular age; however, the value (and characteristics) of one's plan may be correlated with expected retirement patterns. For example, number of years of participation in a pension plan is strongly correlated to expected retirement plans. We find that workers with a longer length of participation in a

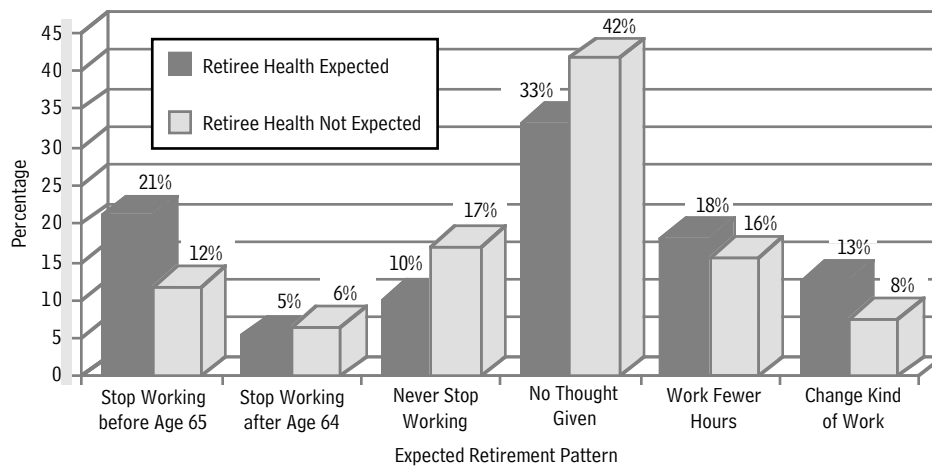
primary defined contribution pension plan are more likely than workers with a shorter plan tenure to expect to retire before age 65 (table 5). This may indicate that the longer a worker has been participating in a defined contribution plan, the more capital that has been accumulated that would allow a worker to retire early. When comparing workers with a primary defined benefit plan to those with a primary defined contribution plan, we find that those with a primary defined benefit plan are more likely to expect to retire before age 65 than workers with a primary defined contribution plan at all years of plan participation.

Relative employer and employee contributions also may play an important role in the decision to withdraw from the labor force. With respect to employer and employee contributions to a defined contribution plan, workers were able to report contributions either as a percentage of pay or as an amount per year. More than 57 percent reported their employers' contribution as a percentage of pay, while 13 percent reported an annual

*individuals who either did not know the exact amount of the variable in question or refused to give the exact amount. As a result, a more detailed breakdown of the expected benefits and lump-sum distribution data would be based on a much smaller sample and may not be reflective of the sample population. Previous research has found that households reporting exact data have a lower mean value than households reporting that they do not know (or refused to provide) the amount of their asset or debt (Juster and Suzman, 1995). In addition, the lump-sum distribution data are based on a very small sample even after the bracketed data are included. As a result, tabulations of this data may not paint a representative picture of the population.*



Chart 7  
**EXPECTED RETIREMENT PATTERN, BY RETIREE HEALTH INSURANCE AVAILABILITY, WAGE AND SALARY WORKERS, AGES 51-61, 1992, PRIMARY RESPONDENTS ONLY**



Source: Employee Benefit Research Institute estimates from the 1992 Health and Retirement Study, Wave 1.

dollar amount, and 30 percent did not know how much their employer contributed to their plan. Only 10 percent of the sample did not know how much they were contributing to their own defined contribution pension plan. In general, employee and employer contribution levels did not exhibit any strong correlation to expected retirement patterns. However, data on account balances indicate that workers with a higher accumulation of capital were more likely to expect to retire before age 65 than those with less capital accumulation. Approximately 30 percent of these workers did not even know how much they had accumulated in their accounts.

As mentioned above, there is evidence that the availability of retiree health insurance affects retirement patterns. Without the availability of retiree health insurance, retirees may not have access to health insurance until age 65. Data from the Health and Retirement Study indicate that workers expecting retiree health insurance from their employer are more likely to expect to retire before age 65 than workers who do not expect to have retiree health insurance (chart 7).

In any analysis of retirement patterns, it is important to consider the effects of employee benefits. It is just as important to consider the impact of other economic incentives. Employee benefits are just one factor among a multitude of factors that may explain retirement patterns. Employee benefits, pensions and health insurance alike, are a form of capital that individuals may or may not have access to during retirement. Individuals may have access to capital not related to employee benefits, that may have an effect on retirement patterns. These other resources need to be

considered. For example, housing equity has been shown to be a significant factor in explaining household wealth and the ability to withdraw from the labor force.<sup>24</sup>

Average household wealth and net worth are presented in table 6. In general, the data indicate that workers expecting to retire before age 65 have the highest net worth.<sup>25</sup> This is due to that fact that their combined housing and other equity is higher than the other groups. In addition, they appear to have accumulated more liquid assets, higher amounts of individual retirement account and Keogh assets, and other real estate.

Finally, the Health and Retirement Study can be used to examine the employee benefits of former workers. Out of the sample of individuals with a work history, the majority said they withdrew from the labor force either for health reasons (34 percent) or because they retired (18 percent) (table 7). When comparing individuals with and without pension plans, we see that those with a pension plan (especially those with a defined benefit plan) were more likely to report that they were retired than individuals without a pension plan at their former employer. In addition, we find that 53 percent of

<sup>24</sup> One survey found that the baby boom generation was saving at only one-third the rate necessary to maintain their level of consumption in retirement. However, when housing wealth was taken into account, the same study found that the baby boom generation was saving at 84 percent of the necessary rate needed to maintain their current consumption level in retirement (Bernheim, 1992 and 1993).

<sup>25</sup> The net worth for the 'change kind of work,...' group presented in table 6 is actually higher than the net worth of those expecting to retire before age 65. While this group represents 10 percent of our sample, their retirement patterns are not specific, therefore, they cannot be easily compared with the other workers.

Table 6  
**AVERAGE HOUSEHOLD NET WORTH, BY EXPECTED RETIREMENT PATTERN, WAGE AND SALARY WORKERS,  
 AGES 51-61, 1992, PRIMARY RESPONDENTS ONLY**

	Total	Stop Working Before Age 65	Stop Working After Age 64	Never Stop Working; Continue As Is	No Thought Given	Work Fewer Hours	Change Kind of Work; Work for Self; Other Plans
Total Net Worth	\$162,722	\$182,841	\$165,153	\$176,265	\$130,280	\$179,415	\$200,076
Housing Equity	54,764	61,267	65,585	52,782	48,860	56,391	59,021
Other Equity	107,958	121,574	99,569	123,483	81,420	123,024	141,055
Vehicles	11,092	13,840	10,968	10,120	9,933	11,153	11,957
Liquid Assets	17,381	19,569	15,621	15,086	13,375	22,539	23,633
IRA <sup>a</sup> and Keogh	14,155	17,890	16,019	11,405	10,711	18,712	15,346
Stocks and Mutual Funds	14,797	14,634	26,225	14,901	11,207	18,539	15,193
Business Equity	13,798	8,595	5,347	20,371	10,347	17,165	25,615
Bonds	1,626	1,395	773	2,304	1,390	1,519	2,646
Other Assets	6,259	7,335	8,637	5,119	4,549	7,319	9,004
Other Real Estate	31,681	40,234	18,650	47,080	22,766	29,885	40,288
Other Debts	2,830	1,918	2,672	2,902	2,857	3,806	2,627

Source: Employee Benefit Research Institute tabulations of the 1992 Health and Retirement Study, Wave 1.

<sup>a</sup>Individual retirement account.

those with an employment-based health plan from their own employer or union and 44 percent of those with retiree health insurance reported themselves as being retired, compared with 3 percent retired out of those in the uninsured population.

## Policy Implications

The Social Security Old-Age and Survivors Insurance (OASI)

program depends on obtaining sufficient revenue from active workers' payroll taxes to fund the benefits received by retired beneficiaries. Funding the program in the past was in large part effortless because of the relatively large number of workers per retiree. In 1950, there were 16.5 workers for every retiree covered by OASI. Recently, however, funding the Social Security trust fund has become more problematic. Today, the ratio of workers to retirees covered by the OASI program is 3.2, and it is expected to reach 1.9 by the year 2025. As a result, policymakers have taken numerous steps to ensure continued solvency of the program. For example, OASI payroll taxes imposed to finance the pay-as-you-go system were increased from 1.5 percent in 1950 to 5.35 percent today for both employers and employees. In addition, in anticipation of the baby boom cohorts' retirement, the full-benefit retirement age will rise incrementally from 65 today to 67 in 2027. Nevertheless, according to the Social Security trustees report, the Social Security trust fund surplus will be exhausted

by 2029.

Policymakers have been able to agree that reform of the Social Security program is necessary for its survival; however, the debate over options to reform Social Security is just beginning, and it is likely to be a long time before a consensus emerges.<sup>26</sup> It is likely that the short-term priority of policymakers will be Medicare, not Social Security. Unlike the Social Security program, which is expected to become insolvent in 2029, the Medicare trust fund is expected to be depleted by late 2000 or early 2001 (assuming changes are not made in 1997). The Medicare trust fund already is in a state of negative cash flow. In FY 1996, the Medicare trust fund lost \$4.2 billion. The financial condition of the Medicare program shares its roots with the financial condition of the Social Security program. Both programs are dependent on payroll tax revenue from a proportionately smaller number of workers per retiree, and both programs must deal with increased longevity. While the Social Security program will phase in a higher eligibility age for full benefits, the Medicare eligibility age remains at 65, and neither program has "indexed" its eligibility age to changes in life expectancy.

One reason for the declining worker-to-retiree ratio is the fact that early retirement is more common today than in the past. Because of U.S. policy toward encouraging a longer worklife, public- and private-sector retirement incentives are likely to diverge (Quinn, 1996b). According to the Bureau of Labor Statistics, the

<sup>26</sup> See Olsen (1996) for a comparison of alternative Social Security reform proposals.

Table 7  
**PENSION PLAN PARTICIPATION AND HEALTH INSURANCE STATUS AMONG NONWORKERS WITH PREVIOUS  
WAGE AND SALARY EMPLOYMENT BY REASON FOR LEAVING LAST EMPLOYER, AGES 51-61, 1992**

	Total	Poor Health/ Disabled	Retired	Laid Off/ Let Go	Quit	Business Closed	Family Care	Other
Total	100%	34%	18%	15%	12%	10%	7%	4%
No Pension Plan	100	34	33	19	17	13	9	5
Included in Pension Plan	100	34	38	11	5	6	3	2
Defined benefit	100	33	44	8	5	4	3	3
Defined contribution	100	37	21	16	9	7	6	3
Defined benefit and defined contribution	100	24	52	13	3	6	2	0
Total Private	100	27	33	13	10	7	5	3
Employment-based	100	27	37	13	9	7	4	3
own employer/union	100	29	53	9	4	3	0	1
spouse's employer/union	100	24	13	18	17	12	11	7
Retiree health	100	25	44	10	9	5	3	3
Other private	100	31	24	12	13	8	9	2
Total Public	100	62	5	11	7	9	3	3
CHAMPUS <sup>a</sup>	100	37	16	14	15	9	6	3
Medicare	100	80	3	6	4	5	1	2
Medicaid	100	60	1	14	5	12	4	4
Uninsured	100	33	3	28	12	11	8	5

Source: Employee Benefit Research Institute tabulations of the 1992 Health and Retirement Study, Wave 1.

<sup>a</sup>Civilian Health and Medical Program for the Uniformed Services.

normal retirement age for participants in defined benefit plans was younger than age 65 for 54 percent of the participants (chart 4), and 95 percent of the participants had an early-retirement provision (chart 5). In addition, some employers continue to tie eligibility for retiree health benefits with eligibility for defined benefit pension plans, allowing workers to retire before becoming eligible for Medicare benefits. Given these diverging retirement incentives, can we expect individuals to work longer? If workers continue to work longer, will they be employed in career jobs or in bridge jobs? Can we expect employers to change economic incentives to encourage individuals to work longer?

As technological innovation continues to replace labor, many employers may continue to offer early-retirement incentives to manage the size of their work force. Alternatively, technology may create new jobs that do not impose physical demands that would deter or prevent older individuals from continuing to participate in the labor force. As a result, the changing nature of work may result in increased work life. Because physical exertion is required on fewer jobs and a growing number of workers have the flexibility to choose their hours and the flexibility to telecommute, gradual retirement may become more practical. This also will give employers more options to match jobs with potential employees.

Results from the EBRI Retirement Confidence Survey (RCS) indicate that it may be quite difficult to reverse the trend toward early retirement.<sup>27</sup> Almost

50 percent of those retired indicated that they had retired earlier than they had planned to retire.<sup>28</sup> More than 40 percent retired when they planned to retire, while 6 percent worked longer than they planned to work. With respect to current workers, 46 percent plan to retire before age 65; however, 72 percent *want* to retire before age 65. In addition, 72 percent of workers oppose raising the normal retirement age in the Social Security program to age 70, despite understanding that the financial stability of the program will be in jeopardy once the baby boom generation reaches retirement. The most popular reform option among current workers was to invest a portion of the Social Security trust fund in the stock market. As a result, it is unlikely that current workers will support an increase in the normal retirement age (beyond age 67) in the Social Security program or in the Medicare program (beyond age 65) as long as they are expecting to retire before becoming eligible for benefits under these programs and as long as they believe that there are other options for reform.

The survey also found that 22 percent of current

<sup>27</sup> The Retirement Confidence Survey defined individuals as retired if they were not participating in the labor force.

<sup>28</sup> Of those individuals who retired earlier than they originally planned, 38 percent retired because of a health problem, 19 percent retired because of downsizing or other company changes, 13 percent accepted an early buy-out offer, 15 percent retired for other work-related reasons, and 17 percent retired for family reasons. This is consistent with the Health and Retirement Study, which found that 34 percent of those not working withdrew from the labor force because of health reasons.

*Future declines in the number of new entrants into the labor force may increase the demand for labor and lead employers to increase incentives for older workers to stay on the job longer.*

retirees reported a decline in their standard of living. Twenty-seven percent of retirees reported that their health had been worse than expected, resulting in 21 percent reporting that they were not prepared to cover their medical expenses. In addition, 19 percent reported unfulfilled expectations in terms of having enough money to pay for most of the recreational, entertainment, and travel pursuits they desired in retirement. If corporate downsizing is resulting in increasing numbers of workers retiring before they have the financial means to retire, public assistance programs such as Medicaid and Supplemental Security Income may experience additional financial pressures in the future. In addition, employers also may feel additional pressure to avoid offering early-retirement options in the future, and workers may not be as willing to accept early buyouts. In fact, the growing trend toward defined contribution plans may encourage deferral of retirement, as coverage periods increase, account balances grow, and workers begin to understand the benefits of leaving a defined contribution account intact for additional years. Furthermore, this may result in workers turning to bridge jobs as a means of preserving retirement benefits.

## Conclusion

Americans are living longer healthier lives; however, because Americans,

especially males, are permanently withdrawing from the labor force at earlier ages than in the past, financing of the Social Security and Medicare programs is becoming an increasing challenge. The Medicare trust fund already is in negative cash flow and is expected to be depleted in late 2000 or early 2001. The Social Security trust fund is projected to enter a state of negative cash flow in 2020, with depletion of the trust fund following in 2029. While the size of the federal budget as a percent-

age of GDP has not changed significantly in recent years, entitlements such as the Social Security and Medicare programs are accounting for an increasing proportion of the federal

budget (Quinn, 1996a). Given the changing demographics of the United States, these projected trends are not sustainable. The baby boom generation will start to withdraw from the labor force in 2011, 10 years after the projected depletion date of the Medicare trust fund. Hence, the projected trends are not even sustainable in the short run.

Even though the normal retirement age for Social Security benefits is 65, and most individuals do not qualify for Medicare benefits before age 65, many Americans continue to withdraw from the labor force prior to age 65. Some analysts have concluded that employee benefits play a large role in the labor force withdrawal of older Americans.<sup>29</sup> Increased retirement income from public and private sources appears to have been the main cause of an increasing trend toward early retirement. Benefit provisions allowing early retirement may reflect employer and employee preferences for relatively short work lives rather than more frequent periods of leisure during a lengthier work life.<sup>30</sup> However, future declines in the number of new entrants into the labor force may increase the demand for labor and lead employers to increase incentives for older workers to stay on the job longer.

Changes to laws and regulations affecting early retirement have been proposed as a way to encourage

<sup>29</sup> Corporate downsizing also may have played a role in early retirement, but in many cases, workers are given early buy-outs and/or enhanced pension benefits to accept early retirement.

<sup>30</sup> One cost that may not have been adequately considered in this compensation arrangement may be the cost of health care in retirement. Until the proposal by the Financial Accounting Standards Board to require accrual accounting for the health insurance liability of retirees, many employers had not focused on the cost of their promises to provide this coverage. Some employers have ceased offering retiree health benefits, while many have continued to offer access to the insurance product concurrently requiring retirees to contribute an increasing share toward the cost of the insurance.

older workers to stay employed longer. However, reducing employer flexibility in structuring compensation may interfere with the ability of employers and employees to negotiate a compensation package that reflects changing needs over the course of a work life. Policymakers might want to enhance the ability to choose freely between retirement and work. Attempts to encourage a longer working life might be framed as an effort to encourage flexibility in retirement to supplement resources and account for unanticipated changes in resource needs.

## References

- Allen, Everett T., Jr., Joseph J. Melone, Jerry S. Rosenbloom, and Jack L. VanDerhei. *Pension Planning*. Seventh edition. Homewood, IL: Richard D. Irwin, Inc., 1992.
- Anderson, K., Richard V. Burkhauser, and Joseph F. Quinn. "Do Retirement Dreams Come True? The Effect of Unanticipated Events on Retirement Plans." *Industrial and Labor Relations Review* 39 (1986): 518–526.
- Beller, Daniel J., and Helen H. Lawrence. "Trends in Private Pension Plan Coverage." In John A. Turner and Daniel J. Beller, eds., *Trends in Pensions*. Washington, DC: U.S. Department of Labor, Pension and Welfare Benefits Administration, 1992.
- Bernheim, B. Douglas. *Is the Baby Boom Generation Preparing Adequately for Retirement? Technical Report*. Merrill Lunch & Co., Inc., 1992.
- \_\_\_\_\_. *Is the Baby Boom Generation Preparing Adequately for Retirement? Summary Report*. Merrill Lunch & Co., Inc., 1993.
- Betley, Charles. "Trends and Issues in Early Retirement." *EBRI Issue Brief* no. 103 (Employee Benefit Research Institute, June 1990).
- Blinder, Alan S., Roger H. Gordon, and Donald E. Wise. "Reconsidering the Work Disincentive Effects of Social Security." *National Tax Journal* (December 1980): 431–442.
- Bound, John. "Self-Reported versus Objective Measures of Health in Retirement." *Journal of Human Resources* (Winter 1991): 106–138.
- Burkhauser, Richard V. "The Pension Acceptance Decision of Older Workers." *Journal of Human Resources* (Winter 1979): 63–75.
- Burtless, Gary, and Robert A. Moffitt. "The Joint Choice of Retirement Age and Post-Retirement Hours of Work." *Journal of Labor Economics* 3 (1985): 209–236.
- Clark, Robert L., and Ann A. McDermed. "Pension Wealth and Job Changes: The Effects of Vesting, Portability, and Lump Sum Distributions." *The Gerontologist* 28 (August 1988): 524–532.
- Danziger, Sheldon, Robert Haveman, and Robert Plotnick. "How Income Transfer Payments Affect Work, Savings, and the Income Distribution: A Critical Review." *Journal of Economic Literature* (September 1981): 975–1021.
- Employee Benefit Research Institute/The Gallup Organization, Inc. "Public Attitudes on Medicare and Retiree Health, 1993." *Summary Report G-51* (Employee Benefit Research Institute, November 1993).
- Fields, Gary S., and Olivia S. Mitchell. *Retirement, Pensions, and Social Security*. Cambridge, MA: MIT Press, 1984.
- \_\_\_\_\_. "Restructuring Social Security: How Will Retirement Ages Respond?" In Steven H. Sandell, ed., *The Problem Isn't Age: Work and Older Americans*. New York, NY: Praeger, 1987.
- Fronstin, Paul. "Sources of Coverage and Characteristics of the Uninsured: Analysis of the March 1996 Current Population Survey." *EBRI Issue Brief* no. 179 (Employee Benefit Research Institute, November 1996).
- Gordon, Roger H., and Alan S. Blinder. "Market Wages, Reservation Wages, and Retirement Decisions." *Journal of Public Economics* 14 (1980): 277–308.
- Gruber, Jonathan, and Brigitte C. Madrian. "Health-

- Insurance Availability and the Retirement Decision." *American Economic Review* (September 1995): 938–948.
- Gustman, Alan L., and Thomas L. Steinmeier. "Employer-Provided Health Insurance and Retirement Behavior." *Industrial and Labor Relations Review* (October 1994): 124–140.
- \_\_\_\_\_. "A Structural Retirement Model." *Econometrica* 54 (1986): 555–584.
- Gustman, Alan L., Olivia S. Mitchell, and Thomas L. Steinmeier. "The Role of Pensions in the Labor Market: A Survey of the Literature." *Industrial and Labor Relations Review* (April 1994): 417–438.
- Hall, A., and T. Johnson. "The Determinants of Planned Retirement Age." *Industrial and Labor Relations Review* 33 (1980): 241–254.
- Holtmann, Alphonse G., Steven G. Ullmann, Paul Fronstin, and Charles F. Longino, Jr. "The Early Retirement Plans of Women and Men: An Empirical Analysis." *Applied Economics* (June 1994): 591–601.
- Honig, Marjorie, and Cordelia Reimers. "Is It Worth Eliminating the Retirement Test?" *American Economic Review* (May 1989): 103–107.
- Hurd, Michael. "Research on the Elderly: Economic Status, Retirement, and Consumption and Saving." *Journal of Economic Literature* (June 1990): 565–637.
- Hurd, Michael, and Kathleen McGarry. "The Relationship Between Job Characteristics and Retirement." NBER Working Paper No. 4558 (December 1993).
- Juster, F. Thomas, and Richard Suzman. "An Overview of the Health and Retirement Study." *Journal of Human Resources* 30 (Supplement 1995) S7–S56.
- Karoly, Lynn A., and Jeannette A. Rogowski. "The Effect of Access to Post-Retirement Health Insurance on the Decision to Retire Early." *Industrial and Labor Relations Review* (October 1994): 103–123.
- Leonesio, Michael V. "The Effects of the Social Security Earnings Test on the Labor-Market Activity of Older Americans: A Review of the Evidence." *Social Security Bulletin* (May 1990): 2–20.
- Lumsdaine, Robin L., James H. Stock, and David A. Wise. "Retirement Incentives: The Interaction Between Employer-Provided Pensions, Social Security, and Retiree Health Benefits." In Michael D. Hurd and Naohiro Yashiro, eds., *The Economic Effects of Aging in the United States and Japan*. Chicago, IL: University of Chicago Press, 1997.
- \_\_\_\_\_. "Pension Plan Provisions and Retirement: Men, Women, Medicare, and Models." *Studies in the Economics of Aging*. Chicago, IL: University of Chicago Press, 1994.
- Madrian, Brigitte C. "The Effect of Health Insurance on Retirement." *Brookings Papers on Economic Activity* (1) (1994): 181–252.
- Mitchell, Jean M., and Kathryn H. Anderson. "Mental Health and the Labor Force Participation of Older Workers." *Inquiry* 26 (Summer 1989): 262–271.
- Mitchell, Olivia S., and Gary S. Fields. "The Effects of Pensions and Earnings on Retirement: A Review Essay." *Research in Labor Economics*. Vol. 5. Greenwich, CT: JAI Press, 1982.
- Olsen, Kelly. "Keeping Track of Social Security Reform Proposals: A Summary." *EBRI Notes* no 11, (November 1996).
- Parsons, Donald O. "The Decline in Male Labor Force Participation." *Journal of Political Economy* (February 1980): 117–134.
- \_\_\_\_\_. "The Male Labour Force Participation Decision: Health, Reported Health, and Economic Incentives." *Economica* 49 (February 1982): 81–91.
- Quinn, Joseph F. "The Nature of Retirement: Survey and Econometric Evidence." In Alicia Munnell, ed., *Retirement and Public Policy* (1991): 115–137.
- \_\_\_\_\_. "Entitlements and the Federal Budget: Securing Our Future." National Academy of Aging. Working Paper. May 1996a.
- \_\_\_\_\_. "The Role of Bridge Jobs in the Retirement Patterns of Older Americans in the 1990s." Paper presented at the annual research conference of the International Association for Research in Income and Wealth, August 16-23, Lillehammer, Norway, August 1996b.

- 
- Quinn, Joseph F., and Michael Kozy. "The Role of Bridge Jobs in the Retirement Transition: Gender, Race, and Ethnicity." *The Gerontologist* (June 1996): 363–372.
- Quinn, Joseph F., Richard V. Burkhauser, and Daniel A. Myers. *Passing the Torch: The Influence of Economic Incentives on Work and Retirement*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1990.
- Ruhm, Christopher J. "The Work and Retirement Patterns of Older Americans." *EBRI Issue Brief* no. 121 (Employee Benefit Research Institute, December 1991).
- Sammartino, Frank J. "The Effect of Health on Retirement." *Social Security Bulletin* (February 1987) 31–47.
- Skolnik, Alfred. "Private Pension Plans, 1950–74." *Social Security Bulletin* (June 1976): 3–17.
- U.S. Department of Labor. Bureau of Labor Statistics. *Employee Benefits in Medium and Large Private Establishments, 1993*. Washington, DC: U.S. Government Printing Office, 1995.
- Yakoboski, Paul, and Allen Schiffenbauer. "The Reality of Retirement Today: Lessons in Planning for Tomorrow." *EBRI Issue Brief* no. 181 (Employee Benefit Research Institute, January 1997).
- Yakoboski, Paul, and Celia Silverman. "Baby Boomers in Retirement: What are Their Prospects?" *EBRI Special Report SR-23 / Issue Brief* no. 153. (Employee Benefit Research Institute, July 1994).
- Yakoboski, Paul, et al. "Employment-Based Health Benefits: Analysis of the April 1993 Current Population Survey." *EBRI Special Report SR-24 / Issue Brief* no. 154 (Employee Benefit Research Institute, August 1994a).
- Yakoboski, Paul, et al. "Employment-Based Retirement Benefits: Analysis of the April 1993 Current Population Survey." *EBRI Special Report SR-25 / Issue Brief* no. 155 (Employee Benefit Research Institute, September 1994b).

**EBRI****EMPLOYEE  
BENEFIT  
RESEARCH  
INSTITUTE®**

# Issue Brief

© 1997.  
Employee  
Benefit  
Research  
Institute-  
Education  
and  
Research  
Fund.  
All rights  
reserved.

Established in 1978, the Employee Benefit Research Institute (EBRI) is the only private, nonprofit, nonpartisan, organization committed to original public policy research and education on economic security and employee benefits. Through its activities, EBRI is able to advance the public's, the media's, and policy makers' knowledge and understanding of employee benefits and their importance to the nation's economy. EBRI's membership represents a cross section of pension funds; businesses; trade associations; labor unions; health care providers and insurers; government organizations; and service firms.

The Employee Benefit Research Institute Education and Research Fund (EBRI-ERF) performs the charitable, educational, and scientific functions of the Institute. EBRI-ERF is a tax-exempt organization supported by contributions and grants.

The American Savings Education Council (ASEC) is a part of EBRI-ERF. ASEC is a coalition of over 200 private- and public-sector institutions. ASEC's goal is to make saving and retirement planning a vital concern of Americans and in the economic interests of employers. Partnership is open to any organization that shares this goal. Inquiries regarding ASEC should be directed to Don Blandin, (202) 775-9130; email to: [blandin@asec.org](mailto:blandin@asec.org); or on the World Wide Web at [www.asec.org](http://www.asec.org).

**EBRI Issue Briefs** are monthly topical periodicals providing expert evaluations of employee benefit issues and trends, including critical analyses of employee benefit policies and proposals. Each issue, ranging in length from 16–28 pages, thoroughly explores one topic. Subscriptions to *EBRI Notes* are included as part of EBRI membership or as part of an annual \$224 subscription to *EBRI Notes* and *EBRI Issue Briefs*. Individual copies of *Notes* and *Issue Briefs* are available for \$25 each, prepaid, by calling EBRI.

**Other EBRI publications include:** *EBRI Notes* is a monthly periodical providing up-to-date information on a variety of employee benefit topics. *EBRI's Washington Bulletin*, provides sponsors with short, timely updates on major developments in Washington in employee benefits. *EBRI Fundamentals of Employee Benefit Programs* offers a straightforward, basic explanation of employee benefit programs in the private and public sectors. *EBRI Databook on Employee Benefits* is a statistical reference volume providing tables and charts on private and public employee benefit programs and work force related issues.

Other activities undertaken by EBRI include educational briefings for EBRI members, congressional and federal agency staff, and the media; public opinion surveys on employee benefits issues; special reports; and policy studies.

Editorial Board

Publisher: Dallas L. Salisbury

Editor: Maureen Richmond

Layout and Distribution: Cindy O'Connor

**Subscriptions/Orders:** Direct subscription inquiries to EBRI Publications, (202) 659-0670; fax publication orders to (202) 775-6312. A complete list of EBRI publications are available on the World Wide Web at <http://www.ebri.org>.

**Change of Address:** EBRI, 2121 K Street, N.W., Suite 600, Washington, DC 20037, (202) 775-6311; fax number, (202) 775-6312; e-mail to [PublicationsSubscriptions@ebri.org](mailto:PublicationsSubscriptions@ebri.org).

**Membership:** Inquiries regarding EBRI membership and/or contributions to EBRI-ERF should be directed to EBRI President Dallas Salisbury or Director of Membership Deborah Milne, 2121 K Street, N.W., Suite 600, Washington, DC 20037, (202) 659-0670; e-mail to: [Dallas\\_Salisbury@ebri.org](mailto:Dallas_Salisbury@ebri.org) or [Deborah\\_Milne@ebri.org](mailto:Deborah_Milne@ebri.org).

Any views expressed in this publication and those of the authors should not be ascribed to the officers, trustees, members, or other sponsors of the Employee Benefit Research Institute, the EBRI Education and Research Fund, or their staffs. Nothing herein is to be construed as an attempt to aid or hinder the adoption of any pending legislation, regulation, or interpretative rule, or as legal, accounting, actuarial, or other such professional advice.

*EBRI Issue Brief* is registered in the U.S. Patent and Trademark Office  
ISSN: 0887-137X 0887-137X/90 \$ .50 +.50