Early Retirement Incentives

March 1995

Program Evaluation Division
Office of the Legislative Auditor
State of Minnesota

Program Evaluation Division

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OFFICE OF THE LEGISLATIVE AUDITOR
STATE OF MINNESOTA

Early Retirement Incentives

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March 14, 1995

Members
Legislative Audit Commission

Over the past decade, the Legislature has adopted several early retirement incentive programs whose primary aim is to save money by inducing public employees to retire early. In June 1994, the Legislative Audit Commission directed us to determine whether, in fact, the benefits of the programs have exceeded the costs.

Most public employers rated early retirement programs positively. But we found that many of the participants in state early retirement programs would probably have retired soon anyway and that, for most groups of employees, the programs' salary savings were probably less than the costs. We think that early retirement incentive programs can produce tangible net benefits for the state only if they are carefully designed and properly targeted.

We received the full cooperation of the Minnesota State Retirement System, the Public Employees Retirement Association, and the Teachers Retirement Association. We also were assisted by the staff of the Legislative Commission on Pensions and Retirement. This report was researched and written by Dan Jacobson and Elliot Long, with assistance from Carrie Meyerhoff.

Sincerely yours,

James R. Nobles
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Early Retirement Incentives

EXECUTIVE SUMMARY

In recent years, the Minnesota Legislature has offered a variety of early retirement incentives for public employees, including state, city, county, and school district employees. Early retirement incentives are designed to reduce salary expenses, avoid layoffs, or increase productivity. Supporters of early retirement incentives contend that the public saves money by inducing older, higher paid employees to retire and replacing them with lower paid workers or leaving the positions vacant. Critics argue that the benefits do not last long and question whether the benefits justify the costs.

Our study examines statewide early retirement incentives that have been used since 1980. It focuses on the costs and benefits of the early retirement incentive established in 1993, the most recent statewide incentive. We asked:

- **How have early retirement incentives been used in Minnesota? Who has participated in recent incentive programs? How did the 1993 incentive program affect the timing of retirements?**

- **What are the public costs of the 1993 incentive program?**

- **What are the public benefits of the 1993 incentive, including salary savings, layoffs avoided, and organizational benefits? How do salary savings compare with costs?**

- **Are early retirement incentives appropriately targeted and financed? What are the implications of demographic changes for early retirement incentives?**

To answer these questions, we analyzed data on retirement trends and costs from the three state retirement associations and the actuary for the Legislative Commission on Pensions and Retirement. We also surveyed and interviewed officials from state agencies, schools, cities, and counties.

RECENT EARLY RETIREMENT INCENTIVES

In recent years, the Legislature has established two types of early retirement incentives: (1) employer-paid health insurance until age 65 (when citizens become eligible for Medicare) and (2) higher pension payments. In 1990, 1991, and 1992, the state offered employer-paid health insurance until age 65 to eligible employees who retired between the ages of 55 and 65.

The 1993 incentive was offered to eligible employees in all state agencies and most counties, cities, and school districts.

In 1993, the Legislature established a more generous incentive that provided higher pensions and/or employer-paid health insurance until age 65. Participation was mandatory for state agencies, but was optional for counties and cities. School districts were required to offer the incentive to teachers, but could choose whether to offer the incentive to other staff.

The early retirement incentives offered in 1993 varied among employers and retirement plans. Eligible state employees covered by the General State Employees Retirement Plan could choose to: (1) continue their health insurance until age 65 or (2) receive a higher pension. This second option would increase a retiree's pension by about 15 to 19 percent. For example, a state employee who retired at age 65 under the 1993 incentive program (with 30 years of service and an average salary of $36,000) would receive a pension of $18,900, instead of the normal $16,200.

Eligible county, city, and school district employees covered by the Public Employees Retirement Plan could choose between these two incentives, provided they were both offered. Participating local governments could offer either incentive or both. Public school teachers covered by state or local teacher retirement funds received both higher pensions and employer-paid health insurance, though the pension increase was about 60 percent smaller than that received by other early retirees with the same salary history and years of service.

IMPACT OF THE 1993 INCENTIVE ON RETIREMENTS

The costs and benefits of early retirement incentives depend on the extent to which incentives cause employees to retire earlier than they otherwise would retire. For each of the three major public retirement funds, we compared the actual number of retirements which occurred during the year spanning the 1993 incentive with the "expected" number of retirements based on the experience of the preceding three years. Our estimates take into account changes in the number of employees and their age distribution. However, it is not possible to take into account other factors that might affect retirement rates. Thus, our estimates should be viewed as approximate. We estimate that:

- **Roughly one-half of employees who participated in the 1993 incentive program would have retired during the same year had the incentive not been offered.**

We also estimated how long retirees would have kept working had there not been an incentive. Given the high degree of uncertainty, we made high and low estimates of the time retirees would have kept working. We estimate that:

- **The 1993 incentive probably induced participants to retire an average of 0.5 years to 1.7 years earlier than they would have retired without the incentive.**

COST OF THE 1993 INCENTIVE

The public costs of the 1993 incentive include the liability incurred by the retirement funds to finance higher pensions and the cost to employers to finance health insurance. Our cost estimates are based on the difference in the present value of retirees' pensions with and without the incentive. We estimate that:

The 1993 incentive program probably cost over $100 million, or more than $25,000 per retiree.

- **The cost of the 1993 incentive is between $101 million and $132 million.**

These figures include about $82 million to $113 million in retirement fund costs attributable to the pension incentive. The range in cost reflects the uncertainty in estimates of how the incentive program affects the timing of retirements. In addition, the health insurance incentive will cost employers about $19 million. The proportion of cost directly paid by employers varies widely. Cities, counties, and schools will directly pay only 2 percent of the program's total costs for members of the Public Employees Retirement Association (PERA), whereas schools and colleges will pay about 32 percent of the incentive's cost for members of the Teachers Retirement Association. The reason that employers will pay such a small percentage of the cost for PERA members is that most employers offered the pension incentive but not the health incentive to PERA members. We estimate that:

- **The average cost per retiree under the 1993 incentive program is about $25,500 to $33,500.**

The cost per retiree is highest for school district teachers and administrators ($29,800 to $39,900), followed by state employees ($28,600 to $35,000), and city, county, and school district employees who are members of the Public Employees Retirement Association ($21,800 to $29,700). The cost is highest for teachers because they received both the pension and the health incentive. The main reason that the cost is lowest for PERA members is that their average salary is lower than the average salary of other public employees.

SALARY SAVINGS COMPARED WITH COST

One of the major objectives of early retirement incentives is to help employers save salary expenses. Early retirement incentives can provide salary savings if retirees are replaced with lower paid employees or retirees' positions are held vacant. The most that an early retirement incentive could save would be an employee's earnings between the time of early retirement and the time at which the employee would have otherwise retired.

We found that early retirees were replaced by lower-paid employees, but the average salary savings are considerably less than the average cost per retiree under the 1993 incentive program. Furthermore, overall salary savings could exceed total costs only if a high percentage of retirees' positions were kept vacant. We estimate that salary savings would exceed costs only if employers kept open more than 69 percent of the positions vacated by retiring PERA members. Similarly, 59 percent of state employee positions and 36 percent of TRA member positions would have to be left vacant in order for salary savings to equal the cost of the 1993 incentive program. These percentages are based on mid-range estimates of how much the 1993 incentive program affected the timing of retirements.

We reviewed employment trends for public employees and surveyed employers about whether they refilled retirees positions. We conclude that:

- **The overall public costs of the 1993 incentive program probably exceed the salary savings, although savings may be greater than costs where public employers need to make significant staff reductions.**

For most public employers, the cost of the 1993 incentive program probably exceeds the salary savings.

It is necessary to keep a high percentage of retirees' positions vacant in order for salary savings to exceed costs. However, employment trends suggest that this is unlikely in schools and counties. Eighty-three percent of public school teachers are in school districts in which the number of teachers increased between 1993 and 1994. About 92 percent of counties experienced growing employment between 1988 and 1992. Together, schools and counties had about two-thirds of the 1993 incentive's participants.

We found that the proportion of early retirees' positions that were kept vacant was considerably less than that required to cover the cost of the incentive program for schools, counties, and cities. The proportion of positions left vacant was 6 percent for school administrators, 11 percent for school district employees covered by PERA (those who do not hold a teaching license), 22 percent for county employees, and 31 percent for city employees.

The benefits of the 1993 early retirement program may have exceeded the costs for two large state agencies that together account for nearly half of the state's early retirees: the Minnesota Department of Transportation (MnDOT) and the Department of Human Services (DHS). Both agencies needed to achieve significant reductions in payroll in the 1994-95 biennium. MnDOT's budget required holding more positions vacant than could be accomplished without making many layoffs.

DHS had very limited hiring flexibility because it could not lay off employees even though it was closing certain programs.

AVOIDING LAYOFFS

Another purpose of early retirement incentives is to enable employers to avoid layoffs. Layoffs are costly to organizations as well as to the people involved. We surveyed public agencies to find out how many layoffs were made by public employers between 1991 and 1994, and how many layoffs were avoided because of the 1993 early retirement incentives. We found that most public employers did not make any layoffs in the years from 1991 to 1994. The percentage of school districts, cities, and counties with no layoffs is over 90 percent in most years, and is below 80 percent in only one year. In addition:

Apart from a few agencies which needed to reduce staff, most employers did not avoid any layoffs because of the 1993 incentive program.

- **Most employers said they did not avoid any layoffs because of the 1993 incentive.**

In our survey, 96 percent of counties and 88 percent of cities said they avoided no layoffs as a result of the 1993 incentive. About 69 percent of school districts said they avoided no layoffs of teachers, and 84 percent said they avoided no layoffs of other district employees.

The employment trend in state government differs somewhat from those in local government and schools. Employment in state government has not grown, in contrast to school district and county government. More departments made layoffs during the 1991-1994 period, and a few departments in state government, including the two largest, the departments of Transportation and Human Services, needed to reduce staffing levels and create job vacancies in order to stay within their budgets. Still, most departments did not make any layoffs between 1991 and 1994, nor did they report that they avoided layoffs as a result of early retirements.

OTHER BENEFITS TO EMPLOYERS

We surveyed state agencies, counties, cities, and school districts to find out how personnel directors felt about early retirement incentives. We found that:

- **On the whole, employers evaluated the early retirement incentives positively.**

Three-quarters of employers or more said that the overall impact of the incentives is positive. Most personnel administrators in state government and in cities, counties and school districts said that early retirement incentives have produced salary savings. Personnel administrators were more likely to feel that there was a productivity or quality gain than a loss, particularly for teachers. About two-thirds of school administrators felt that the early retirement program improved the quality of teachers, while only 6 percent felt that there was a loss in quality. Administra-

tors for state agencies and cities were about ten times more likely to report a productivity gain than a loss, though about half of these administrators felt there was no change. County personnel administrators were the least likely to feel that there was a productivity gain. Only 15 percent felt there was a gain, while 11 percent felt there was a loss and 74 percent felt there was no change. Of course, as we have noted, most of the cost of the early retirement incentives is not directly borne by employers; they benefit from early retirement incentives but do not directly bear the full cost.

CONCLUSIONS AND RECOMMENDATIONS

The 1993 incentive program was not well targeted to employers who needed to make staff reductions.

Early retirement incentives are popular with employers and produce tangible benefits. We conclude that early retirement incentives have a useful function in specific circumstances, but that these conditions are not typical or widespread. Offering an expensive option to employers who do not need it is not cost effective. The problem with offering incentives like those offered in 1993 is that it is doubtful that benefits outweigh the cost, and the cost is considerable.

It is helpful to keep in mind that an estimated half of all early retirees would have retired anyway in the same year they took early retirement. Many others would have retired in the next year or two. Early retirement does not create employee attrition, it borrows it from the near future. The beneficial use of early retirement incentives would appear to be restricted to situations where an employer is facing a one-time need to cut back or reorganize. This means that frequent repetition of early retirement incentives is not likely to be cost effective.

An argument against targeting early retirement incentives is that it is inequitable because it treats similar groups of public employees differently. However, broad early retirement incentives such as the 1993 incentive program are inequitable because they grant higher benefits to employees who retire during a particular time at the expense of employers and employees who must finance these incentives in the future. Future employees may have to help finance early retirement incentives for current retirees, but may not receive these incentives when they retire. As a result, we recommend that:

- **Future early retirement incentives should be targeted so that the benefits to public employers will be high in relation to costs.**

Benefits are likely to be high in relation to costs if an employer needs to reduce staffing levels beyond that permitted by normal attrition, which is around 9 percent per year in public employment. Certainly the closure of residential treatment centers places the Department of Human Services in this situation. The Department of Human Services has negotiated memoranda of understanding with its public employee unions that permit other severance arrangements that are not available to all state employees. Such a mechanism could be used to permit early retirement incentives in specific circumstances.

The 1993 incentive program was inappropriately financed because it deferred most of the costs to employers and employees in the future.

Furthermore, we conclude that the present method of financing early retirement incentives is flawed. For most retirees, the higher pensions in the 1993 incentive are financed by statewide retirement funds. To the extent that these costs increase the unfunded liability of retirement funds, they are financed by all employees and employers covered by these funds over the next 25 years. This arrangement is undesirable for several reasons. First, it is unfair to employers who choose not to participate because they still must pay their share of the cost of the higher pensions offered by other employers. Second, it gives employers an incentive to participate regardless of whether they believe the benefits outweigh the costs. Finally, participating employers get the benefit now and leave the financing burden to employers and employees in the future. Some of the benefits of early retirement are subjective and difficult to measure from a distance. Therefore, employers are in the best position to weigh the costs and benefits of early retirement incentives. We recommend that:

- **Early retirement incentives should be financed by employers at the time of early retirement.**

If an employer is undergoing a major one-time reorganization, it may be that special funding has to be provided specifically for this purpose. In any case, future generations should not be burdened by the cost of higher pensions for the present generation of retirees beyond the unfunded liabilities that already exist. The demographic structure of Minnesota and the United States is changing in a direction that makes it unwise to further require future workers to pay for current retirees.

Introduction

State policy makers have been looking for ways to cut government expenses as painlessly as possible. Advocates of early retirement incentives contend that incentives are an effective way to reduce government expenses because they reduce salary expenses, avoid layoffs, and improve productivity. Incentives are popular among employees and employers.

The Legislature established early retirement incentives in four consecutive years beginning in 1990. In 1993, the Legislature established an incentive that was more generous than the previous incentives. It provided higher retirement benefits and/or employer-paid health insurance to eligible public employees, including state, school district, county, and city employees.

The frequent use of early retirement incentives has generated questions about their efficiency and effectiveness. Critics argue that the benefits do not last long and question whether the benefits justify the costs. They contend that many employees who take advantage of early retirement incentives would have retired anyway.

As a result of these concerns, the Legislative Audit Commission directed our office to study early retirement incentives in Minnesota. Estimates of costs and benefits of these incentives have been made prior to their enactment, but little follow-up research has been conducted. Our study is the first major follow-up study of an early retirement incentive since the Department of Finance study on the Rule of 85 in 1986.[1] Our study addressed the following questions:

- **How have early retirement incentives been used in Minnesota? Who has participated in recent incentive programs? How much did the 1993 incentive program affect the timing of retirements?**

- **What are the public costs of the 1993 incentive program?**

- **What are the public benefits of the 1993 incentive program, including salary savings, layoffs avoided, and organizational benefits? How do salary savings compare with costs?**

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1 Department of Finance, *An Evaluation of the Rule-of-85*, (St. Paul, 1986).

- **Are early retirement incentives appropriately financed and targeted? What are the implications of demographic changes for early retirement incentives?**

To answer these questions, we interviewed retirement association officials, and surveyed and interviewed personnel directors from state agencies, school districts, counties, and cities. To analyze how early retirement incentives influence retirements, we examined retirement trends since 1980. To estimate the cost of the 1993 early retirement incentive, we obtained cost data from the retirement associations on each participant under this incentive. Our survey of employers who participated in the 1993 incentive asked about layoffs avoided, salary savings, and other organizational benefits. We also looked at employment trends and future demographic trends.

Our study focuses on the costs and benefits of the 1993 incentive program. We compare salary savings and costs, but we do not place a dollar value on other benefits such as avoiding layoffs and improving productivity.

Our report contains six chapters. The first chapter briefly describes the retirement plans used by most public employees and early retirement incentives that have been used since 1980. The second chapter examines retirement trends and how they are influenced by early retirement incentives. We estimate how many participants in the 1993 incentive program would have retired in the same year had there been no incentive. We also estimate how long participants would have kept working without the incentive. In the third chapter, we estimate the public cost of the 1993 incentive. The fourth chapter compares salary savings with the cost of the 1993 incentive program. The fifth chapter examines the benefits to the employer of the 1993 incentive, including layoffs avoided and other organizational benefits. Finally, the sixth chapter summarizes our major findings and makes recommendations. It also discusses demographic trends to provide context for future early retirement policy.

Background

CHAPTER 1

In recent years, the Minnesota Legislature has offered a variety of early retirement incentives to public employees. In addition, many school districts and some cities and counties have provided early retirement incentives in collective bargaining agreements. Types of early retirement incentives used in Minnesota include (1) employer-paid health benefits between retirement and age 65, (2) lump-sum payments by the employer, and (3) higher retirement benefits.

This chapter describes the early retirement incentives offered to public employees in Minnesota. To understand the incentives, we also briefly describe the major retirement plans for Minnesota's public employees. We asked:

- **What retirement benefits do Minnesota's public employees receive?**
- **What early retirement incentives have been offered to public employees since 1980?**
- **How are early retirement incentives financed?**
- **Who has been eligible for early retirement incentives? How many employees participated? What are the characteristics of early retirees?**

MINNESOTA'S RETIREMENT SYSTEM FOR PUBLIC EMPLOYEES

Most public employees in Minnesota are covered by one of three major retirement plans. The General State Employees Retirement Plan, administered by the Minnesota State Retirement System (MSRS), covers about 49,000 state employees. The Public Employees Retirement Plan, administered by the Public Employees Retirement Association (PERA), covers about 118,000 local government employees, including city and county employees and school district employees who do not have a teaching license. The Teachers Retirement Plan, administered by the Teachers Retirement Association (TRA), covers about 67,000 active teachers and other licensed staff employed by school districts, community colleges, technical colleges,

state universities, and miscellaneous educational institutions.[1] TRA does not cover teachers employed by school districts in Minneapolis, St. Paul, and Duluth, each of which has its own teacher retirement plan. Nor does TRA cover faculty of the University of Minnesota.

Our report focuses on the early retirement incentives offered to employees covered by these three retirement plans. We do not examine plans for police officers and fire fighters, who were not eligible for recent incentives offered to most other public employees in the state. In this section, we describe the retirement benefits provided by the three major retirement plans.

Retirement Benefits

Minnesota's three major public retirement plans have two types of members: coordinated system members and basic system members. Most members are coordinated system members whose benefits are coordinated with Social Security. Basic system members include some members of TRA and PERA who are not covered by Social Security. These basic members receive higher retirement benefits under their retirement plan and make higher contributions (along with the employer) to the retirement fund. The basic system of membership is being phased out and all new employees must be coordinated members.

Retirement benefits are based on years of service and the highest average salary earned during five successive years.

Figure 1.1 summarizes how retirement benefits are determined under the three major retirement plans. Under each plan, retirement benefits are based on the employee's age at retirement, years of service, and high-5-average salary (the highest average annual salary attained during five successive years). Most employees who retire when they are 65 or older receive 1.5 percent of their high-5-average salary for each year of service (basic members receive 2.5 percent per year of service instead of 1.5 percent). TRA members who retire after May 1994 receive an additional .13 percent of their high-5-average salary per year of service (e.g. 1.63 percent instead of 1.5 percent of average salary per year of service).

As Figure 1.1 shows, employees who retire before they reach age 65 receive a reduced benefit according to the "level formula" or the "step formula", whichever benefit is greater. Under the level formula, benefits for early retirees are reduced according to the amount determined by the actuary to compensate the fund for the extra time that benefits are expected to be paid when an employee retires early. In contrast, the step formula tier of benefits is like a permanent early retirement incentive in that it may reduce the penalty for retiring early, especially for those who qualify for the "Rule of 90" (age plus years of service totals 90 or more) or have at least 30 years of service.

The Rule of 90 typically reduces the early retirement penalty for eligible employees who are 62 and under. The closer the retiree's age is to 55, the greater is the benefit of the Rule of 90. For example, an employee who qualifies for the Rule of 90 (with 26 or more years of service) and retires at 64 would receive a higher bene-

1 Teachers first employed by state universities or community colleges after June 30, 1989 are not covered by the TRA retirement plan nor are teachers who choose to be covered by the Individual Retirement Account Plan administered by the State University and Community College Boards.

Figure 1.1: Retirement Benefit Formulae Used by the Three Major Public Employee Retirement Plans

COORDINATED SYSTEM MEMBERS (those with social security coverage) who were first hired before July 1, 1989 receive a retirement benefit determined according to the level formula or the step formula, whichever is greater:

Level Formula

1.5 % of high-5-average salary for each year of qualified service with an actuarial reduction (typically 4 or 5 percent per year that the retirement age is below 65) if the employee retires before age 65. Selected reduction factors for the State Employees Retirement Fund are as follows:

Age	Reduction Factor
55	40.5%
58	31.8
60	24.7
62	16.3

Step Formula

1.0% of high-5-average salary for the first ten years of qualified service and 1.5% of average salary for each subsequent year of qualified service with a reduction of 3 percent per year that the retirement age is below 65.

30 Years of Service: If the retiree has 30 or more years of service, the reduction is 3 percent per year that the retirement age is below 62 (instead of 65).

Rule of 90: If the retiree qualifies for the Rule of 90 (age plus years of service equals at least 90), there is no reduction for retiring early under the step formula.

Retirement benefits for members who were first hired after June 30, 1989 must be based on the level formula. Actuarial reductions would be taken if the employee retires before the retirement age for full social security benefits (currently 65, but scheduled to increase gradually to 67).

Effective for retirements after May 1994, TRA members receive an additional .13 percent of high-5-average salary per year of service (e.g.: 1.63% instead of 1.5%).

BASIC SYSTEM MEMBERS (those without social security coverage) receive 2.5% and/or 2.0% instead of the 1.5% and/or 1.0% shown for coordinated system members.

fit under the level formula than under the step formula. This employee would receive no benefit by qualifying for the Rule of 90. However, an employee who retires at age 60 and qualifies for the Rule of 90 (with 30 years of service) would receive a benefit that is about 18 percent higher than the benefit determined under the level formula.

To illustrate how retiring early affects a person's retirement benefits, Table 1.1 shows how the annual retirement benefit changes with retirement age for a state employee who earns $40,000 per year and has only 27 years of service at age 55. In the example, we assume that the employee's salary increases at the same rate as inflation, and thus does not change in constant dollars. At age 65, the employee would have 37 years of service and upon retirement would receive a benefit of $22,200 (1.5 percent of average salary per year of service). We found:

Table 1.1: An Example of How Retirement Benefits are Affected by When an Employee Retires

Age at Retirement	Service (in Years)	High-5-Average Salary	Annual Retirement Benefit: Benefit	Annual Retirement Benefit: Formula Used	Percent Change from Previous Year
55	27	$40,000	$9,940	Step	
56	28	40,000	10,804	Step	8.7%
57	29	40,000	11,704	Step	8.3
58	30	40,000	14,080	Step (30 Years)	20.3
59	31	40,000	16,600	Step (Rule of 90)	17.9
60	32	40,000	17,200	Step (Rule of 90)	3.6
61	33	40,000	17,800	Step (Rule of 90)	3.5
62	34	40,000	18,400	Step (Rule of 90)	3.4
63	35	40,000	19,000	Step (Rule of 90)	3.3
64	36	40,000	20,261	Level	6.6
65	37	40,000	22,200	Level	9.6
66	38	40,000	22,800	Level	2.7
67	39	40,000	23,400	Level	2.6
68	40	40,000	24,000	Level	2.6
69	41	40,000	24,600	Level	2.5
70	42	40,000	25,200	Level	2.4

Note: We assume that the employee's salary increases at the rate of inflation. Figures are in constant dollars.

Source: Program Evaluation Division analysis based on retirement formula used by the General State Employees Retirement Plan and the Public Employees Retirement Plan.

- **Retirement before age 60 substantially reduces a retiree's annual benefit, particularly if the retiree does not qualify for the Rule of 90 and has less than 30 years of service.**

Ordinarily, early retirement causes a benefit reduction. Early retirement incentives reduce or eliminate the reduction.

If the employee retires at age 55, the annual benefit would be $9,940, less than half of the benefit that could be obtained by waiting to retire at age 65. The benefit is much lower at age 55 because of the early retirement penalty and the fact that the years of service equals 27 years instead of 37 years. An early retirement incentive would have to be very large to make up most of the reduction in benefits due to retiring at age 55 instead of 65.

Table 1.1 also shows how much the benefit increases by working one more year before retiring. Initially, retirement benefits increase by 8 or 9 percent per year. But when the employee reaches 30 years of service, the early retirement penalty is reduced and the retirement benefit increases by 20 percent. The following year, the employee qualifies for the Rule of 90, further reducing the early retirement penalty, and benefits rise by another 18 percent.

- **Retirement benefits increase slowly with additional years of work after an employee qualifies for the Rule of 90 or after reaching 65 years of age.**

After qualifying for the Rule of 90, continuing to work increases retirement benefits by only about 3 percent per year. After reaching age 65, benefits increase by only 2 or 3 percent per year. Thus, the current benefit structure provides the strongest incentive to retire to these two groups (those qualifying for the Rule of 90 and those 65 or older). Studies conducted by the pension commission actuary show that these two groups have the highest retirement rates.

Employees with service covered by two or more designated public retirement plans can combine the service for purposes of calculating their retirement benefit. Fourteen public retirement plans designated in statute provide combined service annuities, including the three major plans discussed above.

EARLY RETIREMENT INCENTIVES

Early retirement incentives have been offered frequently during the 1980s and 1990s.

State legislation offered employer-paid health benefits until age 65 to eligible employees who retired early in 1982, 1990, 1991, 1992, and 1993. From April 1984 through June 1987, the state eliminated early retirement penalties for employees whose age and years of service totaled at least 85 (under the Rule of 85). In 1993, the state also offered increased retirement benefits to eligible employees who retired during specified time periods. These incentives are described below and are summarized in Figure 1.2.

1982 Incentive

The state offered employer-paid health benefits until age 65 to state employees who retired between March 23 and May 21, 1982, were between 60 and 65 years old, and had at least 20 years of service. State employees covered by the MSRS correctional retirement plan or highway patrol retirement plan were eligible if they were between 55 and 65. This incentive was not offered to employees of local governments.

The Rule of 85

The Rule of 85 eliminated early retirement penalties for public employees whose age and years of service totaled at least 85. It applied to state, city, county, and school district employees who retired between April 1984 and June 1987.[2]

Early Retirement Incentives in 1990, 1991, and 1992

As in 1982, the state offered continued health insurance coverage until age 65 for eligible employees who retired during two to three month periods in 1990, 1991, and 1992. In 1990, only state employees who were between 55 and 65 years of

2 To qualify for the Rule of 85, an employee's age plus years of service had to equal or exceed 85 by Jan. 1, 1987.

Figure 1.2: Early Retirement Incentives in Minnesota

Incentive	General State Employees Retirement Plan	Public Employees Retirement Plan	Teachers Retirement Plan
TEMPORARY INCENTIVES			
1993: employer-paid health benefits until 65 and/or higher pension benefit.	Mandatory for state agencies. U of M and MTC chose not to participate. Employees could choose health or pension incentive.	Optional for employers. Participating employers could offer either incentive or both. If offered, employees could choose one incentive.	Mandatory for all school districts, technical colleges, community colleges, and state universities. Retirees from K-12 system received both health and pension incentives. College faculty could choose one incentive.
1992: employer-paid health benefits until 65.	Mandatory for state agencies.	Optional for employers. Low participation.	Optional for employers.
1991: employer-paid health benefits until 65.	Mandatory for state agencies.	Optional for employers. Low participation.	Not offered.
1990: employer-paid health benefits until 65.	Mandatory for state agencies.	Not offered.	Not offered.
1984-87: Rule of 85: eliminated early retirement penalty if age + years of service was at least 85.	Applied to all eligible employees.	Applied to all eligible employees.	Applied to all eligible employees.
1982: employer-paid health benefits until 65.	Mandatory for state agencies.	Not offered.	Not offered.
PERMANENT INCENTIVES			
Rule of 90: reduces early retirement penalty if age + years of service is at least 90.	Effective 1989 for all eligible employees.	Effective 1982 for all eligible employees.	Effective 1989 for all eligible employees.

age and had at least 25 years of state service could participate. In 1991 and 1992, those eligible included state employees and, at the discretion of local governments, city, county, and school district employees (school district employees were not eligible in 1991). To be eligible, an employee needed to be between 55 and 65 years of age and have at least 25 years of qualified service.

In 1990, 1991, and 1992, state law prohibited employees from receiving both the above health benefit incentive and an early retirement incentive contained in their

employers' collective bargaining agreements or personnel plans. In such cases, employees had to select the incentive they preferred.

The 1993 Early Retirement Incentive

Many employers at the state and local level participated in the 1993 early retirement incentive program.

In 1993, the Legislature established an early retirement incentive that included higher retirement benefits and/or employer-paid health benefits until age 65. Participants included state, city, county, and school district employees. To be eligible, an employee needed to be employed by a participating employer, retire between May 17, 1993 and January 31, 1994, and (1) be at least 55 years of age and have at least 25 years of qualified public service, or (2) be at least 65 years of age and have at least one year of service.

The Legislature mandated participation by "all state agencies if the commissioner of employee relations and the commissioner of finance certified that layoffs in any of the agencies would occur without the incentives."[3] Subsequently, both commissioners certified that there would be layoffs without the incentives. K-12 school districts were mandated to offer the incentive to eligible teachers and other licensed staff covered by one of the state's teachers retirement funds. However, school districts could choose whether to offer the incentive to employees covered by the public employees retirement fund (those without teaching licenses). Participation was also optional for city and county employers, the University of Minnesota, and various other agencies, including the Metropolitan Transit Commission. Neither the University of Minnesota nor the Transit Commission chose to participate.

The 1993 incentive program offered an enhanced annuity, health insurance, or in some cases, both.

The benefits offered under the 1993 incentive varied among employers and retirement plans. Eligible state employees covered by the General State Employees Retirement Plan could choose to either (1) continue their health insurance until age 65 or (2) receive a higher pension benefit by increasing the benefit formula's multiplier from 1.5 to 1.75 percent of high-5-average salary per year of service (or from 1.0 to 1.25 percent under the step formula). The increased multiplier applies only to the first 30 years of service.

This pension option increased pension benefits for most participants by between 15 and 19 percent. For example, an employee who retired at 65 with 33 years of service would receive a benefit of 57 percent (30 times 1.75 percent plus 3 times 1.5 percent) of the employee's high-5-average annual salary. This enhanced benefit is about 15 percent higher than the normal benefit (49.5 percent of average salary).

Employees covered by the Public Employees Retirement Plan (primarily city, county, and non-licensed school employees) could also choose between these two benefits, provided their employer chose to offer both incentives. These employers could offer both incentives, one of the incentives, or neither incentive.

3 *Minn. Laws* (1993) Ch. 192, Sec. 108, Subd. 1.

Eligible teachers employed by K-12 school districts received both benefits (employees who were 65 years of age or older received the higher retirement benefit only), but they received a smaller benefit increase than other participants (the formula's multiplier percentage increased by .1 percentage points instead of .25 percentage points). Eligible teachers employed by state universities, community colleges or technical colleges and covered by the Teachers Retirement Association could choose one of the two incentives. As with other TRA members, they received the smaller retirement benefit increase (.1 percent of average salary per year of service).

Legislation enacted in 1994 provided the same incentive as the 1993 incentive to employees inadvertently left out of the 1993 law, including employees of county and municipal hospitals and certain local elected officials. To qualify, these employees had to retire between April 30 and July 15, 1994.

Local Early Retirement Incentives

In addition to any state incentives, most school districts have their own early retirement incentive programs that provide a cash payment to teachers who retire early.

School districts, counties, and cities may offer their own early retirement incentives, though they may not increase the retirement benefits paid by retirement associations. The two types of incentives that have frequently been used are: (1) lump-sum cash payments upon retirement and (2) employer-paid health insurance. To examine what types of incentives are used by local governments, we surveyed a sample of school districts, counties, and cities. The survey is described in Appendix A.

We found that about 90 percent of school districts offered teachers cash payments as an incentive to retire early. Only one county and no city in our survey sample offered a lump-sum early retirement incentive.

Under these local incentive programs, school districts paid an average (including participants who received no payment in the average) of $21,000 per teacher and $31,000 per administrator.[4] These incentive programs use a sliding scale, under which the amount paid declines as the retirement age increases. For most districts, the incentive payment begins to decline between the ages of 56 and 60 and reaches 0 at age 65. Our review of teacher contracts indicates that teachers who retired under the 1993 incentive program would have received about $2,000 less from their school districts' incentive programs had they retired one year later. Many districts base the incentive payment only on age. Other districts base the payment on age and years of service, unused sick days, or salary.

Many school districts, counties, and cities have their own programs that provide employer-paid health insurance to early retirees. We found that about 68 percent of teachers who retired under the 1993 incentive program were from districts that offered some employer-paid health benefits to early retirees. The corresponding percentages for county and city retirees were 60 and 43 percent respectively. Our review of teacher contracts in our sample school districts indicates that about 17 percent of early retirees were in districts that provide early retirees with the same

4 These figures are based on teachers and administrators who participated in the 1993 early retirement incentive program.

health benefits as active teachers. About 51 percent were in districts that provide more limited coverage than they do for active teachers, such as paying for single coverage but not family coverage.

FINANCING OF EARLY RETIREMENT INCENTIVES

Enhanced pension benefits are paid by the retirement fund. Health coverage for early retirees is paid by the employer.

The financing of early retirement incentives varies with the type of incentive. Health benefits for early retirees have been paid by the employer. However, the pension benefit increases contained in the 1993 incentive program and the Rule of 85 are paid by the retirement funds. Eventually, these costs are passed on to employers and/or employees in the form of higher contribution rates (or possibly, they could jeopardize future benefit improvements). Under current law, unfunded liabilities of pension funds are amortized over a 25 year period (to the year 2020). As a result, to the extent that early retirement incentives increase the unfunded liability of a retirement fund, the cost will be spread over a 25 year period.

- **The financing of the 1993 early retirement incentive gave local governments an incentive to offer the increased pension benefit even if the benefits to the employer did not outweigh the total cost.**

The three major public retirement funds involved in the 1993 incentive and the Rule of 85 incentive are statewide funds. While participation by counties, cities, and schools (with respect to PERA members) was optional under the 1993 incentive, each employer would ultimately pay for the pension benefit increase offered by others regardless of whether it participated. Thus it may be in an employer's self interest to offer the increased pension benefit even if the employer does not believe that the benefits outweigh the costs.

EMPLOYER PARTICIPATION

The Legislature allowed public employers to offer early retirement incentives in 1993, but it did not mandate participation by all employers. To find out which employers participated in the 1993 early retirement incentive, we examined employer data for retirees who received the incentive. However, these data are limited since it is possible that some employers offered the incentive without any employees taking advantage of the offer. Thus our estimates of employer participation rates for the 1993 incentive are probably conservative estimates of the actual rates. To estimate employer participation in previous incentive programs, we used our survey of employers who participated in the 1993 incentive.

Our analysis focuses on employers for whom participation was optional. Cities, counties, and schools could choose whether to offer the incentive to employees covered by the Public Employees Retirement Plan. State agencies were mandated

to participate and schools were mandated to offer the incentive to TRA members. We found that:

- **Employers chose to offer the 1993 incentive to a large majority of city, county, and school district employees covered by the Public Employees Retirement Plan.**

The 1993 incentive was offered to a large majority of eligible public employees.

At least 94 percent of counties and 64 percent of Minnesota's cities with a population of 10,000 or more offered the 1993 incentive to their employees. Minneapolis was the only city out of the largest 7 cities that did not participate in the program. Unlike other cities, Minneapolis employees are covered by their own retirement fund--the Minneapolis Employees Retirement Fund. Forty-five of the 47 school districts with more than 4,000 students, serving 59 percent of the state's public students, chose to offer the incentive to PERA members.

- **Most counties, cities, and school districts offered the increased annuity option to employees covered by the Public Employees Retirement Plan, but most employers did not offer the health benefit.**

All of the employers who had an employee retire under the 1993 incentive offered the annuity option. As mentioned above, we do not know how many other employers offered the annuity option without any employees taking advantage of the offer. Thus, at least 94 percent of counties offered the annuity option, as did at least 64 percent of cities with populations over 10,000, and 96 percent of school districts with more than 4,000 students.

Our survey of a sample of school districts, cities, and counties that participated in the 1993 incentive asked whether they offered the health option. We found that among participating employers, about 83 percent of counties and 84 percent of cities offered the annuity option only. About 17 percent of counties and 16 percent of cities offered both the annuity and the health options. About 69 percent of participating school districts with more than 4,000 students offered only the annuity option to PERA members, while 31 percent offered both options.

Many local governments offered enhanced pension benefits, but not health insurance coverage.

One reason that many local governments offered the annuity option but not the health option may be that local governments bear the direct cost of the health option but not the annuity option. Another possible reason is that some local governments have their own health benefit incentives.

- **Substantially fewer counties, cities, and schools participated in the 1991 and 1992 early retirement incentive program (health benefit only) than in the 1993 incentive program.**

Our survey of cities indicates that among cities with a population over 10,000, the percent that offered the early retirement incentive was about 10 percent in 1991 and 1992. These rates are substantially lower than the 64 percent participation rate for the 1993 incentive. Among cities with a population over 2,000, our survey indicates that about 7 percent offered the 1991 incentive and about 13 percent offered the 1992 incentive.

Among counties, our survey indicates that about 12 percent participated in 1991 and 18 percent in 1992, considerably lower than the 94 percent that participated in 1993. Again, one reason for the higher participation in 1993 is that the employer did not bear the direct cost of the pension benefit component of the 1993 incentive, whereas employers paid the full cost of the 1991 and 1992 incentives.

All school districts were mandated to offer the 1993 incentive to TRA members, while about 56 percent offered the 1992 incentive to TRA members and about 26 percent offered the 1992 incentive to PERA members. School district employees were not eligible for the 1991 incentive.

EMPLOYEE PARTICIPATION

In this section, we look at the employees who participated in the 1993 incentive. We examine how many eligible employees took advantage of the incentive, which incentive option they selected, and the characteristics of participants, including their ages, salaries, and years of service.

About a third of eligible employees took advantage of the 1993 incentive.

Employee Participation Rates

To determine what percent of eligible employees retired under the 1993 incentive, we obtained lists of members who were eligible for the incentive and lists of participants from the three major retirement associations. Many participants received combined service annuities (that is, they received service credit from two or more retirement funds) and were listed in more than one fund. To avoid counting individuals more than once, we included retirees with the last fund in which they were a member. Table 1.2 presents the number and percent of eligible employees who retired under the 1993 incentive for different employee groups. We found that:

- **About one third of eligible employees participated in the 1993 early retirement incentive program.**

Thirty-seven percent of eligible state employees retired under the 1993 incentive program. Participation rates were slightly lower for TRA (35 percent) and PERA (34 percent).

Participation rates did not vary much among different types of employers. Among eligible PERA members, the rates were 36 percent for county employees, 34 percent for city employees, and 33 percent for school district non-licensed staff. Among eligible TRA members, 38 percent of eligible college faculty retired under the incentive program, only slightly higher than the rate for school teachers and administrators (35 percent).

- **State employees were more likely to retire under the 1993 incentive program than under those in 1990, 1991, or 1992.**

Table 1.2: Participation Rates for the 1993 Early Retirement Incentive Program

Retirement Plan	Covered Employees	Number of Eligible Active Employees	Number of Active Employees Participating	Percent Participating
General State Employees Retirement Plan	State Employees (mostly)	1,736	651	37%
Teachers Retirement Plan	School District Teachers and Other Licensed Staff (does not include Minneapolis, St. Paul, Duluth)	4,029	1,410	35
	Faculty of State Universities, Community Colleges, and Technical Colleges	648	248	38
Public Employees Retirement Plan	City Employees	1,285	433	34
	County Employees	1,424	521	37
	School Non-Licensed Employees	2,018	660	33
	Other	128	23	18

Note: This table does not include 267 school teachers and other licensed staff who retired from Minneapolis, St. Paul, and Duluth.

Source: Data provided by the Minnesota State Retirement System, the Teachers Retirement Association, and the Public Employees Retirement Association.

The total number of state employees retiring under the 1993 incentive was about 651, compared with 369 for the 1990 incentive, 265 for the 1991 incentive, and 194 for the 1992 incentive. In part, these differences are due to different eligibility criteria. Employees who were 65 years of age or older were eligible for the 1993 incentive, but not for the previous incentives. There were about 406 state employees under 65 years of age who retired under the 1993 incentive.

Type of Incentive Received by Participants

More than half of state employees retiring at age 58 or less chose health insurance coverage over a larger pension.

Some public employees could select between the two options offered under the 1993 early retirement incentive, including state employees, college faculty covered by TRA, and some local government employees covered by PERA. Table 1.3 shows the incentive option selected by state employees of different age categories. We found that:

- **Most state employees who retired under the 1993 incentive program chose the annuity option, but most retirees between 55 and 58 chose the health benefit.**

Overall, 24 percent of state employees chose the health benefit. However, younger retirees were more likely to choose the health benefit than older retirees. Fifty-seven percent of state employees who retired when they were 58 or younger chose the health benefit, compared with 26 percent for those who were 59 to 61 years of age, and 9 percent for those who were 62 to 64. Employees who were 65

Table 1.3: Type of Incentive Chosen by State Employees of Different Ages

		Number Choosing		Percent Choosing	
Age	Number	Annuity Option	Health Option	Annuity Option	Health Option
55-58	141	60	81	43%	57%
59-61	170	105	65	62	38
62-64	105	96	9	91	9
65+	235	235	0	100	0
Total	651	496	155	76%	24%

Note: Retirees who had service with two or more funds are included with the fund in which they were active at retirement.

Sources: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System.

or older were not eligible for the health option. These results are not surprising since those who retire close to age 65 would get the benefit for only a few years, while they would receive the increased annuity for the rest of their lives.

- **Very few local government employees (covered by PERA) who retired under the 1993 incentive program chose the health benefit, in large part because few local governments offered the health option.**

Only two percent of retirees from the public employees retirement fund chose the health option. As we showed earlier, most cities and counties did not offer the health option.

Characteristics of Early Retirees

Table 1.4 summarizes the retirement ages of those who retired under the 1993 incentive. Unlike previous early retirement incentives, employees who were 65 or older were eligible for the 1993 incentive. The percentage of early retirees who were 65 or older was 44 percent for PERA members and 36 percent for state employees, but only 7 percent for teachers and other licensed staff. Forty-four percent of teacher participants were between 55 and 58 years of age. The younger ages of teacher participants reflects the fact that teachers normally retire much earlier than other public employees.

Table 1.5 presents the average salary and years of service of persons who retired under the 1993 incentive program. On average, employees who retired when they were under 65 years of age had about 31 years of service and average salaries ranging from $31,500 for PERA members to $42,400 for TRA members. Retirees who were 65 years of age or older had fewer years of service and lower salaries, particularly for those covered by the Public Employees Retirement Plan. PERA members who were 65 or older had, on average, just 18.9 years of service and a salary of $19,600, considerably lower than younger retirees.

Many employees were 65 or older when they retired under the 1993 incentive program.

Table 1.4: Retirement Ages of Early Retirees, 1993 Incentive

	Percent of Early Retirees		
Age	General State Employees Retirement Plan	Public Employees Retirement Plan	Teachers Retirement Plan
55-58	22%	18%	44%
59-61	26	20	35
62-64	16	18	14
65 & Over	36	44	7
Number of Retirees	651	1,637	1,658

Note: Retirees who had service with two or more funds are included with the fund in which they were active at retirement.

Sources: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System, the Public Employees Retirement Association, and the Teachers Retirement Association.

Table 1.5: Average Salary and Years of Service of Early Retirees Under the 1993 Early Retirement Incentive

	General State Employees Retirement Plan	Public Employees Retirement Plan	Teachers Retirement Plan (K-12)
NUMBER OF RETIREES			
Under 65	416	909	1,337
65 & Over	235	728	73
Total	651	1,637	1,410
AVERAGE YEARS OF SERVICE			
Under 65	31.7	30.5	32.1
65 & Over	22.0	18.9	29.0
Total	28.2	25.3	31.9
AVERAGE SALARY			
Under 65	$37,400	$31,500	$42,400
65 & Over	34,400	19,600	40,000
Total	36,300	26,200	42,300

Note: Retirees who had service with two or more funds are included with the fund in which they were active at retirement.

Sources: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System, the Public Employees Retirement Association, and the Teachers Retirement Association.

Effect of Early Retirement Incentives on Retirements

CHAPTER 2

The costs and benefits of early retirement incentives depend on the extent to which the incentives induce employees to retire earlier than they otherwise would retire. Those who would have retired at the same time without the incentive increase costs but do not yield any salary savings for their employers beyond what would have been obtained without the incentive. In this chapter, we ask:

- **How have statewide early retirement incentives during the 1980s and 1990s affected retirement rates?**
- **How many retirements under the 1993 incentive program would have occurred without the incentive?**
- **How long would have employees who retired under the 1993 incentive program kept working without the incentive?**

To answer these questions, we examined retirement trends for the three major retirement plans: the General State Employees Retirement Plan (administered by MSRS), the Public Employees Retirement Plan, and the Teachers Retirement Plan. To estimate the effects of early retirement incentives over the past 15 years, we compared retirement rates (retirements as a percent of employees 55 or older) in the years before and after the incentives' enactments. We obtained retirement rates by fiscal year from 1980 to 1994 for the Public Employees Retirement Plan, from 1982 to 1994 for the Teachers Retirement Plan, and from 1987 to 1994 for the General State Employees Retirement Plan. While employee age data were not available for the state plan prior to 1987, we did obtain the number of retirements by fiscal year from 1978 to 1994.

To analyze the effects of the 1993 early retirement incentive, we obtained more detailed retirement data (broken down by employee's age and Rule-of-90 eligibility status) for the last five years (fiscal years 1990-94) for each of the three major retirement plans.

It is important to recognize that retirement trends are affected by a number of factors besides early retirement incentives, including ages of employees, their Rule-of-90 eligibility status, their health, their financial resources, and their attitude towards retirement. Retirement rates fluctuate from year to year because of these and other factors. We can take into account changes in age and Rule-of-90 status,

but not other factors. As a result, it is not possible to precisely measure the effects of early retirement incentives. While these factors vary from year to year, they are more likely to cause large distortions when comparing retirement rates across decades. For example, people can more easily afford to retire early today than they could 30 years ago, but the change in financial resources of potential retirees changes gradually. It is doubtful that there is much difference in financial resources between two consecutive years.

RETIREMENT RATES FROM 1980 TO 1994

Table 2.1 and Figures 2.1 through 2.3 show how retirement rates (the percent of active members 55 and over who retire) changed for each retirement fund. Figure 2.4 shows how the number of retirements of state employees changed from fiscal years 1978 to 1994. We found:

- **For each major public employee retirement plan, there were large increases in retirement rates when the Rule of 85 was introduced and when the 1993 early retirement incentive was introduced.**

Table 2.1: Trends in Retirement Rates, Fiscal Years 1980-94

	General State Employees Retirement Plan		Public Employees Retirement Plan		Teachers Retirement Plan	
Fiscal Year	Number of Retirements	Percent of Employees 55 & Over	Number of Retirements	Percent of Employees 55 & Over	Number of Retirements	Percent of Employees 55 & Over
1980	653		1,096	7.0%		
1981	764		1,256	7.2	718	
1982	946		1,242	6.9	794	10.7%
1983	667		1,276	7.5	917	11.8
1984	759		1,169	7.1	1,063	15.0
1985	920		1,585	9.8	1,201	16.5
1986	824		1,487	9.6	1,169	19.9
1987	872	14.5%	1,588	10.4	1,214	20.2
1988	863	13.9	1,574	10.5	735	12.0
1989	549	9.5	1,343	8.8	817	12.3
1990	683	11.5	1,635	10.4	1,085	15.0
1991	896	14.9	1,659	10.4	1,299	17.3
1992	896	14.3	1,745	10.0	1,407	17.5
1993	735	11.9	1,667	9.4	1,923	23.5
1994	1,036	16.7	2,506	13.7	1,656	20.6

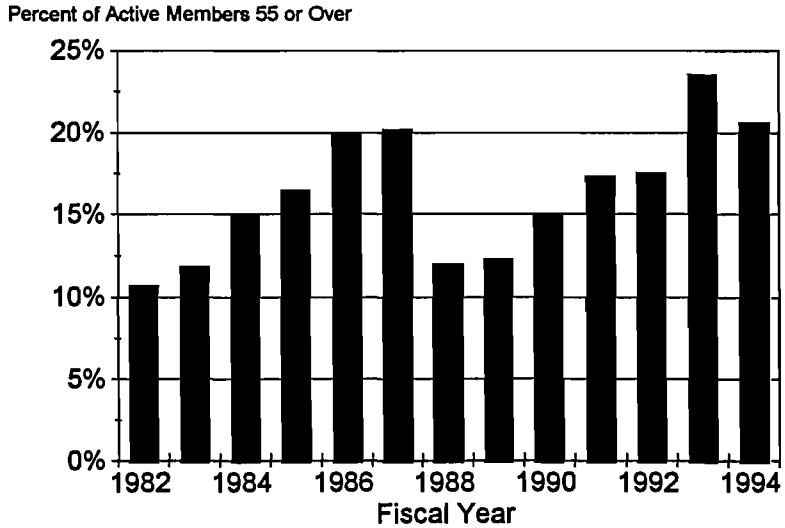
Note: Retirements include only employees who were active immediately prior to retirement for the General State Employees Retirement Plan and the Public Employees Retirement Plan. For the Teachers Retirement Plan, retirements include active and inactive employees because we could not obtain comparable data on active employees over this time period.

Source: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System, the Public Employees Retirement Association, and the Teachers Retirement Association.

Figure 2.1 shows that prior to the Rule of 85 (fiscal years 1982 and 1983), 10 to 12 percent of TRA members 55 and over retired annually. After the Rule of 85 became effective in April 1984, retirement rates rose to 15 percent in 1984 and climbed to 20 percent in 1987. After the Rule of 85 ended in July 1987, retirement rates dropped to 12 percent (fiscal years 1988 and 1989). Retirement rates reached a new peak of 24 percent during the 1993 early retirement incentive.

Retirement rates for teachers were highest when the Rule of 85 and the 1993 incentive programs were in effect.

Figure 2.1: TRA Retirement Trends



Note: Retirements include active and inactive members who retired because we could not obtain comparable data on active members during this time period.

Source: Program Evaluation Division analysis of data provided by the Teachers Retirement Association.

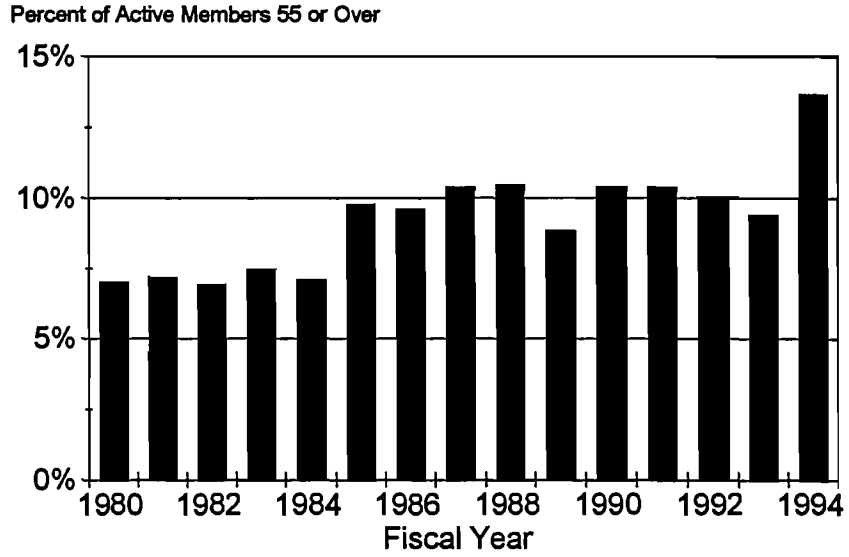
Figure 2.2 shows that retirement rates for employees covered by the Public Employees Retirement Plan increased from 7 percent to 10 percent after the Rule of 85 was enacted. After the 1993 incentive was enacted, retirement rates went up from about 10 percent during fiscal years 1990-93 to 14 percent in fiscal year 1994.

Note that the effects of early retirement incentives tend to show up earlier for teachers than they do for other public employees. Retirement association data on retirees who took advantage of the 1993 incentive show that most participating teachers retired in fiscal year 1993, whereas most participants from PERA and MSRS retired during fiscal year 1994. In addition, according to retirement association officials, even though the Rule of 85 expired at the end of fiscal year 1987, many members of PERA and MSRS who took advantage of the Rule of 85 were processed in fiscal year 1988 because they waited until the deadline to retire.

Figure 2.4 shows the trend in the number of retirements by state employees from fiscal years 1978 to 1994. Large increases in retirements occurred after the 1982 incentive, the Rule of 85, and the 1993 incentive. There was also a large increase in fiscal year 1991 following the 1990 health incentive, though some of this in-

Retirement rates for other public employees were also highest during the 1993 incentive program.

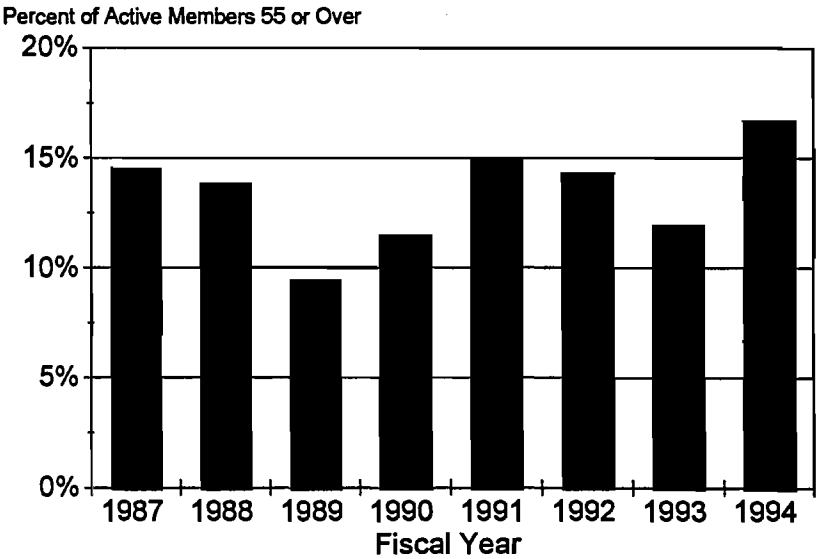
Figure 2.2: PERA Retirement Trends



Note: Data include retirements by members of the Public Employees Retirement Plan.

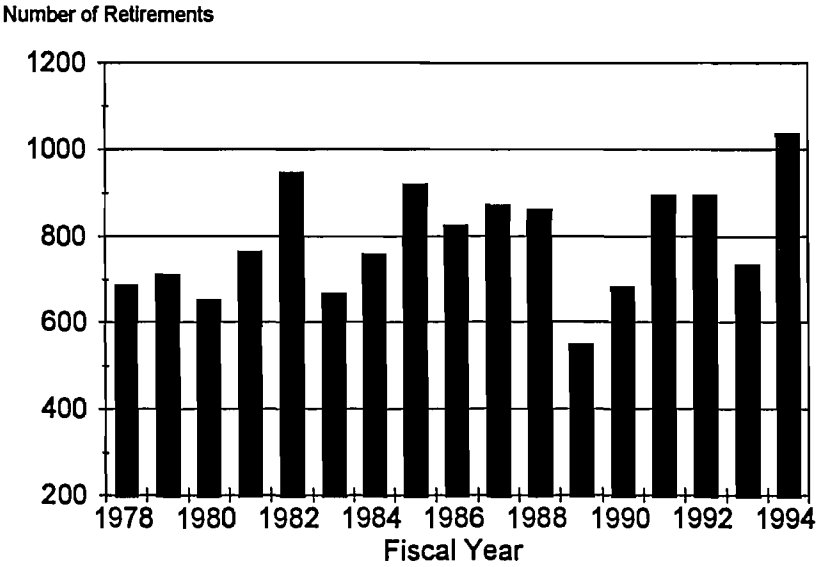
Source: Program Evaluation Division analysis of data provided by the Public Employees Retirement Association.

Figure 2.3: Trends in State Employee Retirement Rates



Source: Program Evaluation Division analysis of data provided by the Minnesota State Retirement Association.

Figure 2.4: Trends in the Number of State Employee Retirements



Source: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System.

State employee retirement rates tapered off in fiscal year 1993, the third consecutive year that the health incentive was offered.

crease might be because the number of retirements was below average in fiscal year 1990.

Retirements declined substantially after the end of the Rule of 85. The number of retirements dropped from 863 in fiscal year 1988 (the last year with Rule-of-85 retirements) to 549 in fiscal year 1989 (or from 13.9 percent to 9.5 percent of employees 55 and over). Retirements also tapered off during fiscal year 1993, the third consecutive year that the health incentive was offered.

EFFECTS OF THE 1993 INCENTIVE PROGRAM

To estimate the number of retirements induced by the 1993 early retirement incentive for MSRS and PERA employees, we compared actual retirements for fiscal year 1994 with the expected number of retirements based on the retirement rates (by age and Rule-of-90 eligibility) for the period prior to the incentive.[1] For example, in fiscal year 1994, there were 781 state employees who were 60 or 61 and were not eligible for the Rule of 90. Ninety-one of these employees retired during fiscal year 1994. During fiscal years 1991 through 1993, an average of 8.7 percent of state employees with the same age and Rule-of-90 status retired per year. Thus, the "expected" number of retirements for fiscal year 1994 would be 8.7 percent of 781, or 68. The difference between the actual number of retirements and

1 While the incentive began during fiscal year 1993 (May 17, 1993), few members of MSRS or PERA who retired under the 1993 incentive actually retired during fiscal year 1993.

the expected number is 23, which represents the estimated effect of the 1993 incentive for this particular group. Appendix B describes our estimates in more detail.

Measuring the effect of the 1993 incentive is problematic for state employees because it is difficult to find a recent base period that has not been affected by a previous early retirement incentive. High retirement rates in fiscal years 1987 and 1988 probably were caused by the Rule of 85. Low retirement rates in fiscal years 1989 and 1990 may also be caused by the Rule of 85 since employees who normally would have retired during this period may have retired earlier to take advantage of the Rule of 85. The three health insurance incentives during the early 1990s probably raised retirements during fiscal years 1991, 1992, and 1993. As a result, we used two base periods: (1) fiscal year 1990, which had lower than average retirement rates and (2) the three year average for fiscal years 1991 through 1993, when rates were higher than average. The "normal" retirement rates are probably between the retirement rates calculated from these two base periods.

For TRA, we also compared actual retirements with the number expected based on retirement rates for the previous three years. We used different reporting periods in order to bracket the entire incentive window.[2]

Table 2.2 presents our estimates of how many employees retired because of the 1993 early retirement incentive.

- **We estimate that roughly half of the retirees under the 1993 early retirement incentive program would have retired in the same year without the incentive program.**

Roughly half of early retirees would have retired in the same year without the incentive.

We estimate that about 50 percent of state employees who retired under the 1993 incentive would have retired without the incentive. Our corresponding estimates are 45 percent for teachers and 57 percent for local government employees covered by the public employees retirement fund.

HOW MUCH EARLIER DID EMPLOYEES RETIRE BECAUSE OF THE 1993 INCENTIVE PROGRAM?

We just showed that about half of the early retirees would have retired in the same year even if the 1993 incentive were not offered. To determine the effect of the 1993 program, we must also estimate when the other half of the early retirees would have retired without the incentive program. We do not have direct empiri-

2 Teachers and other licensed staff employed by local school districts were eligible if they retired between May 15 and July 21, 1993. We compared the number of retirements during the incentive period with the expected number based on average retirement rates for the same time period during the three previous years (1990-92). Other members of TRA (primarily teachers employed by state universities, community colleges, and technical colleges) were eligible for the 1993 incentive if they retired between May 17, 1993 and January 31, 1994. To estimate the effect of the 1993 incentive on retirements for this group, we compared actual retirements during the year ending March 16, 1994 with expected retirements based on the previous three years.

Table 2.2: Effect of 1993 Early Retirement Incentive on Retirements

	Active Members who Retired Under the 1993 Early Retirement Incentive			
	General State Employees Retirement Plan		Public Employees Retirement Plan	Teachers Retirement Plan
	Low Estimate	High Estimate		
Base Period	FY 1991-93	FY 1990	FY 1991-93	1990-92
Number of Retirees Under 1993 Incentive	651	651	1,637	1,658
Estimated Number Who:				
Retired Because of Incentive	214	392	702	912
Would Have Retired in the Same Year Anyway	436	258	935	746
Estimated Percent That Would Have Retired Anyway	67%	40%	57%	45%

Note: Retirees who had service with two or more funds are included with the fund in which they were active at retirement.

Sources: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System, the Public Employees Retirement Association, the Teachers Retirement Association, and the actuary for the Legislative Commission on Pensions and Retirement.

cal evidence on when these retirees would have retired without the incentive. However, we can estimate when they would have retired if we assume they would have retired at the same rate as other employees having the same age and Rule-of-90 status. We believe this would be a high estimate of how long they would have kept working because, as some personnel directors observed, employees who were planning to retire in the near future were more likely to take the incentive than those who did not have imminent retirement plans. Thus, we also made a low estimate based on the assumption that those who would not have retired during the same year were it not for the incentive would have retired one year later. Appendix C describes how we made our high and low estimates in more detail.

Table 2.3 presents our low and high estimates of how much earlier incentive participants retired because of the 1993 incentive. We estimate that:

- **The 1993 incentive program induced participants to retire an average of 0.5 to 1.7 years earlier than they would have retired without the incentive program.**

We estimate that the 1993 incentive induced state employee participants to retire, on average, from 0.5 to 1.7 years earlier than they would have retired without the incentive. Corresponding low and high estimates are 0.43 to 1.5 years for retirees from the Public Employees Retirement Plan, and 0.55 to 1.8 years for employees retiring under the Teachers Retirement Plan.

Table 2.3: How Much Earlier Did Participants Retire Because of the 1993 Incentive?

	Estimated Effect in Years			
	General State Employees Retirement Plan	Public Employees Retirement Plan	Teachers Retirement Plan (K-12)	Total
Number of Participants	651	1,637	1,410	3,698
Low Estimate	0.5	0.43	0.55	0.5
High Estimate	1.7	1.5	1.8	1.7
High Estimate by Age Category				
55-58	2.4	1.9	2.2	
59-61	1.6	1.4	1.6	
62-64	1.5	1.2	1.3	
65 & Over	1.4	1.4	1.0	

Note: Retirees who had service with two or more funds are included with the fund in which they were active at retirement.

Sources: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System, the Public Employees Retirement Association, the Teachers Retirement Association, and the actuary for the Legislative Commission on Pensions and Retirement.

Table 2.3 shows that the incentive may have affected the timing of retirements to a greater extent for participants between 55 and 58 than for older participants. For example, based on our high estimates, the effect of the 1993 incentive was 2.4 years for state employee participants between 55 and 58 years of age, compared with 1.4 to 1.6 years for the other age categories.

Cost of the 1993 Incentive Program

CHAPTER 3

There are two main costs of early retirement incentives: (1) the additional liability incurred by retirement funds to finance retirement benefits for early retirees and (2) the additional costs paid by employers to finance health insurance and/or lump sum payments for early retirees. This chapter examines the cost of the 1993 incentive for retirees under the state's three major public retirement funds: the State Employees Retirement Fund, the Public Employees Retirement Fund, and the Teachers Retirement Fund. We asked:

- **What is the cost of the 1993 early retirement incentive program? What is the cost per retiree?**
- **How much is paid by the retirement funds? How much is directly paid by employers?**
- **What are the costs of the pension benefit and health benefit components?**

METHOD

This section describes the method we used to estimate the cost of the 1993 early retirement incentive. First, we describe how we estimated the cost to the retirement funds of the pension incentive option. Second, we describe how we estimated the cost of the health benefit option. Finally, we discuss some cost issues involving local early retirement incentives.

Estimating the Cost to the Retirement Funds

To estimate the cost of early retirement incentives to the retirement funds, we obtained retirement data for each member who retired under the 1993 incentive from the three major retirement funds and the teacher retirement funds for the Minneapolis, St. Paul, and Duluth school districts. To obtain needed information for retirees who had service from two or more funds, we matched computer files of participants from each retirement fund.

For each participant, we obtained the actual amount transferred to the post-retirement fund, which represents the present value of the retiree's retirement benefits measured at the time of retirement. We also obtained the amount (as estimated by the retirement associations) that would have been transferred if the employee would have retired without the incentive. The difference between these two amounts is a rough estimate of the cost of early retirement incentives. Many previous studies, including the Rule-of-85 study by the Department of Finance, used this measure to estimate the cost of early retirement incentives.[1]

This method is accurate if participants would have retired at the same time were the incentive not offered. However, if participants had kept working, their annual benefits would be higher due to salary increases, additional years of service, and reductions in early retirement penalties. On the other hand, the retirement fund would receive additional contributions and could avoid making annuity payments while employees keep working. In addition, employees lose post-retirement benefit increases while working.

Our study examined the combined effect of these factors. We estimated the present value of each retiree's benefits under each of the following assumptions: the retiree would have retired at the same time without the incentive, or alternatively, the retiree would have kept working for one, two, three, or five more years without the incentive. Under each assumption, we calculated the retiree's new benefit based on additional year(s) of service and higher salary, taking into account any changes in early retirement penalties (such as qualifying for the Rule of 90 because of additional service and higher age). In each case we used a discount rate of 8.5 percent per year, a salary increase of 5.25 percent per year, and a post retirement annuity increase of 3.5 percent per year. These assumptions are consistent with the assumptions used by the pension commission's actuary to determine the retirement funds' financial status.

We then estimated the cost of the incentive to the retirement funds by subtracting the present value of the retiree's benefits without the incentive from the present value of the benefits with the incentive and adding the present value of additional contributions made by the employer and employee to the retirement fund, had the retiree kept working.

To estimate the average cost for all early retirees, we made low and high cost estimates based on the same assumptions we used in Chapter 2 regarding how long employees would have kept working without the incentive. For example, under our low estimate, we assumed that half of state employees would have retired at the same time without the incentive and half would have retired one year later. Under our high estimate, we assumed that 50 percent would have retired at the same time, 14 percent one year later, 10 percent two years later, and so forth, with the average time equal to 1.7 years. We describe this method in more detail in Appendix D.

Our cost estimates ignore the effect of the recent increase in retirement benefits for members of the Teachers Retirement Association who retired after May 1994.

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1 Minnesota Department of Finance, *An Evaluation of the Rule-of-85*, (St. Paul, 1986).

The pension benefit multiplier was increased by .13 percent of average salary per year of service, slightly higher than the increase under the 1993 incentive. As a result, teachers who retired under the 1993 incentive would have received higher pension benefits had they waited another year before retiring. This would significantly reduce our estimate of the 1993 incentive's cost. We ignored this effect in our cost estimates in order to make our estimates useful to policy makers considering future early retirement incentives. Significant increases in the retirement benefit formula do not usually occur one year after an early retirement incentive. Ignoring the effect of the recent benefit increase on the cost of the 1993 incentive makes it more likely that our estimates reflect what the costs would be under normal circumstances.

There is considerable uncertainty in cost estimates for early retirement programs.

It is important to recognize that there are several assumptions that must be made to estimate the cost of early retirement incentives. We made high and low estimates that reflect the uncertainty in our assumptions about how long retirees would have kept working without the incentive, but there is uncertainty in other assumptions as well, including how much their salaries would have increased, how many would have retired anyway without the incentive, and how much their annuities would increase after retirement. Given the uncertainty in each of these assumptions, it is impossible to precisely measure the actual cost.

Estimating Employer Costs

The primary employer cost of the 1993 incentive is the cost of continuing health insurance until the retiree reaches the age of 65. To estimate this cost for state agencies, we obtained from the Department of Employee Relations the annual cost of premiums paid on behalf of early retirees in 1993. To estimate the cost for school districts, we obtained annual health premium cost data from our survey of school districts. For school districts in our sample, we obtained the premium cost for each member of the Teachers Retirement Association who retired under the 1993 incentive. We did not obtain from employers the cost of providing health benefits to members of the Public Employees Retirement Association because so few of these members received the health benefit incentive (only 2 percent). We also did not obtain the premium cost for college teachers covered by TRA. Instead, we used the average annual premium cost for state employees and teachers.[2]

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2 The premium cost of health insurance may underestimate the actual cost of providing health care to early retirees. Premium costs paid by the state and local school districts are group rates based on the experience of public employees of all ages. The state does not keep track of the costs for different age groups. Since health care costs for those between 55 and 65 undoubtedly are higher than the cost for younger employees, the premium cost could be viewed as a low estimate of the actual cost. However, our review of school district contracts indicates that most school districts that do not normally pay the health premiums of early retirees do allow early retirees to continue their health insurance coverage so long as the retiree pays the group policy premium. Thus, for these districts, the additional cost is in fact the premium amount. For state agencies, it is not clear whether the 1993 incentive increased or decreased the number of people over 55 in the state employee insurance pool. On the one hand, many state employees who choose the health incentive will be covered by state insurance longer than they otherwise would be covered. On the other hand, the pension incentive induced many older employees to retire earlier than they otherwise would have retired, reducing the amount of time they are covered by state health insurance. As a result, we consider the premium amount to be a reasonable cost estimate.

To estimate the present value of future health benefits that early retirees would receive under the early retirement incentive, we multiplied the annual cost times the number of years the retiree was below 65. We assumed that health premium costs would increase at 8.5 percent per year, the discount rate we used in our analysis.

Many school districts have their own programs that provide employer-paid health insurance to early retirees. To estimate the additional cost to employers caused by the 1993 incentive, one needs to estimate how much of the health benefit cost would have been paid by the school districts anyway. Our survey of school districts found that about 68 percent of teachers who retired early were in districts that offered some employer-paid health benefits. Our review of school district teacher contracts indicates that about 17 percent of early retirees were in districts that provide early retirees with the same health benefits as active teachers. About 51 percent were in districts that provide more limited coverage than they do for active teachers, such as paying for single coverage but not family coverage. As a rough estimate, we assumed that 50 percent of the cost would have been paid for by schools were it not for the incentive.

COST OF THE 1993 INCENTIVE PROGRAM

Table 3.1 presents our low and high estimates of the cost of the 1993 incentive program. As we discussed above, these low and high estimates reflect the uncertainty regarding how long retirees would have kept working without the incentive. We estimate that:

The 1993 early retirement incentive program probably cost over $100 million.

- **The 1993 early retirement incentive program cost about $101 million to $132 million, including about $82 million to $113 million in retirement fund costs and about $19 million in employer costs.**

We estimate that the 1993 incentive cost about $42 million to $56 million for teachers and other licensed staff covered by TRA, about $36 million to $49 million for local government employees covered by PERA, about $19 million to $23 million for state employees, and about $5 million for college faculty covered by TRA.

There are two components to the cost of the 1993 early retirement incentive: the extra cost due to the increase in benefits and the extra cost due to the fact that some employees retired earlier than they otherwise would have. The extra cost to the retirement funds directly attributable to the higher pension benefit is about $69 million. The cost due to the incentive inducing employees to retire earlier than they otherwise would is about $13 million to $44 million. The difference reflects the uncertainty of how much earlier the incentive induces employees to retire.

The main reason that costs increase as the time by which employees retire early increases is that a high percentage of early retirees are either at least 65 years old or are eligible for the Rule of 90. For example, 33 percent of state employees who selected the pension option retired under the Rule of 90 and 47 percent were 65 or

Table 3.1: Estimated Cost of the 1993 Early Retirement Incentive Program

	State Employees Retirement Fund	Public Employees Retirement Fund	Teachers Retirement Fund (K-12)	Teachers Retirement Fund (College)	Total
Number of Early Retirees	651	1,667	1,410	248	3,976
Estimated Cost to:					
Retirement Funds					
Low Estimate	$15,200,000	$35,100,000	$29,000,000	$2,900,000	$82,800,000
High Estimate	19,400,000	47,900,000	43,200,000	No Estimate	114,300,000
Employers	3,380,000	660,000	13,060,000	1,660,000	18,760,000
Total Cost					
Low Estimate	18,600,000	35,800,000	42,000,000	4,500,000	100,900,000
High Estimate	22,800,000	48,600,000	56,300,000	No Estimate	132,200,000
Percent of Cost Paid by[1]:					
Retirement Funds	82%	98%	69%	63%	82%
Employers	18	2	31	37	18
Cost Per Retiree					
Low Estimate	$28,600	$21,800	$29,800	$18,200	$25,600
High Estimate	35,000	29,700	39,900	No Estimate	33,500

Note: This table does not include the costs for teachers retiring from Minneapolis, St. Paul, and Duluth school districts. Retirees who had service with two or more funds are included with the fund in which they were active at retirement. For these "combined service annuitants," cost estimates include costs to all retirement funds.

Sources: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System, the Public Employees Retirement Association, the Teachers Retirement Association, the actuary for the Legislative Commission on Pensions and Retirement, the Department of Employee Relations, and our survey of school districts.

[1]Percents are based on the low estimate of the cost to the retirement funds.

Most of the cost of the 1993 incentive program was borne by the state's three major retirement funds.

older. As we showed in Chapter 1, the Rule of 90 can substantially reduce the penalty for retiring early. In fact, the earlier that the retirement occurs, the greater is the impact of the Rule of 90 on retirement benefits. By causing more people who qualify for the Rule of 90 to retire early, the incentive program increases costs to the retirement funds. Similarly, we showed in Chapter 1 that retirement benefits increase slowly as employees continue working past 65. The retirement benefits of employees who retire when they are older than 65 are not adjusted for the fact that they will receive benefits for a shorter time period. As a result, by inducing employees over 65 to retire earlier than they otherwise would have, the incentive increases costs to the retirement funds.

Overall, about 81 percent of the cost was borne by the retirement funds and 19 percent by the employers (based on our low estimate of the cost to the retirement funds). This percentage varied among the retirement funds. The percentage paid by retirement funds ranged from 98 percent for PERA members to 68 percent for TRA members. One reason that PERA paid such a high percentage of the cost is

that most cities, counties, and schools offered the higher pension benefit option but not the health option to PERA members.

- **We estimate that the average cost per retiree of the 1993 incentive program is between $25,600 and $33,500.**

The average cost of the 1993 incentive program probably exceeds $25,000 per retiree.

The cost per retiree is highest for school district teachers ($29,800 to $39,900), followed by state employees ($28,600 to $35,000), city, county, and school employees covered by PERA ($21,800 to $29,700), and college faculty ($18,200). The cost is highest for teachers because they were the only group to receive both a higher pension benefit and a health insurance benefit under the 1993 incentive. College faculty had the lowest cost because they received one benefit and those who chose the pension benefit received a smaller increase (.1 percent of average salary per year of service instead of .25 percent). Members of PERA tended to have lower costs because, as we showed in Chapter 1, they had lower salaries and fewer years of service than other public employees.

Tables 3.2 and 3.3 show the costs of the pension benefit and health benefit options respectively. Overall, 3,682 retirees received the higher pension benefit under the 1993 incentive program.[3] A total of 1,601 retirees received the health benefit, including 264 who chose the health option and 1,337 who received both options. We found that:

- **The cost of the pension benefit is higher than the cost of the health insurance benefit under the 1993 incentive program.**

The average cost per retiree of the pension benefit incentive is about $22,300 to $30,800, compared with $19,900 for the health benefit incentive. As we discussed above, we assumed that if the 1993 incentive did not exist, schools would have paid about half of the health incentive cost for teachers under their own health benefit programs. Thus, the additional health benefit cost imposed on employers by the 1993 incentive would be about $11,700 per retiree.

The cost of the pension benefit incentive is $30,700 to $39,100 per retiree for state employees, well above the average cost for other public employees. The cost is higher for state retirees than for teachers because of the higher increase in the pension multiplier. It is higher than the cost for PERA members because state retirees had higher salaries.

Unlike previous incentives, the 1993 incentive extended eligibility to employees who retired after age 65. In Chapter 2, we showed that participants in the 1993 incentive who were under 65 probably would have kept working longer had there been no incentive than would those 65 and over. As a result, potential salary savings are probably greater for employees who retired when they were under 65. However, the cost of the pension incentive is considerably higher for retirees who were under 65 than for those who were 65 or older. State employees and PERA members together account for about 90 percent of incentive participants who

3 These figures do not include about 267 TRA members from Minneapolis, St. Paul, and Duluth who retired under the 1993 incentive program.

Table 3.2: Estimated Cost to the Retirement Funds of the Pension Component of the 1993 Incentive Program

	State Employees Retirement Fund	Public Employees Retirement Fund	Teachers Retirement Fund (K-12)	Teachers Retirement Fund (College)	Total
NUMBER OF RETIREES					
Under 65	261	879	1,337	130	2,607
65 & Over	235	728	73	39	1,075
Total	496	1,607	1,410	169	3,682
COST PER RETIREE					
Low Cost Estimate					
Under 65	$37,700	$29,600	$20,600	$17,600	$25,200
65 & Over	22,900	12,400	19,800	14,900	15,300
Total	30,700	21,800	20,500	17,000	22,300
High Cost Estimate					
Under 65	47,100	40,000	30,900	No Estimate	35,000
65 & Over	30,200	17,400	25,300	No Estimate	20,700
Total	39,100	29,800	30,700	No Estimate	30,800
TOTAL COST					
Low Estimate	15,200,000	35,100,000	29,000,000	2,900,000	82,200,000
High Estimate	19,400,000	47,900,000	43,200,000	No Estimate	113,400,000

Note: This table does not include the costs for teachers retiring from Minneapolis, St. Paul, and Duluth school districts. Retirees who had service with two or more funds are included with the fund in which they were active at retirement. For these "combined service annuitants," cost estimates include costs to all retirement funds.

Sources: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System, the Public Employees Retirement Association, the Teachers Retirement Association, and the actuary for the Legislative Commission on Pensions and Retirement.

Table 3.3: Estimated Cost to Employers of the Health Benefit Component of the 1993 Early Retirement Incentive Program

	State Employees Retirement Fund	Public Employees Retirement Fund	Teachers Retirement Fund (K-12)	Teachers Retirement Fund (College)	Total
Number of Retirees	155	30	1,337	79	1,601
Average Age	58.8	58.6	59.2	58.9	59.1
Average Years Until 65	6.2	6.4	5.8	6.1	5.9
Average Annual Health Cost	$3,522	$3,445	$3,368	$3,445	$3,369
Average Cost Per Retiree	$21,800	$22,000	$19,500	$21,000	$19,900
Total Cost	$3,380,000	$660,000	$26,120,000	$1,660,000	$31,820,000
Estimated Portion That Would Have Been Paid Under Employers' Existing Incentives	$0	$0	$13,060,000	$0	$13,060,000
Additional Cost to Employer	$3,380,000	$660,000	$13,060,000	$1,660,000	$18,760,000

Note: This table does not include the costs for teachers retiring from Minneapolis, St. Paul, and Duluth school districts. Retirees who had service with two or more funds are included with the fund in which they were active at retirement.

Sources: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System, the Public Employees Retirement Association, the Teachers Retirement Association, the Department of Employee Relations, and our survey of school districts.

retired when they were 65 or older. Based on the high cost estimate, the average cost was $40,000 for PERA members under 65, more than twice as high as the cost for those over 65 ($17,400). The cost for state employees under 65 ($47,100) is 56 percent higher than the cost for those who are 65 or older. Thus, while the benefits of inducing employees over 65 to retire may be lower, the costs are also lower.

Salary Savings Compared with the Cost of the 1993 Incentive Program

CHAPTER 4

In this chapter, we examine salary savings caused by the 1993 incentive and compare them with the incentive's cost to employers and retirement funds. It is important to recognize that salary savings are only one of the benefits of early retirement incentives. Other potential benefits include avoiding layoffs, improved productivity, and more productive activity by early retirees who switch to the private sector. In Chapter 5, we examine whether the 1993 incentive program avoided layoffs and improved productivity, but we do not attempt to measure the dollar value of these benefits. Furthermore, we do not examine whether early retirements improved the economy by stimulating activity in the private sector. Nevertheless, we think it is useful to examine how costs compare with salary savings, one of the major objectives of early retirement incentives. We ask:

- **How much salary savings resulted from the 1993 early retirement incentive program?**
- **How do salary savings compare with the cost of the 1993 incentive program?**

To answer these questions, we obtained lists of early retirees from the retirement associations and asked personnel administrators from a sample of school districts, counties, and cities to tell us what happened to each job vacated through the 1993 early retirement program. When the job was refilled, we obtained information on the salary of the replacement employee. In the case of teachers, we requested the average salary of newly hired teachers from each school district in our sample. We also used the results of a similar survey of state agencies conducted by the Department of Employee Relations. In addition, we examined employment trends of state agencies, school districts, counties, and cities.

It is not possible to precisely measure salary savings caused by early retirement incentives.

There are two types of salary savings that may occur as a result of an early retirement incentive: (1) savings that occur because the retiree is replaced with a lower-paid employee, and (2) savings that occur while the position is held vacant or eliminated. In either case, the amount of savings depends on how long the retiree would have kept working without the incentive.

It is not possible to precisely measure salary savings for several reasons. First, there is uncertainty concerning how long employees would have kept working had there been no incentive. Second, holding a position vacant does not necessarily mean that the employer reduces its salary expenses. It is normal for public em-

ployers to hold some positions vacant when employees leave in order to save money, reallocate workers, or find a replacement. Since most retirees who participate in an incentive program would have retired soon anyway, the effect of temporarily holding early retirees' positions vacant is to obtain salary savings earlier than otherwise would be possible. As a result, we did not include salary savings between the retirement date and the date the position was refilled.[1]

It is also possible that an employer may keep an early retiree's position vacant, but use the salary dollars to create a new position or fill a different vacancy. These changes may improve the agency's productivity, but do not necessarily reduce its salary expenses. As a result, we also examined employment trends of public agencies to assess the impact of early retirement programs on agency staff levels.

Another reason that it is difficult to measure salary savings is that a position may be filled by an employee from the same organization, which creates another vacancy that may or may not be refilled. In our case studies of state agencies, we found that many positions were filled through promotion, which created other vacancies. We did not ask agency personnel to determine these chain reaction effects because it often would be a difficult task.

In summary, measuring salary savings based on whether a position was refilled provides only a general indication of salary savings. As a result, it is important to also examine trends in public employment levels. If the number of employees is growing in a particular organization, it is unlikely that early retirement incentives will significantly reduce salary expenses by creating vacant positions.

The 1993 early retirement program required state agencies to obtain approval by the Department of Employee Relations (DOER) in order to refill any position during the biennium ending June 30, 1995, except for correctional guards and persons who provide direct patient care in state institutions. The Commissioner of Employee Relations instructed agency heads to carefully evaluate the need to refill each position and submit a memorandum justifying the decision. To refill positions in schools, counties, and cities, the governing body must give its approval.

We reviewed DOER's compilation of requests by state agencies, which range from a few sentences to a few pages. They often mention the need to handle the agency workload, and the fact that the request has been the result of a specific analysis of staffing needs. DOER called for additional information in some cases, but ultimately left the decision to refill positions to individual agencies, and did not disapprove any agency requests.

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1 For the same reason, we did not include severance payments made to early retirees as a cost of early retirement incentive programs. The only way that incentive programs affect severance payments is that employers must make the severance payments at an earlier time than they otherwise would.

SAVINGS DUE TO REPLACEMENT OF RETIREES WITH LOWER-PAID EMPLOYEES

Early retirees were replaced by lower-paid employees, but only for teachers was the salary savings significant.

Table 4.1 shows the estimated salary difference between the final salary of workers retiring under early retirement provisions and the employees hired to replace them. In each case, the average salary of replacement employees is lower than the salary of retirees, but only in the case of teachers is there a major difference. The average salary of teachers (covered by TRA) who participated in the 1993 incentive program was about $18,200 higher than the average salary of new teachers. Other salary differences were about $3,100 for state employees, $4,200 for city employees, $5,300 for county employees, and $2,800 for school employees covered by PERA.

Table 4.1: Salary Comparison, Early Retirees Compared to Replacements

	Average Salary at Retirement	Average Salary of Replacements	Salary Difference	Cases (unweighted)
TRA				
School Administrators	$63,807	$60,094	$3,713	75
Classroom Teachers	42,667	24,435	18,232	574
MSRS				
State Employees	40,266	37,131	3,135	203
PERA				
City Employees	34,705	30,507	4,198	143
County Employees	35,174	29,877	5,297	294
School District Employees	19,194	16,402	2,792	222

Note: Figures are based on weighted data and reflect only positions that were refilled.

Source: Program Evaluation Division survey and Department of Employee Relations survey.

Table 4.2 illustrates potential salary savings due to a teacher retiring one year earlier than planned because of the incentive. The average salary of a teacher at retirement was about $49,400, including employer costs for social security and retirement contributions, compared with $28,300 for new teachers. Thus, if the teacher would have taught for another year without the incentive, the district would have saved $21,100 in the first year. However, in subsequent years, the early retirement would likely cause the district to have higher salary expenses because the replacement teacher would have an additional year of experience. For example, if the district pays second year teachers 3 percent more than it pays first year teachers, it would pay an additional $850 in salary and fringe benefit expenses in the second year. As Table 4.2 shows, the cumulative savings keep declining as long as the replacement teacher remains, reaching about $15,000 after 8 years, and about $8,000 after 16 years. When the replacement teacher leaves, the cumulative savings will increase, after which it will again decline.

Table 4.2: Illustration of Salary Savings Due to a Teacher Retiring One Year Earlier Than Planned

Year	Salary and Fringe Benefits if Teacher Retires After Year 0	Salary and Fringe Benefits if Teacher Retires After Year 1	Salary Savings	Cumulative Savings	Discounted[a] Salary Savings	Discounted[a] Cumulative Savings
0	$49,400	$49,400				
1	28,300	49,647	$21,347	$21,347	$21,000	$21,000
2	29,149	28,300	(849)	20,498	(808)	20,192
3	30,023	29,149	(874)	19,624	(806)	19,386
4	30,924	30,023	(901)	18,723	(803)	18,583
5	31,852	30,924	(928)	17,795	(800)	17,782
6	32,807	31,852	(956)	16,840	(798)	16,985
7	33,792	32,807	(984)	15,855	(795)	16,189
8	34,805	33,792	(1,014)	14,842	(793)	15,397
9	35,850	34,805	(1,044)	13,797	(790)	14,606
10	36,925	35,850	(1,075)	12,722	(788)	13,819
11	38,033	36,925	(1,108)	11,614	(785)	13,034
12	38,793	38,033	(761)	10,854	(522)	12,512
13	39,569	38,793	(776)	10,078	(515)	11,997
14	40,361	39,569	(791)	9,286	(508)	11,489
15	41,168	40,361	(807)	8,479	(502)	10,987
16	41,991	41,168	(823)	7,656	(495)	10,492
17	42,621	41,991	(630)	7,026	(367)	10,125
18	43,261	42,621	(639)	6,386	(360)	9,765
19	43,909	43,261	(649)	5,738	(354)	9,411
20	44,568	43,909	(659)	5,079	(348)	9,063
21	45,237	44,568	(669)	4,410	(341)	8,722
22	45,689	45,237	(452)	3,958	(224)	8,499
23	46,146	45,689	(457)	3,501	(218)	8,280
24	46,607	46,146	(461)	3,040	(214)	8,067
25	47,073	46,607	(466)	2,574	(209)	7,858
26	47,544	47,073	(471)	2,103	(204)	7,654
27	28,300	47,544	19,244	21,347	8,071	15,725
28	29,149	28,300	(849)	20,498	(345)	15,380
29	30,023	29,149	(874)	19,624	(343)	15,037
30	30,924	30,023	(901)	18,723	(342)	14,694
31	31,852	30,924	(928)	17,795	(341)	14,353
32	32,807	31,852	(956)	16,840	(340)	14,013
33	33,792	32,807	(984)	15,855	(339)	13,674
34	34,805	33,792	(1,014)	14,842	(338)	13,336

Note: Figures are in constant dollars.

Assumptions:
Salaries increase by an inflation factor (5.0%) and an experience factor (3% for the first ten years, 2% for the next five years, 1.5% for years 16 through 20, 1% for years 21 through 25, and 0.5% for years 26 through 30).

Salary and fringe benefits of teacher who retires under the incentive: $49,400.

Salary and fringe benefits of replacement teachers: $28,300.

[a]These figures are discounted at 8.5 percent to be consistent with the discount rate used in the cost estimates. Since the salary figures in the other columns are adjusted by 5.0 percent, the figures in this column are adjusted by an additional 3.33 percent.

The actual savings depends on a variety of factors, including how long replacements keep working, what year savings are measured, and the district's salary schedule. Our 1991 study on teacher compensation found that the turnover rate for public school district teachers is low (about seven percent in 1989).[2] This indicates that if the turnover rate does not change significantly, average teacher tenure would be greater than ten years.

To estimate the long-run salary savings, we estimated the cumulative salary savings year-by-year for 50 years based on different assumptions about average teacher tenure, ranging from 10 to 13 years.[3] We assumed that the district's salary schedule initially increased by 3 percent per year, and gradually tapered off, consistent with teacher salary schedules in 1989.[4] To be consistent with our cost estimates, we calculated the present value of salary savings at the time of retirement based on a discount rate of 8.5 percent. We found that in the long run (defined as years 11 through 50) the average year-end cumulative savings ranged from $12,000 to $15,000. In the following discussion, we assume that replacing retired teachers with lower-paid teachers saves school districts $15,000 for each year that a retired teacher would have worked without the incentive.

Table 4.3 compares potential salary savings with the cost of the 1993 incentive under our low, middle, and high estimates of the average additional time that retirees would have worked without the incentive. Overall, we found that:

Average salary savings due to replacing retirees with lower-paid employees was considerably less than the average cost of the 1993 incentive program.

- **Salary savings from replacing retirees with lower-paid employees do not, by themselves, exceed the cost of the 1993 incentive.**

For state employees and PERA members, the salary savings due to replacing retirees with lower-paid employees is less than 25 percent of the incentive's cost. For public K-12 school districts, salary savings due to retirements of TRA members are higher, but even under our high savings estimate, are less than the cost.

SALARY SAVINGS DUE TO HOLDING RETIREES' POSITIONS VACANT

If an early retiree's position is held vacant, the most salary savings that could be obtained would be the salary and fringe benefits during the time that the retiree would have kept working had there not been an incentive. Table 4.3 shows that:

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2 Office of the Legislative Auditor, *Teacher Compensation, (St. Paul, 1991).*

3 We used six assumptions: (1) the first replacement teacher would be employed for 2 years, the second teacher would be employed for 26 years, the third teacher for 10 years, and the fourth replacement teacher for 2 years. Thereafter we repeated the same tenure pattern. (2) the first through fourth replacement teachers had tenures of 3 years, 10 years, 1 year, and 31 years; (3) replacement teachers had tenures of 1 year, 31 years, 3 years, 10 years; (4) 26 years, 2 years, 10 years; (5) 10 years, 2 years, 26 years; (6) 10 years, 26 years, 2 years.

4 We assumed that teacher salaries increased by 3 percent per year for the first ten years, 2 percent per year for the next five years, 1.5 percent for years 16 through 20, 1 percent for years 21 through 25, and 0.5 percent for years 26 through 30.

Table 4.3: Comparison of Costs and Salary Savings for the 1993 Incentive Program

How Much Earlier Participants Retired Due to Incentive (in years)		Estimated Cost Per Retiree	Average Salary and Fringe	Potential Salary Savings With: Replacement at Lower Salary	Potential Salary Savings With: No Replacement	Percent With "No Replacement" That is Necessary To Break Even
STATE EMPLOYEES RETIREMENT FUND						
Low Estimate	0.50	$28,600	$46,157	$1,881	$23,078	not possible
Mid Estimate	1.10	31,800	46,157	4,138	50,777	59%
High Estimate	1.70	35,000	46,157	6,395	78,467	40%
PUBLIC EMPLOYEES RETIREMENT FUND						
Low Estimate	0.43	21,800	35,040	2,086	15,067	not possible
Mid Estimate	1.00	25,750	35,040	4,850	35,040	69%
High Estimate	1.50	29,700	35,040	7,276	52,560	50%
TEACHERS RETIREMENT FUND						
Low Estimate	0.55	29,800	56,056	7,566	30,831	96%
Mid Estimate	1.20	34,850	56,056	16,507	67,267	36%
High Estimate	1.80	39,900	56,056	24,760	100,901	20%

Note: Cost includes cost to the retirement associations and employers. We assumed that fringe benefits equaled 20 percent of salary, except that we used 23 percent for TRA members.

Source: Program Evaluation Division analysis of data provided by the Minnesota State Retirement System, the Public Employees Retirement Association, the Teachers Retirement Association, the actuary for the Legislative Commission on Pensions and Retirement, the Department of Employee Relations, and our survey of school districts, counties, and cities.

- **A high percentage of early retirees' positions would have to be held vacant in order for salary savings to exceed the 1993 incentive's cost to the retirement funds and employers.**

Under our middle estimates, the percentage of early retirees' positions that would have to be kept open in order to cover the cost of the incentive is about 69 percent for PERA members, 59 percent for state employees, and 36 percent for TRA members. For example, state employees who retired under the 1993 incentive had average salary and fringe benefits of about $46,157. If, on average, state employees were induced to retire 1.1 years earlier by the incentive, the potential salary savings would be $50,772 per retiree if their positions were kept vacant, and $4,138 if they were replaced. Since the average cost per early retiree is about $31,800, about 59 percent of the early retirees' positions would need to be kept vacant to cover the cost.

Even under our high estimate of how long early retirees would have kept working without the incentive, a significant percentage of early retirees' positions would have to be kept open in order to cover the cost of the incentive (50 percent for PERA, 40 percent for state employees, and 20 percent for teachers). Under our low estimate for both state employees and PERA members, the cost per retiree is higher than the salary savings regardless of how many retirees were replaced.

Employment trends suggest that salary savings may not exceed the public costs of the 1993 incentive program for schools and counties.

Overall, employment trends presented in Chapter 5 and our survey results suggest that it is unreasonable to expect this many vacancies to be created by the early retirement program. Statewide, employment levels have recently been growing in schools and counties. In fact, 83 percent of public school teachers were in school districts with growing employment levels between 1993 and 1994. While we do not have county employment data for 1993 or 1994, about 92 percent of county employees were in counties with growing employment between 1988 and 1992. Altogether, schools and counties had about two-thirds of the participants under the 1993 early retirement incentive.

Employment trends suggest that the early retirement incentives were more likely to reduce positions in state agencies than counties or schools. About two-thirds of state employees were in state agencies that were cutting back the number of full-time employees between 1993 and 1994. Overall employment for state agencies declined by about 2 percent between 1993 and 1994 (full-time employment declined by 3 percent).

Table 4.4 presents our survey results on the status of positions vacated through the 1993 early retirement program. We found that the percentage of retirees' positions that were left vacant was considerably less than the percentage required to cover the cost of the incentive program for schools, counties, and cities. The percentage of retirees' positions left vacant was about 6 percent for school administrators, 11 percent for school PERA members, 22 percent for county employees, and 31 percent for city employees.

Table 4.4: Status of Positions Vacated by 1993 Early Retirees, Fall 1994

	Type of Early Retiree				
	Licensed School Administrators	Non-Licensed School Employees	City Employees	County Employees	State Employees
POSITION REFILLED OR CONTRACTED OUT					
Refilled, Same Classification	89.7%	84.9%	59.4	71.2%	35.6%
Refilled, Different Classification	4.1	3.3	8.5	4.2	3.0
Contracted Out	0.0	0.5	1.5	2.1	0.2
POSITION VACANT OR ELIMINATED					
Duties Reassigned	4.8	8.1	28.5	18.6	48.1
Job Eliminated	1.4	3.3	2.1	3.8	13.1
Total	100.0%	100.1%	100.0%	99.9%	100.0%
Number of Cases (unweighted)	98	275	261	396	540

Note: Percentage distribution based on weighted frequencies.

Source: Program Evaluation Division survey and Department of Employee Relations survey.

Some state agencies may have held enough retirees' positions vacant to cover the cost of the incentive program.

State agencies kept open a higher percent of retirees' positions. About 61 percent of positions vacated by early retirement of state employees were kept open, which is slightly more than our mid-range estimate of the percent required to cover the cost of the program. However, the vacancy data may overstate salary savings for two reasons. First, state agencies may use the salary dollars from these vacancies to fill other vacancies or create new positions. In such cases, the incentive program may provide greater personnel flexibility, but not salary savings. Second, the position status data were based on the status as of August 1994, less than a year after most incentive participants retired. Personnel managers from several state agencies told us that they were planning to refill some of their vacancies in the near future. Thus our estimates may overstate actual salary savings.

While there are a number of limitations to these position-status data, they are consistent with the employment trend data. We conclude that:

- **Overall, it is doubtful that salary savings from the 1993 incentive program exceed the cost to retirement funds and employers.**

It should be recognized that early retirement incentives can produce significant salary savings in agencies facing large staff reductions. In Chapter 5, we examine case studies of two state agencies (the Department of Human Services and the Department of Transportation) that made large staff reductions.

Benefits to Employers

CHAPTER 5

In addition to salary savings, the potential benefits of early retirement include avoiding layoffs, improving productivity, and increasing opportunities for job mobility and promotion. Of course, employee turnover of any kind presents these opportunities, but normal retirements and attrition may not occur when they are needed to forestall layoffs or permit hiring of more productive or appropriately trained workers. Layoffs are painful to the organizations and people involved and induce certain costs in severance pay and unemployment benefits that voluntary retirements do not. Also, early retirements concentrated in a short period of time may present employers with a chance to make more extensive staffing or organizational changes than would ordinarily be possible in a comparable period.

As we saw in Chapter 3, the cost of early retirement incentives such as those offered in 1993 is significant. The incentives do not make sense unless the benefits to employers are significant as well. In this chapter, we ask:

- **What is the impact of early retirements on employee or agency productivity?**
- **Do early retirements provide opportunities for mobility or promotion?**
- **To what extent have early retirements substituted for layoffs?**
- **What proportion of public employment is in school districts, units of local government, and state agencies with growing employment levels?**

When evaluating early retirement incentives, it is helpful to keep in mind that annual turnover in public employment in recent years is around 8 to 9 percent. This does not guarantee that attrition will occur when and where an employer would want it to occur; it does mean that on the whole, public employers have some flexibility to make staffing changes or cuts without making layoffs. As we will show, employment conditions vary considerably across state government and around the state.

While many policy makers assume that early retirement will produce a net benefit for employers, early retirements also carry a potential downside. It may be that the most highly experienced and productive employees leave as a result of retirement incentives or that replacements are difficult to find or need extensive train-

ing. We inquired about the negative consequences of early retirement and present data on these points as well.

In order to address these issues, we surveyed personnel administrators around the state and asked them about their views and observations on the positive and negative effects of early retirement incentives. We inquired specifically about how many layoffs were made by each employer in recent years, and how many layoffs were avoided by early retirements. Finally, we examined data on population, enrollment and employment trends in school districts and state, city, and county government in recent years. The utility of early retirement incentives can be expected to differ between employers with a growing or shrinking work force. We surveyed representative samples of school districts, cities, and counties. We also surveyed all state executive branch agencies with early retirees. Appendix A presents a description of the samples we used. In every case our response rate was over 85 percent.

We surveyed personnel administrators in order to learn their views on early retirement incentives.

EMPLOYER OPINIONS AND ESTIMATES

We asked personnel managers in state and local government and in school districts a series of questions on the positive and negative aspects of early retirement incentives and the usefulness of early retirement incentives in meeting budget constraints and avoiding layoffs. We were interested both in opinions and in specific factual information.

As Table 5.1 shows, a strong majority of school district personnel administrators agreed that early retirement incentives for teachers and other TRA members resulted in meaningful salary savings.[1] About 84 percent agreed that meaningful savings were achieved, and 16 percent disagreed. Interestingly, a much smaller percentage of the same personnel administrators said that early retirements resulted in salary savings in the case of other school district employees. These employees are members of PERA. A slight majority of administrators disagreed with the statement that early retirement incentives resulted in meaningful salary savings in the case of non-licensed school district employees. A majority of administrators in the cities and counties and roughly half of the state administrators we surveyed agreed that meaningful salary savings were achieved.

These figures are consistent with the salary data for replacement workers we presented in the last chapter. Salary differences between retiring and replacement teachers are much larger than the differences between other school district employees or employees of state, county, and city government. Our interpretation is that administrators were aware of these differences as they responded to the question on salary savings.

1 A copy of the questionnaire we sent to local employers and state agency personnel managers is included in Appendix A.

Most administrators believed early retirement incentives had resulted in salary savings.

Table 5.1: Personnel Managers' Views on Whether the 1993 Early Retirement Program Produced Meaningful Salary Savings

	School Districts				
	TRA	PERA	Cities	Counties	State Agencies
Agree	83.7%	46.2%	65.0%	75.7%	51.9%
Disagree	16.3	53.8	35.0	24.3	48.1
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Number of Cases (unweighted)	79	68	44	47	27

Note: Personnel managers were asked about their agreement with the following statement: "On the whole, early retirements resulted in meaningful salary savings."

Percentage distribution based on weighted frequencies.

Source: Program Evaluation Division survey.

Effect on Job Mobility and Promotion

We asked personnel managers about the impact of the 1993 early retirement incentive program on opportunities for job promotion and mobility. As Table 5.2 shows, between 44 and 59 percent of school district, city, and county personnel administrators agreed that early retirement incentives help to create opportunities for promotion and mobility. About 67 percent of personnel administrators in state agencies agreed as well. More state and city personnel administrators saw this benefit than administrators in schools or counties. As we will see later, state and

Table 5.2: Personnel Managers' Views on Whether the 1993 Early Retirement Program Created Opportunities for Job Mobility and Promotion

	School Districts				
	TRA	PERA	Cities	Counties	State Agencies
Agree	47.8%	45.9%	59.0%	44.1%	66.7%
Disagree	52.2	54.1	41.0	55.9	33.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Number of Cases (unweighted)	79	69	44	46	27

Note: Personnel managers were asked about their agreement with the following statement: "Early retirement incentives created opportunities for promotion or mobility that were overdue."

Percentage distribution based on weighted frequencies.

Source: Program Evaluation Division survey.

city government employment has not been increasing in recent years, while school district and county employment is growing quite rapidly. There is probably greater opportunity for mobility and promotion in growing organizations.

Effect on Productivity

Administrators felt that early retirements resulted in productivity gains.

Many expect early retirement incentives to improve the productivity of the work force. Although there is some reluctance to articulate this purpose, there is a clear understanding that in any organization some long-term employees will cease to be as productive as they were, or will lack the skills that are a normal part of contemporary training in many fields. Of course, some long-term workers are highly experienced and productive.

Which type of worker responds to early retirement incentives is a question of some importance. Some suggest that highly productive workers who could easily get another job will be the first to respond, or that it will be difficult or expensive to replace retiring employees who have years of training and experience in the job. Alternatively, it may be people who are ready to retire because they have lost interest in work or are in ill health that are most likely to retire.

We did not ask retirees why they retired, but we did ask personnel administrators about the impact of early retirement on productivity. Only a small minority of personnel administrators report a loss of productivity as a result of early retirements. More felt there was at least some improvement in productivity as a result of early retirements in their organizations than felt there was a loss of productivity. As in the case of the other measures reported here, responses vary between school districts and other local units. Table 5.3 shows that 28 percent of school district personnel directors felt that the early retirement of teachers (and other TRA members) caused a significant improvement in productivity, and an additional 38

Table 5.3: Personnel Managers' Assessment of the Impact of the 1993 Early Retirement Program on Employee Productivity

	School Districts				
	TRA	PERA	Cities	Counties	State Agencies
Significant Improvement	28.4%	6.4%	16.0%	5.6%	14.8%
Some Improvement	38.0	28.7	34.0	9.7	25.9
No Change	27.9	56.7	45.1	73.6	55.6
Some Loss of Productivity	5.8	3.2	4.9	11.1	3.7
Significant Loss of Productivity	0.0	5.1	0.0	0.0	0.0
Total	100.1%	100.1%	100.0%	100.0%	100.0%
Number of Cases (unweighted)	79	69	44	48	27

Note: For PERA and MSRS members, personnel managers were asked: "Please describe the effect of the 1993 early retirement incentives on the productivity of employees in your department/city/county/district." For TRA members, school district personnel managers were asked: "Please describe the effect of early retirements on teacher quality."

Percentage distribution based on weighted frequencies.

Source: Program Evaluation Division survey.

percent said there was some improvement. Only 6 percent felt there was some loss of productivity, and 28 percent felt there was no change. The same personnel directors felt that productivity improvements occurred but to a lesser extent for their non-professional employees as a result of early retirement. In this case 6 percent said there was a significant productivity improvement and an additional 29 percent said there was some improvement compared to a total of 8 percent who said there was at least some loss of productivity.

A similar pattern holds for state and city government. County administrators were less likely to feel that there was a productivity gain. At each level of government, however, more administrators felt there was a productivity gain than felt there was a loss, although half or more administrators in counties and state agencies felt there was no change in productivity as a result of the retirements.

Budget Savings

We also asked personnel administrators if they agreed with the statement that the 1993 early retirement incentive program helped them resolve a difficult budget situation. As Table 5.4 shows, about 40 percent of school district administrators agreed with the statement in connection with TRA retirements, and 23 percent agreed in reference to their employees covered by PERA. Half of administrators in state agencies, and fewer than half in local government agreed that early retirement incentives solved a difficult budget situation.

Negative Effects

Personnel managers expressed mixed views about whether the early retirement program helped solve a difficult budget situation.

In our initial interviews we learned that early retirement incentives sometimes cause employers problems in planning for staffing needs. Employers do not

Table 5.4: Personnel Managers' Views on Whether the 1993 Early Retirement Program Helped Solve a Difficult Budget Situation

	School Districts				
	TRA	PERA	Cities	Counties	State Agencies
Agree	39.5%	22.9%	26.7%	32.4%	50.0%
Disagree	60.5	77.1	73.3	67.6	50.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Number of Cases (unweighted)	75	69	44	47	26

Note: Personnel managers were asked about their agreement with the following statement: "Early retirements helped solve a difficult budget situation."

Percentage distribution based on weighted frequencies.

Source: Program Evaluation Division survey.

ordinarily know who is going to respond to the incentives. If the program is authorized by the Legislature in May, becomes effective in July, and stays in effect for half a year, employers may not have adequate time to educate their employees on the opportunity to take early retirement. They also may be hard pressed to recruit replacements. This issue was discussed by several administrators and seemed to us to be the issue with the best chance of emerging as having a significant negative effect. However, as Table 5.5 shows, only a very small percentage of personnel administrators for public employers in Minnesota thought this was a problem.

Table 5.5: Personnel Managers' Views on Whether the 1993 Early Retirement Program Caused Difficult Planning Problems

	School Districts				
	TRA	PERA	Cities	Counties	State Agencies
Agree	3.5%	1.3%	9.9%	4.2%	0.0%
Disagree	96.5	98.7	90.1	95.8	100.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Number of Cases (unweighted)	79	69	44	48	27

Note: Personnel managers were asked about their agreement with the following statement: "Early retirement incentives created difficult problems in planning for future staffing needs."

Percentage distribution based on weighted frequencies.

Source: Program Evaluation Division survey.

Overall Impact

We also asked personnel administrators to assess the overall impact of early retirement incentives. As shown in Table 5.6, all but a small minority said that the effect was either generally positive or strongly positive. As we have seen, school district personnel administrators are the most positive when responding to questions about teacher retirements. Early retirement is much more deeply established as a normal practice and expectation among teachers than it is for either other school employees or other public employees. Many school districts offer substantial early retirement incentives of their own. And our survey data are consistent with the concept that personnel managers expect teachers to retire by the time they reach 55 or 60 years of age.

Personnel administrators evaluated the overall impact of early retirement incentives positively.

Table 5.6: Personnel Managers' Assessment of the Overall Impact of the 1993 Early Retirement Program

	School Districts				
	TRA	PERA	Cities	Counties	State Agencies
Strongly Positive	30.2%	12.2%	20.5%	21.2%	20.8%
Generally Positive	67.8	77.0	67.1	75.8	79.2
Generally Negative	2.0	10.8	12.3	3.0	0.0
Strongly Negative	0.0	0.0	0.0	0.0	0.0
Total	100.0%	100.0%	99.9%	100.0%	100.0%
Number of Cases (unweighted)	76	63	44	45	24

Note: Personnel managers were asked: "Taking everything into consideration, how would you evaluate the impact of the 1993 early retirement incentives on your department/district/city/county?"

Percentage distribution based on weighted frequencies.

Source: Program Evaluation Division survey.

EFFECTIVENESS IN AVOIDING LAYOFFS

One of the basic purposes of early retirement incentives is to allow public employers to achieve budget reductions and reductions in force without making layoffs. We asked each employer for data on layoffs during recent years and how many layoffs were avoided because of the 1993 early retirement incentive program. We found:

- **Most employers reported that they did not avoid any layoffs or terminations as a result of the 1993 incentive program.**

As Table 5.7 shows, between 58 and 96 percent of employers said they avoided no layoffs. Very few local employers reported that they avoided more than four layoffs. No county or city employers had more than three layoffs and only about six percent of school districts said they avoided four or more layoffs or terminations.

The case of state government is somewhat different. Fifty-eight percent of state agencies avoided no layoffs, but a couple of departments said they avoided more than 25 layoffs as a result of the 1993 incentives. We discuss the situation facing these departments later in the chapter.

We also asked personnel administrators to estimate how many layoffs they actually made each year from 1991 to 1994. We found:

- **The vast majority of public employers did not have any layoffs in a given year. A majority did not have any layoffs during the entire period.**

Table 5.7: Personnel Managers' Estimates of Layoffs and Terminations Avoided Due to the 1993 Early Retirement Program

	School Districts					
	TRA	PERA	Cities	Counties	State Agencies	
None	68.9%	83.8%	88.3%	95.8%	None	57.7%
1	6.1	7.1	10.5	2.8	1-5	30.8
2	9.7	5.9	0.0	0.0	6-10	3.8
3	8.7	0.6	1.2	1.4	11-25	0.0
4 or more	6.5	2.6	0.0	0.0	26-50	3.8
					51 or more	3.8
Total	99.9%	100.0%	100.0%	100.0%	Total	99.9%
Number of Cases (unweighted)	75	66	44	48		26

Note: Personnel managers were asked: "Please estimate the number of layoffs and terminations you avoided as a result of the 1993 incentive." For TRA members, respondents were instructed: "Do not include teachers who were laid off over the summer but recalled at the beginning of the following school year."

Percentage distribution based on weighted frequencies.

Source: Program Evaluation Division survey.

The early retirement incentive program was offered to many public employers that did not face layoffs.

Table 5.8 shows that (with the exception of state government) 77 to 99 percent of employers across the years shown did not make any layoffs. Between 88 and 94 percent of school districts did not layoff PERA members any year between 1991 and 1994, and between 77 and 87 percent did not lay off any teachers. Statistics for cities and counties present a similar picture. More than 90 percent of city and county personnel administrators said they did not lay off anyone between 1991 and 1994, with the exception of cities in 1992 where 82 percent said they made no layoffs. Early retirement incentives were in effect in some jurisdictions during the period, however the prevalence of layoffs shows no clear relationship to the existence of incentive programs and is largely due to other factors such as growth in employment and changes in the work load.[2]

We conclude that early retirement incentives have been offered to many employers who did not need to lay off any employees in the early 1990s. While the situations of individual local employers are not uniform, the generalization can be

2 Table 5.8 presents layoff data for a period of time when some public employers offered early retirement incentives, and these incentives could have affected the numbers in Table 5.7. However, few local employers offered incentives in 1991 and 1992. School district employees were not eligible in 1991. Our survey found that about 7 percent of cities over 2,000 offered an incentive in 1991 and 13 percent offered an incentive in 1992. About 12 percent of counties participated in 1991 and 18 percent participated in 1992. The major incentive that is the focus of our report was offered in the second half of 1993, and as Chapter 1 discusses in greater detail, most school districts, cities, and counties participated.

Most public employers have not laid off employees in recent years.

Table 5.8: Personnel Managers' Estimates of Layoffs, 1991 to 1994

	1991	1992	1993	1994
SCHOOL DISTRICTS				
TRA				
None	87.4%	81.8%	86.6%	77.0%
1	5.7	9.1	5.9	6.8
2	2.9	2.1	6.0	7.9
3	0.6	4.8	0.0	0.5
4 or more	3.4	2.1	1.6	7.9
Total	100.0%	99.9%	100.1%	100.1%
Number of Cases (unweighted)	65	67	69	71
PERA				
None	92.8%	93.6%	92.4%	88.3%
1	4.3	5.7	5.6	4.8
2	1.4	0.0	0.7	2.1
3	0.0	0.0	0.0	0.7
4 or more	1.4	0.7	1.4	4.1
Total	99.9%	100.0%	100.1%	100.0%
Number of Cases (unweighted)	60	61	61	62
CITIES				
None	90.7%	81.8%	97.3%	94.2%
1	4.0	7.8	2.7	0.0
2	5.3	3.9	0.0	2.6
3	0.0	0.0	0.0	2.6
4 or more	0.0	6.5	0.0	0.6
Total	100.0%	100.0%	100.0%	100.0%
Number of Cases (unweighted)	40	41	40	41
COUNTIES				
None	92.8%	91.2%	94.2%	98.6%
1	4.3	5.9	4.3	1.4
2	0.0	0.0	1.4	0.0
3	0.0	2.9	0.0	0.0
4 or more	2.9	0.0	0.0	0.0
Total	100.0%	100.0%	99.9%	100.0%
Number of Cases (unweighted)	46	45	46	46
STATE AGENCIES				
None	64.0%	73.1%	63.0%	59.3%
1 - 5	12.0	11.5	29.6	25.9
6 - 10	8.0	11.6	3.7	3.7
11 - 25	12.0	0.0	0.0	7.4
26 - 50	4.0	3.8	0.0	0.0
51 and over	0.0	0.0	3.7	3.7
Total	100.0%	100.0%	100.0%	100.0%
Number of Cases (unweighted)	25	26	27	27

Note: Percentage distribution based on weighted frequencies.

Source: Program Evaluation Division survey.

made that one of the major problems that early retirement incentives are supposed to address was not widespread during this period.

As Tables 5.7 and 5.8 show, however, conditions facing state agencies were different. As noted, more than half of the 26 state agencies said that no layoffs were avoided by early retirements, and somewhat more than this said that they did not actually experience layoffs in any given year between 1991 and 1994. But a few state agencies did lay off significant numbers of workers, and a couple of agencies did avoid a significant number of layoffs. The two state departments most affected by the threat of layoffs or other terminations were the Department of Human Services and the Minnesota Department of Transportation. These departments are discussed in greater detail later in the chapter, but the fact that each department has both made layoffs and left open positions vacated by early retirement provides fairly clear evidence that the early retirement option has served an important purpose in these cases.

TRENDS IN PUBLIC EMPLOYMENT

As a whole, public employment has grown.

Another way of looking at the issue of the need for early retirement incentives is to look at employment growth trends among public employers in recent years. Of particular interest is the question of how many employers are growing and whether the growth is among employers with a large share of all public employees. If public employers are growing, and have more employees at the end of the year than at the beginning, they should have considerable flexibility to make staffing changes without the use of early retirement incentives. This does not mean that early retirement incentives have no utility in such circumstances. Even a growing employer may have an outmoded job that will cease to be performed when the incumbent retires, to the benefit of the organization and taxpayer. However, on the basis of the cost estimates and analyses presented in the last two chapters, we doubt if early retirement is a net benefit to most growing employers.

Statistics on this point show that public employment as a whole is growing although not all employers are sharing in this growth. The data we have on trends in public employment come from several sources, and no single source is ideal. Table 5.9 presents data on active members of the pension systems affected by the 1993 incentives.[3]

Table 5.9 shows that active membership in the TRA Teachers Retirement Fund, the PERA Public Employees Retirement Fund, and the MSRS State Employees' Retirement Fund is growing.[4] Active members are those who are working and making pension contributions. The rate of growth between June 1993 and June 1994 was 1.1 percent for state employees, 4.6 for PERA members (local govern-

3 Not all members were offered early retirement incentives in 1993. This is the most inclusive data source, but breakdowns by employer or employer type are not available.

4 In the report and in the next pages, we refer to members of the retirement associations, when, strictly speaking this is not always the same group as those enrolled in particular plans or covered in particular fund accounting or actuarial reports. Data limitations make it difficult to present the experience of exactly the group offered early retirement incentives.

Table 5.9: Change in Active Membership of Retirement Associations, 1993 to 1994

	Teachers Retirement Fund	Public Employees Retirement Fund	State Employees Retiremenet Fund
Active Members, June 30, 1993	65,268	114,932	48,830
Additions	7,111	14,288	4,922
Deletions			
Service Retirements	(1,404)	(2,506)	(996)
Other Terminations	(4,440)	(6,467)	(3,803)
Active Members, June 30, 1994[a]	66,525	120,199	49,365
Growth Rate	1.93%	4.58%	1.10%
Turnover Rate	8.95%	7.81%	9.83%
Retirement Rate	2.15%	2.18%	2.04%

Sources: Retirement Fund Actuarial Valuation reports.

[a]Totals reflect minor data adjustments used in the actuarial valuation reports.

The major retirement associations have had growth in their contributing (or active) membership.

ment and non-licensed school district employees) and 1.9 percent for TRA members.

The annual turnover rate for public employees ranged from 7.8 percent for PERA members to 9.0 percent for TRA members and 9.8 percent for state employees in MSRS. The retirement rate is somewhat over 2 percent for each group. Table 5.9 does not present data on growth, retirement, and turnover for earlier years, but these data are very similar. The rates do not change much from year to year. PERA membership numbers include both school district and local government employees, and TRA members included Community College and State University Faculty in addition to the approximately 54,000 professional school district employees in the school districts represented by those we sampled.

Active membership in the retirement associations does not match up perfectly with the employee groups who were offered early retirement incentives in 1993. In the case of MSRS, the biggest difference is that University of Minnesota Civil Service employees were not offered the incentive, but are included in Table 5.9. In Table 5.10 we present data from the State Department of Employee Relations on about 30,000 state employees that more closely represent the group eligible for early retirement incentives in 1993. Table 5.10 shows employment levels for both full-time state employees and total state employees for several points in time. It also shows data on school district licensed employees for several years, and city and county employees for the most recent years for which data were available.

The growth rate we compute using DOER data for state executive employment alone is -1.7 percent between January 1993 and January 1994 and this compares fairly closely to the 1.10 rate for all state employees. And the growth rate for TRA

Table 5.10: Employment Trends, 1982-94

	Employment				Change in Employment	
	1982	1990	1993	1994	1990 to 1994	1993 to 1994
STATE AGENCIES						
Full-Time	28,081	30,597	31,164	30,260	-1.10%	-2.90%
Total	32,380	39,211	40,538	39,847	1.62%	-1.70%
SCHOOL DISTRICTS						
Classroom Teachers		43,121	45,554	46,826	8.59%	2.79%
All Licensed Employees		49,674	52,369	53,710	8.12%	2.56%
		1988	1990	1992	1988 to 1992	1990 to 1992
COUNTY						
Full-Time		24,105	25,659	26,178	8.60%	2.02%
CITY						
Full-Time		17,519	17,536	17,356	-0.93%	-1.03%

Sources: Department of Employee Relations, Department of Education, and State Auditor.

members is 2.6 percent between school years 1993-94 and 1994-95 using State Department of Education data. This compares fairly closely to 1.93 percent for all TRA members.

State employment was up slightly in the 1990s, but off a little between 1993 and 1994. School district professional employment has grown.

The incomplete data we have on city and county employment shows a slight decline for cities and an increase for counties between 1990 and 1992 the latest year for which we have data. All in all, the data sets are reasonably consistent.

If employment is growing or staying close to even, early retirement incentives may be of questionable value. Normal attrition ranges from 7.8 percent to 9.8 percent in recent years. This level of turnover allows employers at least some degree of flexibility to reduce the work force or to shift resources around.

Tables 5.11 through 5.14 show, first, what percent of employers are facing employment growth or decline, and second, how many workers are employed in state agencies, school districts and cities and counties with a growing work force.

State Government

Most state agencies experienced declining employment in the year ending January 1994. Table 5.11 shows that growing agencies employed 33 percent of workers and declining departments employed two-thirds. About 28 percent of state employment was in agencies whose employment levels declined at least two percent. Early retirement incentives may not be needed to avoid layoffs or hiring gridlock even in agencies with declining employment since annual turnover in state employment is about 9.8 percent, and retirement represents about two percentage points of this turnover. As we saw earlier, 59 to 73 percent of state agencies made

About two-thirds of full-time state employment was in agencies that were not growing.

Table 5.11: Distribution of State Agencies by Change in Full-Time Employment, 1993 to 1994

		Full-Time Employment		
Employment Change	Agencies	Number	Percent	Cumulative Percent
More than 5% decline	3	1,020	3.37%	3.37%
-4.9 to -2.0%	5	7,514	24.83	28.20
-1.9 to 0	9	11,680	38.60	66.80
0.1 to 1.9	1	1,898	6.27	73.07
2.0 to 4.9	6	4,324	14.29	87.36
Over 5.0%	4	3,824	12.64	100.0%
Total	28	30,260	100.0%	

Source: Department of Employee Relations.

no layoffs in a given year between 1991 and 1994. Also, as we pointed out earlier, upwards of one-half of people who took early retirement in 1993 would have retired anyway without the incentives.

School Districts

Table 5.12 presents comparable data on the change in professional employment in school districts between the 1992-93 and 1993-94 school years, and it shows that about 36 percent of school districts faced declining professional employment while the rest were growing. However, most of the declining districts were small, so that only 16.6 percent of total professional employment worked in districts that lost employment between 1993 and 1994, the period in which state early retire-

Eighty-three percent of school district professional employment was in growing districts.

Table 5.12: Distribution of School Districts by Change in Professional Employment, 1992-93 to 1993-94

		Licensed Employees		
Employment Change	School Districts	Number	Percent	Cumulative Percent
More than 4% decline	77	4,192	8.11%	8.11%
-3.9% to -2%	25	1,936	3.75	11.86
-1.9% to -0.1%	34	2,426	4.69	16.55
0	3	27	0.05	16.61
0.1% to 1.9%	71	11,544	22.34	38.94
2.0% to 3.9%	50	9,971	19.30	58.24
4.0% to 5.9%	44	12,382	23.96	82.20
6.0% to 7.9%	30	3,747	7.25	89.45
8.0% to 9.9%	12	1,855	3.59	93.04
10% and over	33	3,595	6.96	100.00%
All Districts	379	51,675	100.00%	

Source: Department of Education.

ment incentives were offered. Most teachers and other school employees were working in growing districts.

The offer of early retirement was undoubtedly appreciated by eligible employees, but not widely needed by employers to reduce the work force. As Table 5.12 shows, about 12 percent of teachers and other licensed employees worked for districts where the professional work force declined by two percent or more. As Table 5.9 showed, the retirement rate among TRA members for the year ending June 30, 1994 was 2.2 percent and the turnover rate was nine percent. Data previously reviewed showed that only a few of our sampled districts had to make layoffs in recent years. We conclude that:

- **Few school districts needed state-paid early retirement incentives to avoid layoffs or other serious consequences that early retirement incentives were designed to forestall.**

Cities and Counties

Table 5.13 presents data on employment growth in cities and counties. Seventeen counties experienced a decline in full-time employment between 1988 and 1992. (We do not have more recent data, so, of necessity, we assume that the pattern of current or future employment growth will be similar.) These counties together employ about 8.0 percent of county employees in the state. Clearly, most county employers are facing growth, not decline, and are not facing the prospect of widespread layoffs or general reductions in force.

We present data for cities, but the usefulness of this information is limited by the unavailability of employment data for most cities, and the questionable quality of the statistics that are available. The data we have is for 188 larger cities, and these

Table 5.13: Distribution of Cities and Counties by Change in Employment, 1988-92

Employment Change	Number	Percent of Employees
COUNTIES		
Declining Employment	17	8.0%
Stable or Increasing Employment	70	92.0
Total	87	100.0%
CITIES		
Declining Employment	53	46.5%
Stable or Increasing Employment	135	53.5
Total	188	100.0%

Source: State Auditor.

cities account for all but 61 city early retirees out of a total of 433.[5] Based on data for 188 cities, about 46 percent of city employment is in cities with declining employment levels between 1988 and 1992. Twenty-eight percent of cities experienced declines, but these tend to be larger cities so they account for a higher share of total employment. (The statistics also exclude Minneapolis where many employees and virtually all retirees are members of the Minneapolis Employees Retirement Fund, not PERA. Minneapolis did not offer the 1993 incentive program.)

We question whether retirement incentives are needed where employment is growing.

The city data suggest that there are cities that are in the process of carrying out significant staffing reductions, but even here, the majority of cities do not face declining employment. As we saw in Table 5.9, PERA membership was up 4.6 percent between 1993 and 1994. These numbers include school district and county employment as well as city employees. Since we know that school enrollment and employment is growing, and county human services and corrections programs are growing, it is likely that city employment is not growing as fast.

We conclude that:

- **Many employers at the state and local level eligible to offer early retirement incentives are not facing conditions that justify the incentives.**

Our surveys showed that employers appreciate the incentives and say they helped save money, solve budget problems, and improve productivity. But the enhanced annuities chosen by most retirees are not paid for by employers so they can afford to focus on the positive aspects of the program.

INDIVIDUAL CASE STUDIES

The following sections describe the experience of individual state agencies with the 1993 early retirement incentive program. We present a brief discussion of the impact of early retirement incentives in the following state agencies: Administration, Agriculture, Health, Human Services, and Transportation. In our view, these examples show:

- **Early retirement incentives are at least somewhat useful everywhere, and of considerable importance to agencies undergoing significant reorganization and down-sizing.**

We also believe that these cases demonstrate the difficulty of measuring salary savings. For most agencies, we think salary savings are primarily due to prior budget decisions and would occur with or without the early retirement incentives.

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5 The data come from the State Auditor who annually compiles financial data along with some other data on local governments such as employment and population statistics. But these data are only as good as the data that cities keep, and the quality is mixed.

Table 5.14 presents a distribution of early retirees by the state agency they worked for at the time of retirement, along with the number of people in each department and recent employment change in each department. As Table 5.14 shows, two departments, Human Services and Transportation, account for nearly half of all early retirees. Many departments, including fairly large departments like the Pollution Control Agency, have only one early retiree.

Table 5.14: State Agency Employment, 1990-94

				Change in Employment			
	Early Retirees	Employment, 1994		1990-1994		1993-1994	
Agencies	1993	Full-Time	Total	Full-Time	Total	Full-Time	Total
Administration	21	771	840	3.1%	0.5%	-4.5%	-7.0%
Agriculture	13	390	503	6.8	4.6	-1.3	0.8
Commerce	5	239	257	9.1	16.3	-0.8	0.8
Community Colleges	19	1,898	4,037	9.5	8.2	1.1	1.3
Corrections	19	2,529	2,728	29.9	27.0	5.9	5.7
Economic Security	53	1,824	2,071	-2.4	0.6	2.2	3.4
Education	1	326	374	-10.7	-11.0	-1.2	1.4
Employee Relations	1	145	176	-5.8	-11.1	-10.5	-8.3
Finance	3	103	154	-12.0	26.2	-2.8	25.2
Health	7	891	1,064	16.6	22.9	2.4	6.6
HECB	2	58	64	-7.9	-12.3	-4.9	-3.0
Housing Finance	0	125	152	5.9	9.4	-1.6	2.7
Human Rights	1	55	65	-14.1	-5.8	-8.3	3.2
Human Services	107	4,937	7,047	-12.8	-6.6	-3.4	2.0
Labor and Industry	4	338	386	11.2	8.7	4.6	3.2
Military Affairs	9	296	341	-5.4	-16.2	-2.0	-2.3
Natural Resources	38	1,917	2,293	11.8	4.4	-1.4	-0.8
Office of Strategic and Long Range Planning	0	57	93	-38.7	-21.2	72.7	66.1
Pollution Control	1	706	805	25.4	32.8	4.9	4.8
Public Safety	35	1,645	1,777	-2.7	-2.6	-2.6	-2.3
Public Service	2	123	129	4.2	-3.7	2.5	-2.3
Revenue	21	1,075	1,253	-0.1	6.5	10.3	9.4
State Universities	27	3,722	5,949	-1.6	9.3	-1.0	-1.5
Trade and Economic Development	2	173	229	-6.5	-18.2	-1.1	-5.4
Transportation	207	4,492	4,952	-1.4	-2.0	-1.0	-1.6
Veterans Affairs[a]	8	442	708	8.3	22.1	4.7	10.8
Zoological Gardens	0	163	260	18.1	16.6	7.2	0.4
All Others[b]	45	820	1,140	-44.1	-40.3	-52.8	-49.9
Total	651	30,260	39,847	-1.1%	1.6%	-2.9%	-1.7%

Sources: Data provided by Department of Employee Relations and the Minnesota State Retirement System.

[a]For 1994, "Veterans Homes" and "Veterans Benefits and Services" combined and listed as "Veterans Affairs."

[b]Because figures were not available for all years, employment figures do not include the following: Higher Education Board, Attorney General, State Auditor, Gambling Control Board, Governor's Office, IRRRB, Pari-Mutual Racing Board, State Board of Technical Colleges, and the State Lottery Board.

The impact of early retirement varied widely across state agencies.

While we earlier reported survey results for state agencies as a group, the agencies vary greatly in size and in their need to reduce staffing levels. The two largest departments, Human Services and Transportation, for different reasons, needed to promote a greater level of attrition than would normally occur. MnDOT needed to hold open hundreds of positions to meet budget constraints and avoid layoffs. DHS was in the process of closing treatment centers and finding jobs for displaced workers, but was constrained against making layoffs outside its central office because of requirements enacted as part of the laws closing several residential treatment centers.

The departments of Agriculture, Health, and Administration were facing conditions that are probably common in state government, including changes in management, fluctuating workloads, changes in technology and the need for new skills. While all three made some positive use of the early retirement incentives, it seems reasonable to suppose that they could have solved the problems they faced with the opportunities provided through normal attrition. Closer examination of these departments reaffirms a conclusion that early retirement incentives ought to be targeted to employers facing a critical need to reorganize or down-size in a short period of time and beyond the level permitted by ordinary turnover. In the typical department, staff reductions will not finance the additional cost of early retirements.

Department of Agriculture

Full-time unlimited employment in the Department of Agriculture declined slightly between January of 1993 and January of 1994, from 395 workers to 390. Total employment went up a little, from 499 to 503 workers. (Total employment includes temporary or seasonal full-time employees as well as part-time or intermittent workers.) The department's total employment has remained around 500 during the 1990s, up a little from a decade ago. The department's 1994-95 budget lays out a plan to reduce its staffing level by 11.7 positions during each year of the biennium. Total department appropriations declined from $23.7 million in fiscal year 1994 to $22.6 million in fiscal year 1995. As part of its budget proposal, the department anticipated being able to make these reductions through attrition and retirements during the 1994-95 biennium. The staff complement was scheduled to decline from 598 positions at the start of FY 1994 to 584 positions by the end of FY 1995.

Thus the Agriculture Department was not facing an extraordinary problem requiring the need for major layoffs at the start of fiscal year 1994 when new incentives to take early retirement were offered to state employees. We examine this department in some detail because it represents a chance to examine the impact of early retirement incentives in an organization with a stable employment base over a fairly long period of time. This is the situation characterizing many state agencies. Total executive branch unclassified state employment changed little during the 1990s. Full-time employment for the state was 30,597 in 1990 and 30,260 in 1994.

The Agriculture Department does not operate in a static environment, however. Factors outside the department's control affect its workload. According to the department, the cool weather and relatively poor grain harvest of 1993 led to a low level of inter-state and international grain shipments requiring grain inspections. As a result, the workload of the department's grain inspectors declined and the need for as many regional offices as the department maintained became problematic.

Early retirement incentives helped the Agriculture Department cope with a declining workload in grain inspection.

The Department of Agriculture is small enough and early retirees few enough for us to understand the consequences of each early retirement on how work was organized in the department and to what extent financial savings accrued to the department as a result of the retirements.

Fourteen people in the Department of Agriculture took early retirement between July 1993 and January 1994. In Agriculture, seven of the 14 positions vacated by early retirees were refilled by the end of August 1994. (We know the status of most state government positions vacated through early retirement as of this date because our data come from a DOER survey with an August 1994 cutoff date). In the case of the jobs that were refilled, all but one replacement employee earned a salary below that of the departing workers, although the salary savings measured this way are small. Aggregating the seven positions, a total of about $9.10 per hour was saved because the salary of the new employees was somewhat lower than the salary of the retired employees. The seven positions were vacant an average of 65 days so there was some temporary savings from this as well. The savings is temporary, because a similar vacant period would probably occur after a normal retirement. Of course, vacation and severance pay was due upon retirement and this amounts to more than $125,000 that has to be paid sooner than it would otherwise be due. In the case of the Department of Agriculture, the interest on this obligation is around $5,000 at 4.5 percent per year.

By November 1994, the date we gathered data from the Agriculture Department, the disposition of all the positions vacated through early retirement was fairly clear. Replacements had been found for two more positions, but in Agriculture, a number of vacancies that the department intends to keep open for the foreseeable future were achieved through retirement. The retirements occurred between August 1993 through January 1994 and our data are current as of November 1994. The reasons for a declining workload, according to the department, include a relatively poor grain harvest in 1993 and a long-term trend to fewer farms. The department estimates that six employees were laid off in 1993 and that it avoided three to five layoffs or terminations due to the early retirement program.

Early retirees are not necessarily less than 65 years of age. Six of the department's early retirees were over 65 years of age and one was 73. Without the early retirement incentives, these workers might have stayed on. However, it is also possible that they or others would have retired anyway, or even that they kept working somewhat longer than they otherwise would have in the hope that the state would enact the incentives that some were anticipating. Less generous early retirement incentives had been enacted in each of the previous two years. State employees under 65 can elect either an enhanced annuity or insurance coverage

until the age of 65. Employees over 65 have no choice and those close to 65 usually opt for the enhanced annuity. Only five of the Agriculture Department's early retirees were younger than 63, and 12 of 14 took the annuity option.

We asked all departments a series of questions about the 1993 early retirement incentive, and the Agriculture Department's personnel office is quite positive about the program. Retirements in Grain Inspection helped solve problems induced by declining workloads, although several supervisory retirements created a short-term supervisory vacuum. The department believes the early retirements helped save money, helped improve productivity and created opportunities for promotion and mobility, and helped avoid a few layoffs. While their assessment is positive, the magnitude of savings was small, and the department needed the salary savings to fund severance pay. The Agriculture Department has a lot of long-term employees and did not find it difficult to move experienced replacements into the positions vacated through retirement.

Department of Administration

The Department of Administration had 771 full-time employees in January 1994, down from 807 full-time employees in January 1993, a decline of 4.5 percent. Total employment in the department was down about 7 percent to 840 between 1993 and 1994. The department's fiscal year 1995 appropriation was $27.2 million, down from $28.3 million in fiscal year 1994. MSRS records identify 19 people in the department who opted for early retirement during the 1993 window.

Early retirement incentives helped the Administration Department make changes in Intertech and the Facilities Management Bureau.

The Department of Administration had a declining work force in 1993. As we have noted, a condition of declining employment improves the chance that potential benefits (to the employer) of early retirement will be realized and the negative consequences will be minimized. Among the possible benefits of early retirement are salary savings, replacement of outmoded skills, and consolidation and reorganization of positions that are not needed but impossible to do anything about while there is an incumbent with many years of tenure in the job.

This is, in fact, a fair description of what happened in the wake of early retirements in the Department of Administration. Most of the people who took early retirement worked for two divisions within the Department of Administration. Eight retirees worked for Intertech, the state's computer services provider, and seven worked for the Facilities Management Bureau. Intertech has undergone fundamental change in the last few years as a consequence of changing policy and technology. The skills appropriate to the computer services function are different today than they were ten years ago. The Facilities Management Bureau is responsible for plant management, building codes and standards, building management, and related functions. One of the early retirees was the Plant Management Director, and this created an opportunity for the new director to consider whether the positions vacated within this division should be refilled.

Nine of the 19 people choosing early retirement in the Department of Administration were 65 years of age or older. Eight were below the age of 62. Four of the 19 chose the health insurance option while 15 chose the enhanced annuity. The

health insurance benefit terminates at age 65, so it usually makes sense only to those with at least several years of eligibility. There were five retirees below the age of 60 and all worked for Intertech.

As in the case of the Agriculture Department, we looked more closely at what happened to the job duties performed by each of the retirees. Seven of the 19 retirees were replaced by the end of August 1994 with employees hired into the same position held by the retiree. The job duties of the remainder of the positions vacated through retirement were either eliminated or held open for the time being.

In the seven cases where the position was refilled, a total hourly savings of $15.59 was realized. Most replacements were hired for a few dollars an hour less than the workers they replaced. This is very typical of replacement salaries across state government. One of the positions was vacant for up to 101 days, although several positions were filled right away. Assuming fringe benefit costs of 20 percent of salary, a total of about $20,600 for the seven positions was achieved in salary savings because several positions were held open for a time. Assuming the agency experienced some costs in recruiting replacements and in paying accumulated vacation and other severance pay and other termination costs sooner than it otherwise would have, there was probably minimal salary savings from these positions. Also, this type of temporary vacancy would have occurred when normal retirement was taken.

However, there were 12 positions that were unfilled as of September 1994, and significant salary savings accrued as a result. These 12 positions account for over $600,000 in salary costs per year. However, this number overstates the true savings considerably as a consideration of individual cases reveals, partly because some hiring has occurred behind the vacancies and because some of the positions are not permanently canceled.

We asked the department about possible positive and negative effects of early retirement and about the number of layoffs or other terminations avoided by early retirements. Department of Administration personnel administrators, like nearly all personnel officers in state government, are clearly positive about the 1993 early retirement incentives. They say the incentives resulted in meaningful salary savings, created promotional opportunities, helped avoid layoffs, helped solve budget problems, and did not create serious planning problems.

The Department of Human Services

The Department of Human Services is responsible for a far-ranging program of direct delivery and regulation of human services across the state. In recent years, the department's budget has ranged from $3.0 billion in fiscal year 1991 to $4.6 billion budgeted for fiscal year 1995.

The department has more employees than any other, but it has been engaged in a program of treatment center closures and reductions that have required significant reductions in its work force. The Moose Lake Regional Treatment Center is scheduled to close in June of this year and the Faribault Treatment Center is sched-

uled to be closed in 1998. The Developmental Disabilities programs in Regional Treatment Centers are being eliminated or reduced around the state as their clients are now served by community facilities.

The department's staffing levels have been declining in recent years, as measured by full-time employment or total employment. Total employment was 7,541 in January 1990 and 7,047 in January 1994. Full-time employment was 5,659 in January 1990 and 4,937 in January 1991 based on head-count data from the Department of Employee Relations. Between January 1993 and January 1994, full-time employment declined an additional 3.4 percent, although total employment (including part-time, intermittent, temporary or seasonal employment) went up a little. This is the period that corresponds most closely with the 1993 early retirement opportunity.

The 1994-95 budget document provides a count of authorized positions (not the same as the head-count data cited above), of 6,021 in FY 1993 and 5,087 positions were proposed for fiscal 1995.

While the Department of Human Services is facing the need to reduce its work force substantially, the department is constrained by legislation from laying off staff except from the central office. Jobs have to be found for those whose positions in the treatment centers are eliminated. The department has negotiated several memoranda of understanding with the unions representing its workers that have permitted the offer of severance pay and other special benefits to employees willing to leave. The department offers an enhanced severance option that pays a severance benefit of $7,500 and treats voluntary departures as eligible for unemployment benefits.

We asked DHS a variety of questions about its experience with early retirement programs both through a mail survey and personal interviews, and we obtained some data on each individual retiree. The department considers the early retirement incentives to have helped avoid layoffs, to have resulted in meaningful salary savings, and to have helped meet budget constraints. They did not find that the incentives created a significant planning problem, nor did the incentives create promotional opportunities. In summary, the department found that the 1993 early retirement incentive was timely and useful to them.

Approximately 112 people employed by DHS retired under the 1993 incentive. We do not have a count of how many people were eligible to take early retirement in DHS, although statewide about a third of eligible workers retired under the 1993 incentive. We do not have complete information on all early retirees, but of the 82 positions vacated through early retirement in response to the 1993 incentive on which we do have data, 15 jobs appear to have been eliminated, 12 were refilled, using the same classification, 8 more were filled using a different job classification, and in the remaining cases, the job duties were reassigned. (Whether jobs were refilled or reassigned, other vacancies could have been created or eliminated as a consequence, so there is no way of estimating the salary savings. But, it is clear that in the case of DHS, significant salary savings did occur as a result of the retirements.)

Because it has been closing regional treatment centers, the Department of Human Services is the state agency that best illustrates the beneficial effects of early retirement incentives.

Our survey asked each department to estimate the number of layoffs it made in the last four years, and DHS reports 21, 27, 52, and 71 layoffs made in 1991 through 1994. It estimates that the 1993 early retirement incentives allowed it to avoid 35 layoffs. As noted, DHS is constrained by law from making layoffs except in the central office, and is constrained from filling vacancies while department employees who are scheduled to lose their treatment center jobs bid on vacancies created elsewhere in the department. To the extent that DHS can solve its problem through early retirement, it is able to avoid the continuing cost of gridlock created by downsizing without layoffs, or the ability to refill vacancies when some other department employee could, with training, qualify for the job.

DHS has the second highest number of early retirees in response to the 1993 incentive. It stands as a clear example of a state agency faced with the immediate need to downsize as residential treatment services and programs are closed or reduced. It is certainly a department in which it makes sense to offer early retirement incentives; even with the incentives, the department is facing the difficult task of placing employees whose jobs at the treatment centers were eliminated. It is also clear that early retirement incentives will not solve DHS's problem, and for this reason, DHS has other programs designed to reduce its work force.

The agreement between public employee unions and the department demonstrates that it is possible to target incentives to specific departments, to the mutual benefit of both employees and employers. The requirement that early retirement incentives need to be offered to everyone or no one guarantees that early retirement will be offered in circumstances where it is either not helpful or not needed. As Chapter 2 of this report demonstrates, around one half of all early retirees in 1993 would have retired anyway, without special incentives. Thus early retirement incentives are most appropriate in departments facing critical circumstances. Arguably, DHS in the 1990s is such a department.

Minnesota Department of Transportation

According to its budget proposal for 1994-95, the Minnesota Department of Transportation entered the 1994-95 biennium anticipating flat highway user revenues and declining federal revenues. The department anticipated a significant revenue shortfall over the previous biennium, and planned to maintain a 9.5 percent vacancy rate in fiscal year 1994 and a 13 percent rate in 1995 in order to achieve needed salary savings.

In January 1994, MnDOT employed 4,492 full-time unlimited employees and a total of 4,952 employees. These numbers were down 0.99 percent and 1.65 percent

from one year earlier.[6] MnDOT employs quite a few seasonal workers and has some flexibility when faced with the need to achieve salary savings other than using layoffs, a tool it prefers to avoid if at all possible. MnDOT reports, in fact, making only one or two layoffs each year during the four year period ending in 1994. But the department feels that the early retirement incentives made it possible to avoid up to 100 layoffs in 1994.

MnDOT had more early retirees than any other state agency.

MnDOT had 206 employees take early retirement in response to the 1993 program. According to MnDOT, 624 were eligible to retire. According to the personnel office, about 120 would have retired anyway leaving 89 vacancies that would not otherwise have occurred.

We examined what happened to the positions vacated in MnDOT through early retirement, and as of Fall 1993, about 23 percent had been refilled and 76 percent were left open. Even allowing for some imprecision in the data, and it should be viewed with caution, it is clear that MnDOT used many vacancies created through early retirement to avoid layoffs or other salary saving techniques like not recalling seasonal workers.

MnDOT needed to keep many positions open in order to stay within its 1995 budget.

It is clear from these statistics that MnDOT had to hold positions open in order to obtain the salary savings needed to meet its budget. The personnel office does say that some highly skilled employees left as a result of the incentives, but that other departures offered a chance to improve productivity. The biggest point is that layoffs were avoided in a department that regards layoffs as a last resort.

Department of Health

The Minnesota Department of Health has grown in recent years. Its full-time staff increased by about 17 percent between 1990 and 1994 to 891 employees in January 1994. Between 1993 and 1994, its full-time employment grew 2.4 percent and total employment grew 6.6 percent. According to its personnel office, the department is continuing to add staff in a couple of areas.

The experience of the health department is instructive. It shows that in a fairly large department, the 1993 early retirement incentives can have minimal impact. In the Health Department about 20 people were estimated by the personnel office to be eligible out of a work force of about 1,100 and six people took advantage of the incentives.

The department felt it was useful to take a close look at each of the positions vacated through early retirement, and as a result, they upgraded one, left another vacant, reassigned the duties in a third, and refilled the remainder at a similar salary. All in all, the department appears to have eliminated one supervisory position. All but one of the retirees took the health insurance option.

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6 These numbers come from the Department of Employee Relations and are from the data set used throughout this report. MnDOT reports somewhat different numbers, 4,390 full time employees in 1994 and 4610 in 1993, a five percent decline. These numbers could be more accurate.

The Health Department had a few layoffs in the past, and four in 1993. It believes it avoided one layoff because of early retirements. Otherwise, the department is in favor of early retirement incentives, and expresses the view that retirement incentives should become a permanent program.

Many departments, like the Department of Health, had only a few early retirements. Health is representative of many for whom the early retirements offer an opportunity to examine staffing needs, but do not have a major impact because few positions are affected. Among the state agencies with less than five early retirements are the Department of Education, the Pollution Control Agency, the Department of Employee Relations, the Department of Finance, and the Department of Human Rights. As our survey results have shown, most personnel administrators evaluate the early retirement incentives positively, but this must be understood in the context of the minor impact, positive or negative, that a few retirement decisions can have in a large agency with significant retirements and other attrition occurring anyway.

Most departments are like Health, which had only a few early retirees. The potential impact of early retirements for these agencies is small.

Case Studies Summary

The experience of five departments of state government described above makes it clear to us why most employers regard 1993 early retirement incentive program quite favorably. Each department was able to accomplish some useful staffing changes, and no department experienced a net loss of productive workers. Each department was holding open some positions, and the two largest departments of state government were able to achieve meaningful salary savings and avoid layoffs or other problems.

But public employers cannot fully evaluate whether the benefits of early retirement incentives outweigh the costs since they do not bear the full cost of retirement incentives (although many are quite knowledgeable about the issue). Given the fact that early retirement incentives are a useful tool in some settings, we think they should be targeted to where they are needed, and their cost should be borne by the agencies or employers that are realizing the benefit.

Conclusions and Recommendations

CHAPTER 6

This chapter summarizes our major findings and makes two recommendations designed to improve the effectiveness and economy of early retirement incentives. It concludes with a brief discussion of the context for early retirement policy decisions. In our view, decisions about early retirement incentives should not rest solely on the costs and benefits of the incentives themselves, but on other aspects of the state's retirement policy and on the demographic conditions that will affect the financing of retirement benefits in the future.

SUMMARY OF PREVIOUS FINDINGS AND RECOMMENDATIONS

Our major findings are:

- **Employers like early retirement incentives and the additional staffing flexibility they produce.**
- **Most public employers are growing and do not face hiring gridlock or the need to make layoffs.**
- **About half of all early retirees would probably have retired in the same year they took early retirement if the incentive were not offered.**
- **The cost of early retirement incentives is significant, over $100 million in the case of the 1993 incentive program.**
- **Some public employers in Minnesota face conditions where they need more turnover than normal attrition offers in order to carry out significant organizational changes and work force reductions.**
- **In the case of the 1993 incentives, local employers pay for other employers' early retirements whether or not they opt to participate in the program. Employers do not pay for the cost of early retirements at the time they occur; the cost is financed through future employer and employee contributions.**

- **It is highly unlikely that salary savings can offset the cost of early retirement incentives.**

On the basis of these findings, we conclude that early retirement incentives have a useful function in specific circumstances, but that these conditions are not typical or widespread. Therefore, offering an expensive option to employers who do not need it, and offering enhanced benefits to retirees who would retire anyway, is not cost effective.

As a result, we recommend that:

- **Future early retirement incentives should be targeted to employers facing conditions that make it likely that incentive benefits will be high in relation to costs.**

If early retirement incentives are offered in the future, they should be targeted to employers facing layoffs.

These conditions include the need to reduce staffing levels beyond that permitted by normal attrition. We are aware of the practical and legal impediments of targeting early retirement incentives. Employee associations have worked to extend narrowly targeted incentives to broader groups under the argument that it is unfair to offer a benefit to one group and not another. But we believe there are serious questions about the equity of retirement incentives such as the 1993 program, which benefits current employees and is paid for by future workers.

Public employee unions may agree to the use of early retirement incentives in specific employment settings if the alternative is layoffs. For example, under several memoranda of understanding, the Department of Human Services is currently able to offer severance pay to certain DHS employees that is unavailable to other state employees represented by the same unions. A similar mechanism could be used to selectively offer early retirement incentives.

We conclude that use of early retirement incentives should be restricted to employment conditions which require a choice between employee terminations or early retirements. As we briefly discuss later in this chapter, Minnesota public employee retirement benefits are not particularly high compared to public employee retirement benefits around the country. By arguing against early retirement benefits we are not making an argument against or for enhanced general benefits financed in advance.

Finally, we conclude that the present method of financing early retirement incentives is flawed. Some employers pay for the incentives whether or not they participate. All participating employers get the benefit now and leave the financing burden to future employers and employees. Some of the benefits of early retirement are subjective and difficult to measure from a distance. Employers are in the best position to weigh the costs and benefits of early retirement incentives. Consequently, we recommend that:

- **The cost of early retirement incentives should be paid by employers at the time the early retirements are taken.**

We recognize that if an employer is facing conditions that require staffing cuts, it may be impossible to finance the cost of early retirement. But, as our report has shown, early retirement is offered to many who would have retired anyway, and to others who plan on retiring in the fairly near future. If an employer is undergoing a major one-time reorganization, it may be that special funding has to be provided specifically for this purpose. In any case, future generations should not be encumbered by the cost of retirement annuities or benefits for the present generation of retirees beyond the unfunded liabilities that already exist. As we will see in the next section, the demographic structure of Minnesota and the United States is changing in a direction that makes it unwise to further require current workers to pay for current retirees. Current workers have their hands full paying for their own retirement benefits.

CONTEXT FOR POLICY DECISIONS

Legislative decisions on early retirement incentives need to consider the broader public interest. Almost certainly, policy makers will consider factors other than early retirement benefits and costs. As context for legislative decisions on early retirement, we offer a brief discussion of several other factors than may be judged germane to the debate, even though there is no direct or necessary connection to the specific issue. First we present a brief comparison of Minnesota's public employee pension benefits to those of other public employee pension systems. It may be of interest to know how pension benefits as a whole compare nationally, when deciding the merits of enhanced benefits for the purpose of inducing early retirement.

Second, there are profound yet predictable demographic changes that are underway that color the debate over retirement policy. Again, these have no necessary connection with Minnesota's early retirement debate, but they are worth keeping in mind as the pro's and con's of early retirement incentives are evaluated in the future.

Minnesota Retirement Benefits Compared with Other Public Employee Retirement Benefits

It is not our purpose to make a thorough comparison of PERA, MSRS, and TRA benefits to those of other public employee pension systems, but in an evaluation of early retirement incentives such as those offered in the early 1990s, it is useful to examine, in general terms, how Minnesota public employee benefits compare with public employee pension systems around the country. Specifically, it is of interest to know if early retirement incentives such as those offered in the early 1990s cause Minnesota's public employee pension benefits to rise to a level where they are out of line with the pension benefits offered through public employee pension systems around the nation.

There are many dimensions on which pension systems can be compared. Pension benefits in systems like MSRS, PERA and TRA and many other public employee pension systems are based on years of service, final average salary and an annual factor that is multiplied by years of service, and then by final average salary to determine pension benefits. Systems may be compared on various characteristics including the size of the annual multiplier, the number of years on which the final average salary is based, the formula for computing post-retirement benefits, the years required for vesting, and the level of employee and employer contributions.

The best source of comparative information on public employee pension benefits that we know of is the Wisconsin Retirement Research Committee, an agency of the Wisconsin Legislature that carries out an annual survey of public employee pension systems. In our 1991 report on State Investment Performance,[1] we presented some comparative data drawn from the Wisconsin survey and it is presented again in Table 6.1.

On average, Minnesota pension benefits are lower than the benefits offered by other public employers.

Table 6.1 shows that the three major Minnesota pension plans rank near the bottom of comparable plans in the size of the initial pension.[2] Part of the reason is that Minnesota's employee and employer contributions are lower than contributions in other systems. Minnesota public employee unions have called for higher employer and employee contributions and benefits, and contributions were recently raised for TRA members.[3]

Table 6.1: Initial Pensions for Public Employees, 1990

	State Government Employees	Local Government Employees	Public School Teachers[2]
Minnesota Pension	$16,360	$16,360	$16,360
Median Pension Among All States[1]	19,100	19,790	19,100
Minnesota Rank	32 of 37	27 of 30	29 of 34
Minnesota Pension as % of National Median	86%	83%	86%

Source: Office of the Legislative Auditor 1991 Report: *State Investment Performance*, p. 70, from the Wisconsin Retirement Research Committee, *1990 Comparative Study of Major Public Employee Retirement Systems.*

[1]The comparison excludes plans without Social Security coverage. Initial pensions were calculated based on 30 years of service, an age of 65 at retirement, a final salary of $40,000, and salary increases of five percent annually in the years prior to retirement.

[2]TRA employee contributions and benefits were raised in 1994.

1 *State Investment Performance,* Program Evaluation Division, Office of the Legislative Auditor, State of Minnesota, April 1991.

2 Minnesota's post-retirement increases have been higher than most states in recent years however.

3 Coming Up Short: An Analysis of Public Employee Pension Plans, As Compared to Other States. 1993 Published by Eight Public Employee Associations and Unions.

The 1993 retirement incentive program offered (to state and local government employees) a choice of health coverage to age 65 or an enhanced annuity of 0.25 percentage points per year of service in addition to the regular amount of 1.5 percent of final average salary per year of service. In the case of TRA members, the 1993 incentive included both health insurance to age 65 and an increased annuity of 0.1 percent per year of final average salary. The 1994 Wisconsin Retirement Research Committee survey collected data on multiplier amounts and these are presented in Table 6.2 which shows that only 12 of 61 surveyed public employee plans coordinated with social security have an annual multiplier as low as Minnesota's 1.5 percent. In 1994, 33 of 61 plans had multipliers over 1.7 percent. Even with an enhanced annuity that raises the multiplier from 1.5 percent to 1.75 percent of final average salary (the enhanced annuity benefit of the 1993 incentive) Minnesota's annual multiplier is well below the average of the coordinated plans surveyed in 1992 and 1994 by the Wisconsin Retirement Research Committee.

Table 6.2: Annual Multiplier Comparison 1992 and 1994

Formula Multiplier	1992 Survey	1994 Survey
1.1% to 1.3%	5 plans	5 plans
1.3+% to 1.5%	9 plans	7 plans
1.5+% to 1.7%	19 plans	16 plans
1.7+% to 1.9%	6 plans	9 plans
1.9% to 2.1%	19 plans	20 plans
2.1+%	4 plans	4 plans

Source: Wisconsin Retirement Research Committee, *1994 Comparative Study of Major Public Employee Pension Systems*, p. 14.

While the foregoing is a cursory analysis of a complicated subject, it does not appear that early retirement incentives sweeten Minnesota's major public employee retirement system benefits to the point that they are out of line with comparable state or local public employee pension plans. A case can be made for higher employee and employer contributions and higher retirement benefits, since, as we will see in the next section, future demographic conditions will not be favorable for transfers from current workers to current retirees.

Labor Force Trends

The issue of early retirement incentives needs to be considered in light of recent trends in the age of retirement and projections for the future. At the same time that early retirement has become more popular, the age required for collecting full social security benefits is set to rise in steps from 65 to 67, for people born after 1937. The normal age for full social security benefits is now 66 for people born in 1943 and 67 for people born in 1960 or later. The normal age for retirement from state employment (thus full benefits) is now tied to the normal age for full social security benefits for employees hired since 1989. The issue can be raised whether it makes sense to simultaneously raise the age of retirement and reduce it through

early retirement incentives. In any case, the effort required for funding social security depends on the ratio of active, contributing workers to retirees. Assuming that most early retiees do leave the labor force, continuation of early retirement incentives runs counter to the system's funding requirements in the future when fewer workers will be supporting proportionately more retirees.

Labor Force Participation

Labor force participation at ages 55 and over has been declining for decades, but is projected to increase in the future.

Labor force participation at ages 55 and over has been declining for several decades. This reflects the increased affluence of cohorts approaching retirement age over this period, and improved social security and health insurance benefits as well as other factors. The entrance of women and the baby boom cohorts into the labor market has resulted in a relative labor surplus. The trends in labor force participation are shown in Table 6.3 using data from the Bureau of Labor Statistics (BLS). Labor force participation has declined sharply for men aged 55 to 65 and 65 plus, and stayed about the same for women since the 1970s. As Table 6.3 shows, labor force participation for men 55 and over went from 49.3 percent in 1975 to 39.3 percent in 1990. It is projected to reverse this decline and increase to 41.8 percent by 2005.

Forces leading to a decline in participation for older women have been counterbalanced by sharply growing labor force participation for women as a whole. But, older women's labor force participation stayed level between 1975 and 1990 at

Table 6.3: Civilian Labor Force Participation Rates by Sex and Age, 1975 and 1990, and Moderate Growth Projection to 2005

	Participation			Annual Growth Rate	
Group	1975	1990	2005	1975-90	1990-2005
Total, 16 years and over	61.2%	66.4%	69.0%	0.5%	0.3%
16 to 24	64.6	67.3	69.5	.3	.2
25 to 54	74.1	83.5	87.3	.8	.3
55 and over	34.6	30.2	34.6	-.9	.9
Men, 16 years and over	77.9	76.1	75.4	-.2	-.1
16 to 24	72.4	71.5	73.1	-.1	.1
25 to 54	94.4	93.5	92.4	-.1	-.1
55 and over	49.3	39.3	41.8	-1.5	.4
Women, 16 years and over	46.3	57.5	63.0	1.5	.6
16 to 24	57.2	63.1	66.0	.7	.3
25 to 54	55.1	74.1	82.3	2.0	.7
55 and over	23.1	23.0	28.7	0.0	1.5

Source: Bureau of Labor Statistics, *Monthly Labor Review*, Nov. 1991, vol. 114, no. 11, p. 34.

about 23.0 percent, and is projected to increase to 28.7 percent by 2005. BLS projections not shown here also predict that labor force participation will go up or stay stable for both men and women over 65 and over 75 years of age between 1990 and 2005. Early retirement incentives have been consistent with these labor force trends, in that declining participation at ages 55 and over have been met with encouragement to take early retirement. But BLS projections show that the trend toward lower labor force participation is expected to be reversed between 1991 and 2005, and the question can be raised whether early retirement incentives will make sense in the future. The reversal of the trend in labor force participation of older workers is a reflection of smaller cohorts entering the labor force, but the importance of the trend is also due to the fact that the older labor force will increase substantially by 2005 due to rising rates and larger numbers. Of course broad national trends may not describe the situation facing particular Minnesota public employers. In the future as in the past, some public employers in Minnesota will experience a growing workload, and others a decline.

Age at Retirement

The average age at retirement has declined, but is expected to level off.

Related to labor force participation is the trend in age at retirement. The average age of retirement has been declining for some time, but no major decline is projected for the future. Table 6.4 shows that retirement age has declined from 66.9 years for men and 67.7 years for women in 1950-55 to 62.6 and 62.8 years respectively for men and women in 1985-90. The median age of retirement has fallen about 5 years, but is projected to decline only a little further in the future. By 2005, the median age of retirement is projected to decline to 61.7 years for men and 61.2 years for women. A decline in the average age at retirement (plus gains in longevity) tend to raise the economic burden placed on younger cohorts. Predictions of a reversal of the decline in the average age of retirement have been made, but the best recent effort to measure whether this will actually take place in the near future suggests that it will not happen for at least another decade.[4]

The reason it is desirable to prolong working careers is that the ratio of retired people to workers is expected to increase in the future. Social Security and many other public expenditures represent transfers from workers to those both younger and older than workers. Financing many government expenditures is easier if the ratio of workers to dependents is relatively high. Table 6.5 shows what has happened and will happen to this ratio. It presents census estimates of the number of dependents per 100 persons aged 18 to 64 years for 1900 to 1990 and projections to 2050. The dependency ratio declined from 82.2 per 100 people aged 18 to 64 in 1960 to 62 in 1990. This ratio is projected to stay about the same or even decline slightly to 2010, then sharply increase to 67.3 in 2020 and 77.9 in 2030. Almost the entire change in the ratio is due to the rapidly increasing size of the elderly population. The ratio of people under 18 to the population aged 18 to 64 is projected to change very little between 1990 and 2050.

Finally, it is useful to consider what will happen to the size of the elderly population in the future. In 1990 the U. S. population 65 years of age and older num-

4 Murray Gendell and Jacob S. Siegel, "Trends in Retirement Age by Sex 1950-2005," *Monthly Labor Review*, 115(7): 22-29.

Table 6.4: Median Age at Retirement, by Sex, 1950-55 to 2000-05

Period	Age	
	Men	Women
1950-55	66.9	67.7
1955-60	65.8	66.2
1960-65	65.2	64.6
1965-70	64.2	64.2
1970-75	63.4	63.0
1975-80	63.0	63.2
1980-85	62.8	62.7
1985-90	62.6	62.8
1990-95[1]	62.7	62.6
1995-2000[2]	62.3	62.0
2000-05[3]	61.7	61.2

Note: Estimates were calculated from 5-year age-specific labor force data obtained in the Current Population Survey and life-table survival ratios.

Source: Bureau of Labor Statistics, *Monthly Labor Review*, July 1992, p. 27.

[1]Based on 1990 actual and 1995 projected data.
[2]Based on projected data for 1995 and 2000.
[3]Based on projected data for 2000 and 2005.

The ratio of people aged 65 and over to the population aged 18 to 64 is expected to increase sharply, starting about ten years from now.

Table 6.5: Number of Dependents per 100 Persons Aged 18 to 64 Years, 1900 to 2050

(Middle series. As of July 1. Resident population)

Year	Total Dependents	Under Age 18	Aged 65 and Over
ESTIMATES			
1900	79.9	72.6	7.3
1910	73.2	65.7	7.5
1920	72.0	64.0	8.0
1930	67.7	58.6	9.1
1940	59.7	48.8	10.9
1950	64.5	51.1	13.4
1960	82.2	65.3	16.9
1970	78.7	61.1	17.6
1980	64.9	46.2	18.7
1985	61.9	42.6	19.3
1990	62.0	41.7	20.3
PROJECTIONS			
2000	63.3	42.4	20.9
2010	60.9	39.4	21.5
2020	67.3	39.9	27.4
2030	77.9	42.2	35.7
2040	78.9	41.8	37.1
2050	78.1	41.7	36.4

Source: U. S. Census, *Current Population Reports*, P25-1104, p. xv.

bered about 31,224,000. Table 6.6 presents the Census Bureau's middle series projection of this population to 2050. The population aged 65 is projected to reach 40 million in 2010, 53 million in 2020 and 70 million in 2030. The elderly population will be 16.4 percent of the population in 2020 and 20.1 percent by 2030 compared to about 12.8 percent today. Minnesota is older than the nation as a whole, so these national figures probably understate the demographic changes that are projected for the future in Minnesota. Projections of the population by age for Minnesota show that the population over 65 in Minnesota will be proportionately larger in Minnesota by 2015, although it is somewhat less than the national average today. By 2020, the elderly population is projected to be 16.9 percent of the total population in Minnesota compared to 16.37 in the nation as a whole.

None of the demographic trends described above settles the issue of what Minnesota's public employee retirement systems should look like, but they do set a context for consideration of pension system policy decisions. The long term trend toward a lower retirement age and in labor force participation by older workers are widely predicted to either level out or reverse direction. Financing Social Security will become more difficult and there will be a strong national interest in extending

Table 6.6: Population Projections by Age, Minnesota and the United States (in thousands)

	1993	1995	2000	2005	2010	2015	2020
United States							
65 to 74	18,651	18,963	18,551	18,624	20,978	25,733	30,910
75 to 84	10,629	11,087	12,438	13,264	13,157	13,467	15,480
85 and over	3,315	3,598	4,333	5,082	5,969	6,632	6,959
65 and over	32,595	33,648	35,322	36,970	40,104	45,832	53,349
Percent 65 and over	12.64%	12.77%	12.79%	12.82%	13.35%	14.64%	16.37%
All ages	257,927	263,434	276,241	288,286	300,431	313,116	325,942
Minnesota							
65 to 74	300	306	304	309	349	429	525
75 to 84	192	196	210	223	224	231	266
85 and over	72	76	88	98	110	121	126
65 and over	564	578	602	630	683	781	917
Percent 65 and over	12.46%	12.51%	12.48%	12.64%	13.32%	14.80%	16.90%
All ages	4527	4619	4824	4986	5127	5276	5426
Mn/US Ratio	0.9859	0.9797	0.9760	0.9853	0.9980	1.0113	1.0325

Source: U. S. Census, *Current Population Reports*, P25-1111, p. 24.

working careers. There is no necessary connection between wise national policy and Minnesota public policy, but the functional requirements of the Social Security system should enter into the decision.

If a lot of recent thinking is correct, occupational careers will be different in the future than in the past, characterized by greater mobility and career changes. The period since the Second World War has seen a large increase in labor force participation by women and an increase in two-earner households. These trends taken together suggest that part-time work, frequent job changes, and greater flexibility will need to be accommodated in the future. While early retirement is one need to be accommodated, so are portability of benefits and the increased likelihood that people will not make a lifetime commitment to a career in public employment. These issues require permanent structural changes in the retirement system rather than occasional early retirement incentives.

Appendix A: Survey Design

As part of the study we surveyed state agencies, cities, counties and school districts. We obtained data on individual retirees, as well as data on the benefits and costs of early retirement incentives.

This appendix provides a discussion of the samples and survey procedures used in our study. Copies of the survey instruments are also included. We achieved a high rate of response to each of the surveys, over 85 percent in every case. This is due to the general cooperation we received as well as our repeated calls back to non-respondents.

STUDY SAMPLES

State Government

As we started our study, the Department of Employee Relations was also initiating their own study of state government early retirees. They were preparing to collect data on each early retiree responding to the 1993 incentive. In the interests of avoiding duplication, we decided to use their data on the disposition of jobs vacated by early retirement of state employees. DOER received responses from 28 departments.

We sent a separate survey with additional questions to every state department with at least one early retiree and conducted personal interviews with six departments and telephone interviews with others.

We sent surveys to the 31 state departments with early retirees, and received 27 usable responses. We did not survey the community colleges or state universities, because we doubted we had the resources to include these systems along with executive branch agencies of state government, city and county government and school districts. The 18 retirees from the community colleges are included in our numbers on disposition of retirees' job duties and in salary data. The State Universities were not included in DOER's study, and are not included in our numbers on salary and disposition of job duties. We did use some data provided by the retirement associations and the Department of Employee Relations on both the community colleges and state universities, however. On the basis of these numbers, the State Universities contributed 27 early retirees to the total.

We identified a total of 651 state employees who took early retirement in response to the 1993 incentives. We based our salary comparisons and job disposition data on a total of 584 retirees on whom we were able to assemble data. The exact number of early retirees varies across the data sources in part because of different treatment of retirees with service credit derived from working for more than one employer.

The four departments out of 31 that did not respond to the survey are the State Auditor, DOER, the Board of Animal Health, and the Secretary of State. All together these had a total of fewer than 10 early retirees. Thus our response rate for state departments is 27 of 31, or 87.1 percent. Our rate for individuals is 584 of 651, or 90 percent.

School Districts

Table A.1 presents the design of our sample of school districts. We wanted to be sure to sample the largest districts, because that is where most of the retirees are, and we also wanted to make sure districts whose employment is declining were also represented, because we expected that those districts would have a different response to early retirement incentives than growing districts. So we used five survey categories and selected 100 percent of the 30 districts with average daily membership (ADM) of 5,000 or more, and we also selected 100 percent of the 14 districts with a declining number of teachers between school years 1992-93 and 1993-94. We selected half of the districts with enrollment between 2,000 and 5,000, one-quarter of the districts with enrollment between 1,000 and 2,000, and one-eighth of districts between 500 and 1,000.

Table A.1 shows the response rate for each of these survey categories, and also shows that we received back 85 of the 95 surveys we mailed out for an overall response rate of 89 percent. The survey responses were weighted by the same factors used in sampling so our results are representative of Minnesota school districts with early retirees. We did not mail surveys to districts that did not have early retirees.

Table A.1: School District Sample

Survey Category	Number of Districts	Number of Early Retirees[a]	Sample Rate	Sample Weight	Districts with Early Retirees[a]	Surveys Mailed	Surveys Returned	Retirees on Returned Surveys	Response Rate
1992-93 Enrollment Over 5,000	30	1,093	100.0%	1	30	30	26	766	86.7%
Declining Number of Teachers and Enrollment Over 1,300	14	174	100.0	1	14	14	12	167	85.7
1992-93 Enrollment Between 2,000-5,000	47	444	50.0	2	47	22	20	187	90.9
1992-93 Enrollment Between 1,000-2,000	79	316	25.0	4	73	19	17	84	89.5
1992-93 Enrollment Between 500-1,000	88	191	12.5	8	74	10	10	17	100.0
Total	258	2,218			238	95	85	1,221	89.5%

[a]Data provided by PERA, TRA, and the teachers retirement associations of Duluth, Minneapolis, and St. Paul. Data were preliminary so may differ slightly from figures elsewhere in this report.

Counties

The county sample was simple. As Table A.2 shows, there are 87 counties in Minnesota. We surveyed all of the 25 largest counties. The smallest of these had a population of 32,650. We surveyed half of the remaining counties that had at least one early retiree working for county government. There are 56 such counties. We obtained a response rate of 96 percent for the largest counties, and 83 percent for the smaller counties. This averages to an 89 percent total response rate.

Table A.2: County Sample

Survey Category	Number of Counties	Number of Early Retirees[a]	Sample Rate	Sample Weight	Counties with Early Retirees[a]	Surveys Mailed	Surveys Returned	Retirees on Returned Surveys	Response Rate
25 Largest Counties[b] (population over 32,650)	25	337	100%	1	25	25	24	335	96.0%
Remaining Counties	62	180	50	2	56	29	24	79	82.8
Total	87	517			81	54	48	414	88.9%

[a]Data provided by the Public Employees Retirement Association. Data were preliminary so may differ slightly from figures elsewhere in this report.

[b]As measured in 1992. Data provided by the State Auditor's Office.

Cities

Table A.3 shows the design of our sample of cities. We surveyed the four largest cities excluding Minneapolis which did not offer the 1993 early retirement incentives. We also sampled the 11 cities with at least five early retirees. We surveyed half of all cities with populations between 10,000 and 60,000, and a quarter of cities with a population of 2,000 to 10,000. These categories contain 368 early retirees.

We identified 61 other early retirees from data supplied by PERA, but since these were scattered among very small cities and townships we decided not to include these places in our study. It would have been difficult to obtain good data on what amounts to 14 percent of city employees who took early retirement, and it might have impeded our ability to get a good response rate from the larger cities. Our response rate was 100 percent among the largest cities and cities with at least five early retirees. By themselves these survey categories account for nearly half of all city employees who took early retirement.

Other Data Sources

Our data on employment and enrollment in school districts was provided by the State Department of Education. Data on employment and population in cities and counties was provided by the State Auditor's Office. These data come from the Auditor's Financial Health Profiles reports. The last year for which we have data

Table A.3: City Sample

Survey Category	Number of Cities	Number of Early Retirees[a]	Sample Rate	Sample Weight	Cities with Early Retirees[a]	Surveys Mailed	Surveys Returned	Retirees on Returned Surveys	Response Rate
4 Largest Cities[b] (population over 60,000)	4	147	100%	1	4	4	4	135	100.0%
Cities with at Least 5 Early Retirees	11	78	100	1	11	11	11	74	100.0
Cities With Population 10,000-60,000[c]	63	69	50	2	37	20	19	44	95.0
Cities With Population 2,000-10,000[c]	107	74	25	4	40	9	8	17	88.9
Total	185	368			92	44	42	270	95.5%

[a]Data provided by the Public Employees Retirement Association. Data were preliminary so may differ slightly from figures elsewhere in this report.

[b]Excludes Minneapolis, which did not participate in the incentive.

[c]As measured in 1992. Data provided by the State Auditor's Office.

is 1992, and the statistics are provided by cities and counties as an adjunct to the financial reporting required by the State. Many cities and counties did not have good annual information on employment and population judging from the fact that these numbers did not change from year to year. Statistics on state government employment come from the Department of Employee Relations' monthly Executive Branch Employment Statistics reports. We obtained and analyzed employment statistics covering the period January 1982 to January 1994.

School District TRA Member Survey

These questions refer to the teachers and other TRA members who took early retirement in 1993. These retirees are listed in a legal-size form accompanying this questionnaire. A similar questionnaire asks about your district's employees who are PERA members. Please add any comments you have about the survey or the subject matter it covers in the space provided or on additional pages. Your responses are vital if we are to gain an accurate view of the impact of early retirement incentives.

In reporting the results of this study, our office will not release any information that permits the identification of any individual retiree. Also, we will only release opinion data in summaries combining your responses with those of other school districts, so your individual responses will not be made public.

1. The following questions ask you to describe the impact of the 1993 early retirement incentives on your school district. We are referring to the incentives offered statewide, not early retirement severance pay or other incentives specific to your district.

   a. On the whole, early retirements resulted in meaningful salary savings.

   ☐ 1. Agree ☐ 2. Disagree

   b. Please describe the effect of early retirements on teacher quality.

   ☐ 1. Significant improvement
   ☐ 2. Some improvement
   ☐ 3. No change
   ☐ 4. Some loss of quality
   ☐ 5. Significant loss of quality

   c. Early retirement incentives created opportunities for promotion or mobility that were overdue.

   ☐ 1. Agree ☐ 2. Disagree

   d. Disruptive or demoralizing staff reassignments were caused by early retirements.

   ☐ 1. Agree ☐ 2. Disagree

   e. Early retirements helped avoid layoffs or terminations.

   ☐ 1. Agree ☐ 2. Disagree

   f. Please estimate the number of layoffs and terminations you avoided as a result of the 1993 incentive. (Do not include teachers who were laid off over the summer but recalled at the beginning of the following school year.)

   _____

   g. Early retirement incentives created difficult problems in planning for future staffing needs.

   ☐ 1. Agree ☐ 2. Disagree

   h. Early retirement incentives helped us solve a difficult budget situation.

   ☐ 1. Agree ☐ 2. Disagree

2. Taking everything into consideration, how would you evaluate the impact of the 1993 early retirement incentives for TRA members on your district:

   ☐ 1. Strongly positive
   ☐ 2. Generally positive
   ☐ 3. Generally negative
   ☐ 4. Strongly negative

3. What are the most important benefits to your district of the 1993 statewide early retirement incentives offered in 1993?

4. What are the most important negative effects of the 1993 early retirement incentives?

5. Please estimate the total number of layoffs of teachers and other licensed staff (TRA members) in your district that were not recalled at the start of the following school year.

   1991_____ 1992_____ 1993_____ 1994_____

6. What is the average annual salary (excluding fringe benefits) of new teachers hired at the start of the 1993-94 school year?

   _____

7. Did your school district participate in the state's early retirement program (offering employer-paid health benefits until age 65) in 1992 for TRA members?

   ☐ 1. yes ☐ 2. no

8. Does your district have a program separate from the 1993 state incentive that provides employer-paid, post-retirement health benefits to qualified TRA members who retire early?

   ☐ 1. yes ☐ 2. no

9. Please attach a copy of your current teacher contract (or copies of pages that describe the early retirement incentives provided by your district).

10. Please add any other comments you have about the survey or the topics covered.

Please return the completed forms and a copy of your current teacher contract to: **State of Minnesota, Office of the Legislative Auditor, Centennial Office Building, St. Paul, Minnesota 55155.** A postage-paid envelope is included for your use.

School District PERA Member Survey

These questions refer to your district's Public Employee Retirement Association (PERA) members who took early retirement in 1993. These retirees are listed in a legal-sized form accompanying this questionnaire. (A separate but similar questionnaire asks about teachers and other licensed staff.) Please add any comments you have about the survey or the subject matter it covers in the space provided or on additional pages. Your responses are vital if we are to gain an accurate view of the impact of early retirement incentives.

In reporting the results of this study, our office will not release any information that permits the identification of any individual retiree. Also, we will only release opinion data in summaries combining your responses with those of other school districts, so your individual responses will not be made public.

1. The following questions ask you to describe the impact of the 1993 early retirement incentives on your school district. We are referring to the incentives offered under the state's 1993 incentive program, not any other early retirement severance pay or other incentives specific to your district.

   a. On the whole, early retirement of PERA employees resulted in meaningful salary savings.

   ☐ 1. Agree ☐ 2. Disagree

   b. Please describe the effect of the 1993 early retirement incentives on the productivity of PERA employees in your district.

   ☐ 1. Significant improvement
   ☐ 2. Some improvement
   ☐ 3. No change
   ☐ 4. Some loss of quality
   ☐ 5. Significant loss of quality

   c. Early retirement incentives created opportunities for promotion or mobility that were overdue.

   ☐ 1. Agree ☐ 2. Disagree

   d. Early retirements helped avoid layoffs or terminations.

   ☐ 1. Agree ☐ 2. Disagree

   e. Please estimate the number of layoffs and terminations you avoided as a result of the 1993 early retirement incentives.

   _____

   f. Early retirement incentives created difficult problems in planning for future staffing needs.

   ☐ 1. Agree ☐ 2. Disagree

   g. Early retirement of PERA employees helped solve a difficult budget situation.

   ☐ 1. Agree ☐ 2. Disagree

2. Taking everything into consideration, how would you evaluate the impact of the 1993 early retirement incentives for PERA members on your district?

   ☐ 1. Strongly positive
   ☐ 2. Generally positive
   ☐ 3. Generally negative
   ☐ 4. Strongly negative

3. What are the most important benefits to your district of the 1993 early retirement incentives offered to PERA members?

4. What are the most important negative effects of the 1993 early retirement incentives?

5. Please estimate the total number of layoffs of PERA members in your district during each of the following school years.

   1990-91_____ 1991-92_____ 1992-93_____ 1993-94_____

6. Health Benefits:

   a. Did your district choose to offer the health option under the state's 1993 incentive program?

      ☐ 1. yes ☐ 2. no

   b. Does your district have a program separate from the 1993 state incentive that provides employer-paid, post-retirement health benefits to qualified PERA members who retire early?

      ☐ 1. yes ☐ 2. no

   c. If yes to a or b, what is the current average annual cost of health benefits per early retiree? _____

7. Did your school district participate in the state's early retirement program (offering employer-paid health benefits until age 65) in 1992 for PERA members?

   ☐ 1. yes ☐ 2. no

8. Please attach a description of any early retirement incentives you offered in 1993 to PERA members other than the statewide incentives. *Do not include severance pay offered to all retirees or other departing employees.*

9. Please add any other comments you have about the survey or the topics covered.

Please return the completed forms to:
State of Minnesota, Office of the Legislative Auditor, Centennial Office Building, St. Paul, Minnesota 55155. A postage-paid envelope is included for your use.

City Early Retirement Survey

These questions refer to your city's Public Employees Retirement Association (PERA) members who took early retirement in 1993. These retirees are listed in a legal-sized form accompanying this questionnaire. Please add any comments you have about the survey or the subject matter it covers in the space provided or on additional pages. Your responses are vital if we are to gain an accurate view of the impact of early retirement incentives.

In reporting the results of this study, our office will not release any information that permits the identification of any individual retiree. Also, we will only release opinion data in summaries combining your responses with those of other local governments, so your individual responses will not be made public.

1. The following questions ask you to describe the impact of the 1993 early retirement incentives on your city. We are referring to the incentives offered under the state's 1993 incentive program, not any other early retirement severance pay or other incentives specific to your city.

   a. On the whole, early retirement of PERA employees resulted in meaningful salary savings.

   ☐ 1. Agree ☐ 2. Disagree

   b. Please describe the effect of the 1993 early retirement incentives on the productivity of PERA employees in your city.

   ☐ 1. Significant improvement
   ☐ 2. Some improvement
   ☐ 3. No change
   ☐ 4. Some loss of quality
   ☐ 5. Significant loss of quality

   c. Early retirement incentives created opportunities for promotion or mobility that were overdue.

   ☐ 1. Agree ☐ 2. Disagree

   d. Early retirements helped avoid layoffs or terminations.

   ☐ 1. Agree ☐ 2. Disagree

   e. Please estimate the number of layoffs and terminations you avoided as a result of the 1993 early retirement incentives.

   _____

   f. Early retirement incentives created difficult problems in planning for future staffing needs.

   ☐ 1. Agree ☐ 2. Disagree

   g. Early retirement of PERA employees helped solve a difficult budget situation.

   ☐ 1. Agree ☐ 2. Disagree

2. Taking everything into consideration, how would you evaluate the impact of the 1993 early retirement incentives for PERA members on your city?

   ☐ 1. Strongly positive
   ☐ 2. Generally positive
   ☐ 3. Generally negative
   ☐ 4. Strongly negative

3. What are the most important benefits to your city of the 1993 early retirement incentives offered to PERA members?

4. What are the most important negative effects of the 1993 early retirement incentives?

5. Please estimate the total number of layoffs of PERA members in your city during each of the following years.

   1991_____ 1992_____ 1993_____ 1994_____

6. Early retirement incentives:

   a. Did your city participate in the state's early retirement incentive program in:

1991 (health benefits)	☐ 1. yes	☐ 2. no
1992 (health benefits)	☐ 1. yes	☐ 2. no
1993 (health option)	☐ 1. yes	☐ 2. no
1993 (annuity option)	☐ 1. yes	☐ 2. no

   b. Does your city have a program separate from the state incentives that provides employer-paid, post-retirement health or dental benefits to qualified PERA members who retire early?

   ☐ 1. yes ☐ 2. no

   c. If yes to a or b, what is the current average annual cost of health benefits per early retiree? _____

   d. Does your city offer any other employer-paid early retirement incentives to PERA members? (If yes, please attach a description of the incentive.)

   ☐ 1. yes ☐ 2. no

7. Please add any other comments you have about the survey or the topics covered.

Please return the completed forms to:
State of Minnesota, Office of the Legislative Auditor, Centennial Office Building, St. Paul, Minnesota 55155. A postage-paid envelope is included for your use.

County Early Retirement Survey

These questions refer to your county's Public Employees Retirement Association (PERA) members who took early retirement in 1993. These retirees are listed in a legal-sized form accompanying this questionnaire. Please add any comments you have about the survey or the subject matter it covers in the space provided or on additional pages. Your responses are vital if we are to gain an accurate view of the impact of early retirement incentives.

In reporting the results of this study, our office will not release any information that permits the identification of any individual retiree. Also, we will only release opinion data in summaries combining your responses with those of other local governments, so your individual responses will not be made public.

1. The following questions ask you to describe the impact of the 1993 early retirement incentives on your county. We are referring to the incentives offered under the state's 1993 incentive program, not any other early retirement severance pay or other incentives specific to your county.

   a. On the whole, early retirement of PERA employees resulted in meaningful salary savings.

   ☐ 1. Agree ☐ 2. Disagree

   b. Please describe the effect of the 1993 early retirement incentives on the productivity of PERA employees in your county.

   ☐ 1. Significant improvement
   ☐ 2. Some improvement
   ☐ 3. No change
   ☐ 4. Some loss of quality
   ☐ 5. Significant loss of quality

   c. Early retirement incentives created opportunities for promotion or mobility that were overdue.

   ☐ 1. Agree ☐ 2. Disagree

   d. Early retirements helped avoid layoffs or terminations.

   ☐ 1. Agree ☐ 2. Disagree

   e. Please estimate the number of layoffs and terminations you avoided as a result of the 1993 early retirement incentives.

   _____

   f. Early retirement incentives created difficult problems in planning for future staffing needs.

   ☐ 1. Agree ☐ 2. Disagree

   g. Early retirement of PERA employees helped solve a difficult budget situation.

   ☐ 1. Agree ☐ 2. Disagree

2. Taking everything into consideration, how would you evaluate the impact of the 1993 early retirement incentives for PERA members on your county?

   ☐ 1. Strongly positive
   ☐ 2. Generally positive
   ☐ 3. Generally negative
   ☐ 4. Strongly negative

3. What are the most important benefits to your county of the 1993 early retirement incentives offered to PERA members?

4. What are the most important negative effects of the 1993 early retirement incentives?

5. Please estimate the total number of layoffs of PERA members in your county during each of the following years.

   1991_____ 1992_____ 1993_____ 1994_____

6. Early retirement incentives:

   a. Did your county participate in the state's early retirement incentive program in:

1991 (health benefits)	☐ 1. yes	☐ 2. no
1992 (health benefits)	☐ 1. yes	☐ 2. no
1993 (health option)	☐ 1. yes	☐ 2. no
1993 (annuity option)	☐ 1. yes	☐ 2. no

   b. Does your county have a program separate from the state incentives that provides employer-paid, post-retirement health or dental benefits to qualified PERA members who retire early?

   ☐ 1. yes ☐ 2. no

   c. If yes to a or b, what is the current average annual cost of health benefits per early retiree? _____

   d. Does your county offer any other employer-paid early retirement incentives to PERA members? (If yes, please attach a description of the incentive.)

   ☐ 1. yes ☐ 2. no

7. Please add any other comments you have about the survey or the topics covered.

Please return the completed forms to:
State of Minnesota, Office of the Legislative Auditor, Centennial Office Building, St. Paul, Minnesota 55155. A postage-paid envelope is included for your use.

State Agency Early Retirement Survey

These questions refer to your department's experience with early retirement of state employees under incentives enacted by the 1993 Legislature. Qualifying state employees were offered the opportunity to take an enhanced annuity or health insurance coverage if they retired between May 17, 1993 and January 31, 1994.

The Department of Employee Relations recently asked you for data on your early retirees. (We are separately following up that survey with additional questions about the impact of your department's early retirements on your operations.) This questionnaire is designed to obtain your general views on early retirement incentives, and the effect of the 1993 incentives on your department's operations.

In reporting the results of this study, our office will not release any information that permits the identification of any individual retiree.

1. The following questions ask you to describe the impact of the 1993 early retirement incentives on your department. We are referring to the incentives offered under the state's 1993 incentive program that offered qualifying employees an enhanced retirement annuity or health insurance benefits to age 65.

   a. On the whole, early retirements in our department resulted in meaningful salary savings.

      ☐ 1. Agree ☐ 2. Disagree

   b. Please describe the effect of the 1993 early retirement incentives on the productivity of employees in your department.

      ☐ 1. Significant improvement
      ☐ 2. Some improvement
      ☐ 3. No change
      ☐ 4. Some loss of quality
      ☐ 5. Significant loss of quality

   c. Early retirement incentives created opportunities for promotion or mobility that were overdue.

      ☐ 1. Agree ☐ 2. Disagree

   d. Early retirements helped avoid layoffs or terminations.

      ☐ 1. Agree ☐ 2. Disagree

   e. Please estimate the number of layoffs and terminations you avoided as a result of the 1993 early retirement incentives.

      _____

   f. Early retirement incentives created difficult problems in planning for future staffing needs.

      ☐ 1. Agree ☐ 2. Disagree

   g. Early retirements helped solve a difficult budget situation.

      ☐ 1. Agree ☐ 2. Disagree

2. Taking everything into consideration, how would you evaluate the impact of the 1993 early retirement incentives in your department?

   ☐ 1. Strongly positive
   ☐ 2. Generally positive
   ☐ 3. Generally negative
   ☐ 4. Strongly negative

3. What are the most important benefits to your department of the 1993 early retirement incentives?

4. What are the most important negative effects of the 1993 early retirement incentives?

5. Please estimate the total number of layoffs in your department during each of the following years.

   1991_____ 1992_____ 1993_____ 1994_____

6. In 1990, 1991, and 1992, many state employees age 55 and over were offered health insurance coverage to age 65 as an incentive to retire early. What is your general assessment of the impact of these incentives on your department?

   ☐ 1. Strongly positive Comments:
   ☐ 2. Generally positive
   ☐ 3. Generally negative
   ☐ 4. Strongly negative

7. What changes to the state's retirement system would improve the productivity, efficiency, or effectiveness of state government? *(Check all that apply and circle the most important.)*

   ☐ 1. Continue early retirement incentives like those offered in 1993.
   ☐ 2. Adopt a higher multiplier (currently 1.5 percent per year of service).
   ☐ 3. Adopt a shorter period for calculating base salary (currently five years).
   ☐ 4. Lower the normal age and service requirement (lower than the Rule of 90).
   ☐ 5. Raise the normal age and service requirement (higher than the Rule of 90).
   ☐ 6. Move to a defined contribution system.
   ☐ 7. Offer employer-paid health benefits to early retirees (as in 1990-92).
   ☐ 8. Adopt higher employer and employee contributions along with higher benefits.
   ☐ 9. Other (specify):_____

8. Please add any other comments you have about the survey or the topics covered.

Please return the completed forms to:
State of Minnesota, Office of the Legislative Auditor, Centennial Office Building, St. Paul, Minnesota 55155. A postage-paid envelope is included for your use.

Appendix B: Estimation of the Number of Employees Induced to Retire by the 1993 Incentive Program

This appendix explains how we estimated the number of participants that were induced to retire by the 1993 incentive program. Table B.1 shows how we estimated the effect of the 1993 incentive on the number of retirements by state employees in fiscal year 1994. As we explain in Chapter 2, we used two base periods: (1) fiscal years 1991-93, and (2) fiscal year 1990. The set of tables in the left column present our estimates that used fiscal years 1991-93 as the base period; the right column contains our estimates based on fiscal year 1990. In each column, the first table presents the number of state employees eligible to retire in fiscal year 1994. All tables contain six age categories (55-59, 60-61, 62, 63-64, 65, 66 and over) and three Rule-of-90 status categories (not eligible, the first year an employee is eligible, and beyond the first year of eligibility). The second table shows the percent of eligible employees who retired per year during the base period. The third table presents the number that would have been expected to retire in fiscal year 1994 had employees retired at the same rate as they did in the base period (obtained by multiplying figures in the first table by the corresponding figures in the second table). The fourth table contains the actual number of retirements in fiscal year 1994. The fifth table shows our estimated number of retirements in fiscal year 1994 that were induced by the incentive (the difference between actual and expected retirements). Our estimate is 214 if we use fiscal years 1991-93 as the base period and 392 if we use fiscal year 1990 as the base period. Since 651 state employees retired under the 1993 incentive, we estimate that 40 to 67 percent of state employee participants would have retired in fiscal year 1994 anyway had there been no incentive. When we estimated the average time that employees would have kept working had there been no incentive, we used 50 percent as our estimate of the number that would have retired in fiscal year 1994. This estimate is slightly closer to the estimate using fiscal year 1990 as the base period.

Table B.2 presents our estimates for county, city, and school district employees who were members of PERA. The left and right columns contain our estimates for basic and coordinated system members respectively. We used fiscal years 1991-93 as the base period. To estimate the number of PERA members who were induced to retire by the 1993 incentive in fiscal year 1994, we used the same procedure that we used for state employees. There were 117 PERA members who retired under the 1993 incentive who were not recorded as retiring in fiscal year 1994 (76 retired in fiscal year 1993 and 41 retired in fiscal year 1995). This includes some of those who retired under the incentive established by the 1994 Legislature because they were inadvertently left out of the incentive in 1993. Since the procedure outlined above estimates the number of retirements induced by the incentive in fiscal year 1994, we needed to separately estimate the number induced to retire in fiscal years 1993 or 1995. To do this, we assumed that the percentage of participants that were induced to retire by the incentive (43 percent) was the same in each fiscal year.

Table B.1: Estimated Number of State Employees (MSRS) Induced to Retire in FY 1994 by the 1993 Incentive Program

Low Estimate (using FYs 1991-93 as the base period)

	Rule-of-90 Status			
Age	Not Eligible	1st Year Eligible	Beyond 1st Year	Total
NUMBER ELIGIBLE TO RETIRE IN FY 1994				
55-59	2,871	152	232	3,255
60-61	781	53	158	992
62	346	19	58	423
63-64	412	39	63	514
65	137	19	28	184
66+	297	31	130	458
PERCENT RETIRING IN FYs 1991-93				
55-59	3.5%	22.1%	21.1%	
60-61	8.7	29.3	35.4	
62	23.1	64.9	49.7	
63-64	19.1	37.3	27.8	
65	51.1	74.4	48.3	
66+	33.1	23.0	33.1	
EXPECTED RETIREMENTS IN FY 1994 BASED ON FY 1991-93 RATES				
55-59	102	34	49	184
60-61	68	16	56	139
62	80	12	29	121
63-64	79	15	18	111
65	70	14	14	98
66+	98	7	43	148
Total	496	97	208	801
ACTUAL RETIREMENTS IN FY 1994				
55-59	122	46	64	232
60-61	91	21	65	177
62	95	11	24	130
63-64	87	21	32	140
65	86	16	20	122
66+	134	15	66	215
Total	614	130	271	1,015
ESTIMATED NUMBER OF RETIREMENTS IN FY 1994 INDUCED BY THE INCENTIVE				
55-59	20	12	15	48
60-61	23	5	9	38
62	15	(1)	(5)	9
63-64	8	6	14	29
65	16	2	6	24
66+	36	8	23	67
Total	118	33	63	214

High Estimate (using FY 1990 as the base period)

	Rule-of-90 Status			
Age	Not Eligible	1st Year Eligible	Beyond 1st Year	Total
NUMBER ELIGIBLE TO RETIRE IN FY 1994				
55-59	2,871	152	232	3,255
60-61	781	53	158	992
62	346	19	58	423
63-64	412	39	63	514
65	137	19	28	184
66+	297	31	130	458
PECENT RETIRING IN FY 1990				
55-59	2.0%	12.6%	8.5%	
60-61	6.3	30.5	12.2	
62	24.3	19.0	45.7	
63-64	15.4	21.9	25.0	
65	52.8	41.6	45.4	
66+	36.5	13.0	25.8	
EXPECTED RETIREMENTS IN FY 1994 BASED ON FY 1990 RATES				
55-59	58	19	20	97
60-61	49	16	19	84
62	84	4	27	114
63-64	64	9	16	88
65	72	8	13	93
66+	108	4	34	146
Total	436	59	128	623
ACTUAL RETIREMENTS IN FY 1994				
55-50	122	46	64	232
60-61	91	21	65	177
62	95	11	24	130
63-64	87	21	32	140
65	86	16	20	122
66+	134	15	66	215
Total	614	130	271	1,015
ESTIMATED NUMBER OF RETIREMENTS IN FY 1994 INDUCED BY THE INCENTIVE				
55-59	64	27	44	135
60-61	42	5	46	92
62	11	7	(3)	16
63-64	23	12	16	52
65	14	8	7	29
66+	25	11	33	69
Total	179	70	143	392

Number retiring under the 1993 incentive = 651.

Estimated percent that would have retired in fiscal year 1994 anyway:
Using FYs 1991-93 as the base period: (651 - 214) / 651 = 67%
Using FY 1990 as the base period: (651 - 392) / 651 = 40%

Source: Program Evaluation Division analysis of data from the actuary for the Legislative Commission on Pensions and Retirement.

Table B.2: Estimated Number of PERA Members Induced to Retire in FY 1994 by the 1993 Incentive Program

Basic Members

Age	Rule-of-90 Status: Not Eligible	1st Year Eligible	Beyond 1st Year	Total
NUMBER ELIGIBLE TO RETIRE IN FISCAL YEAR 1994				
55-59	550	167	112	829
60-61	114	64	89	267
62	13	36	42	91
63-64	5	47	94	146
65	0	2	44	46
66+	0	0	115	115
Total	682	316	496	1,494
PERCENT RETIRING IN FISCAL YEARS 1991-93				
55-59	4.8%	37.7%	23.6%	
60-61	8.9	41.1	23.8	
62	18.7	42.7	30.9	
63-64	19.6	40.5	27.7	
65	64.2	50.6	47.5	
66+	0.0	39.1	30.1	
EXPECTED RETIREMENTS IN FY 1994 BASED ON FY 1991-93 RATES				
55-59	26	63	26	116
60-61	10	26	21	58
62	2	15	13	31
63-64	1	19	26	46
65	0	1	21	22
66+	0	0	35	35
Total	40	125	142	307
ACTUAL RETIREMENTS IN FISCAL YEAR 1994				
55-59	87	105	72	264
60-61	29	36	54	119
62	9	21	24	54
63-64	2	29	57	88
65	0	1	26	27
66+	0	0	58	58
Total	127	192	291	609
ESTIMATED NUMBER OF RETIREMENTS IN FY 1994 INDUCED BY THE INCENTIVE				
55-59	60	42	46	148
60-61	19	10	33	61
62	7	6	11	23
63-64	1	10	31	42
65	0	0	5	5
66+	0	0	23	23
Total	87	67	149	303

Coordinated Members

Age	Rule-of-90 Status: Not Eligible	1st Year Eligible	Beyond 1st Year	Total
NUMBER ELIGIBLE TO RETIRE IN FISCAL YEAR 1994				
55-59	8,212	39	51	8,302
60-61	2,563	24	42	2,629
62	1,072	16	20	1,108
63-64	1,436	52	37	1,525
65	452	34	24	510
66+	1,076	102	210	1,388
Total	14,811	267	384	15,462
PERCENT RETIRING IN FISCAL YEARS 1991-93				
55-59	2.8%	18.4%	11.3%	
60-61	8.1	45.8	22.9	
62	22.1	50.0	45.6	
63-64	19.4	47.0	21.5	
65	40.0	41.0	58.9	
66+	27.5	29.1	23.6	
Total	9.7	33.1	25.0	
EXPECTED RETIREMENTS IN FY 1994 BASED ON FY 1990 RATES				
55-59	231	7	6	244
60-61	207	11	10	228
62	237	8	9	254
63-64	279	24	8	312
65	181	14	14	209
66+	296	30	50	375
Total	1,431	94	96	1,621
ACTUAL RETIREMENTS IN FISCAL YEAR 1994				
55-59	255	18	16	288
60-61	240	15	24	279
62	304	10	13	327
63-64	305	29	25	359
65	210	20	19	249
66+	323	45	99	467
Total	1,637	137	196	1,970
ESTIMATED NUMBER OF RETIREMENTS IN FY 1994 INDUCED BY THE INCENTIVE				
55-59	23	11	10	45
60-61	33	4	14	51
62	67	2	4	73
63-64	26	5	17	48
65	29	6	5	40
66+	28	15	49	92
Total	206	43	100	349

Estimated number of retirements in FY 1994 induced by the incentive = 303 + 349 = 652.

Number of employees who retired under the 1993 incentive in FY 1994 = 1,520 (117 retired in FY 1993 or FY 1995).

Estimated percent that would have retired in FY 1994 anyway = (1,520 - 652) / 1,520 = 57%.

Estimated total number of retirements induced by the 1993 incentive = 652 + 43% of the 117 who retired in FY 1993 or FY 1995 = 702.

Source: Program Evaluation Division analysis of data from the actuary for the Legislative Commission on Pensions and Retirement.

For TRA, there were significant numbers of retirements under the 1993 incentive in both fiscal years 1993 and 1994. As a result, we used reporting periods that bracketed the eligibility window. For K-12 teachers, who were eligible for the 1993 incentive between May 17 and August 1, 1993, we compared retirements in calendar year 1993 with the average number of retirements in 1990 through 1992. For college teachers, who were eligible between May 17, 1993 and January 31, 1994, we compared retirements in the year ending March 31, 1994 with the average number during the previous three years. Table B.3 presents these comparisons. The annual number of retirements went from 1,347 in the base period to 2,399 in the incentive year, a difference of 1,052.

Table B.3: Estimated Number of TRA Members Induced to Retire During the Incentive Year by the 1993 Incentive Program

Retirements in the incentive year	2,399
Average annual retirements in base period	1,347
Retirements due to demographic changes (see Table B.4)	75
Estimated number of retirements in the incentive year induced by the incentive	977
Incentive participants	1,763
Estimated percent attributable to incentive	55%
Estimated percent that would have retired anyway	45%
Number of active TRA members who participated in the 1993 incentive	1,410
Estimated number of active TRA members who retired in the incentive year because of the incentive	912

Note: For TRA members employed by K-12 school districts, we used calendar year 1993 as the incentive year and calendar years 1990-92 as the base period. For college teachers, we used the year ending March 31, 1994 as the incentive year and the three years ending March 31, 1991 through March 31, 1993 as the base period. The number of retirements were as follows:

TRA (K-12)		TRA (College)	
Year	Retirements	Year Ending	Retirements
1990	978	3-31-91	149
1991	1,235	3-31-92	216
1992	1,236	3-31-93	226
1993	1,976	3-31-94	423

Source: Data provided by Teachers Retirement Association.

However, between the base period and the incentive period there were increases in the number of teachers eligible to retire as well as changes in their age distribution and eligibility for the Rule of 90. To estimate how these demographic changes affected retirements, we calculated how the number of retirements would change between the base period and the incentive period if the retirement rates did not change, as shown in Table B.4. Our estimate of the number of retirements caused by demographic changes is the difference between (1) the expected number of retirements in fiscal year 1993 (the number eligible to retire in fiscal year 1993 times the average percent retiring in fiscal years 1990-92) and (2) the average number of retirements in fiscal years 1990-92. As Table B.4 shows, we estimate that 75 retirements were attributable to the demographic changes, and 977 were attributable to the 1993 incentive.

Table B.4: Estimated Number of Retirements by TRA Members in the Incentive Year Caused by Changes in Number of Employees, Their Ages, and Their Rule-of-90 Status

	Basic Members				Coordinated Members				
	Rule-of-90 Status				Rule-of-90 Status				
Age	Not Eligible	1st Year Eligible	Beyond 1st Year	Total	Age	Not Eligible	1st Year Eligible	Beyond 1st Year	Total
NUMBER ELIGIBLE TO RETIRE IN FISCAL YEAR 1993					NUMBER ELIGIBLE TO RETIRE IN FISCAL YEAR 1993				
55-59	102	125	100	327	55-59	4,322	399	260	4,981
60-61	5	6	52	63	60-61	751	109	252	1,112
62	2	0	11	13	62	203	26	75	304
63-64	4	3	19	26	63-64	211	23	121	355
65	0	0	5	5	65	59	12	31	102
66+	0	0	10	10	66+	60	13	49	122
Total	113	134	197	444	Total	5,606	582	788	6,976
PERCENT RETIRING IN FISCAL YEARS 1990-92					PERCENT RETIRING IN FISCAL YEARS 1990-92				
55-59	11.8%	45.0%	36.1%		55-59	5.4%	31.4%	22.8%	
60-61	17.7	59.1	34.1		60-61	17.5	39.3	34.5	
62	30.7	100.0	35.6		62	34.7	49.3	36.3	
63-64	33.3	100.0	37.6		63-64	38.0	37.3	38.1	
65	100.0	0.0	34.8		65	59.8	45.5	54.5	
66+	100.0		42.1		66+	64.5	28.9	47.6	
EXPECTED RETIREMENTS IN FY 1993 BASED ON FY 1990-92 RATES					EXPECTED RETIREMENTS IN FY 1993 BASED ON FY 1990-92 RATES				
55-59	12	56	36	104	55-59	233	125	59	418
60-61	1	4	18	22	60-61	131	43	87	261
62	1	0	4	5	62	70	13	27	110
63-64	1	3	7	11	63-64	80	9	46	135
65	0	0	2	2	65	35	5	17	58
66+	0	0	4	4	66+	39	4	23	66
Total	15	63	71	149	Total	589	199	260	1,048
AVERAGE ANNUAL ACTUAL RETIREMENTS IN FY 1990-92					AVERAGE ANNUAL ACTUAL RETIREMENTS IN FY 1990-92				
55-59	32	62	27	121	55-59	222	89	40	350
60-61	3	4	18	25	60-61	125	33	66	225
62	1	0	7	9	62	72	12	26	109
63-64	1	0	10	11	63-64	92	11	34	137
65	0	0	3	3	65	32	3	14	50
66+	0	0	5	6	66+	48	4	26	78
Total	37	67	69	173	Total	590	152	205	948
ESTIMATED NUMBER OF RETIREMENTS IN THE INCENTIVE YEAR CAUSED BY CHANGES IN NUMBER OF EMPLOYEES, THEIR AGES, AND THEIR RULE-OF-90 STATUS					ESTIMATED NUMBER OF RETIREMENTS IN THE INCENTIVE YEAR CAUSED BY CHANGES IN NUMBER OF EMPLOYEES, THEIR AGES, AND THEIR RULE-OF-90 STATUS				
55-59	(20)	(6)	9	(16)	55-59	12	36	20	68
60-61	(2)	(1)	0	(2)	60-61	6	10	21	36
62	(1)	(0)	(3)	(4)	62	(1)	1	2	2
63-64	1	3	(3)	1	63-64	(11)	(3)	12	(2)
65	(0)	0	(1)	(1)	65	3	2	3	8
66+	(0)	0	(1)	(1)	66+	(9)	0	(3)	(12)
Total	(22)	(4)	2	(25)	Total	(1)	46	55	100

Estimated total number of retirements in the incentive year caused by changes in number of employees, their ages, and their Rule-of-90 status = 100 - 25 = 75.

Source: Program Evaluation Division analysis of data provided by the actuary of the Legislative Commission on Pensions and Retirement.

Unlike figures presented previously in our report, the number of retirements reported in Table B.3 includes retirees who were formerly active members of TRA but were not active at the time of retirement. For example, the retirement figures in Table B.3 include employees with previous teaching service who retired from a county job. Since we already included these employees in our estimates for PERA, we applied the percent of TRA members who were induced to retire during the incentive year (55 percent) to the number of active TRA members who retired under the incentive (1,658), resulting in our estimate of 912.

Appendix C: Estimation of How Long Participants Would Have Kept Working Without the 1993 Incentive Program

Chapter 2 presents our low and high estimates of how long participants in the 1993 early retirement incentive would have kept working had there been no incentive. We describe how we obtained these estimates in more detail below.

High Estimate

Definitions:

prob(x): the probability that a participant would have retired x years after the participant's actual retirement (defined as x years plus or minus 1/2 year) had there been no incentive.

retirement rate: percent of employees with the same age and Rule-of-90 status that retired during the base period. We used the same age and eligibility categories that we used in Appendix B. Each year the participants' age and years of service are increased by one.

For each participant in the 1993 incentive, we calculated the probability of retiring in different years had there been no incentive as follows:

prob(0) = 0.5 for state employees, 0.45 for teachers, 0.57 for PERA (from Appendix B)

prob(1) = (1 - prob(0)) x retirement rate

prob(2) = (1 - prob(0) - prob(1)) x retirement rate

prob(3) = (1 - prob(0) - prob(1) - prob(2)) x retirement rate

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prob(12) = (1 -prob(0) - prob(1) - prob(2) - prob(3) - ... - prob(11)) x retirement rate

prob(13 and higher) = 1 - prob(0) - prob(1) - prob(2) - ... - prob(12).

We then calculated the expected time each participant would have kept working had there been no incentive as follows:

Time = 1 year x prob(1) + 2 years x prob(2) + 3 years x prob(3) + ... + 12 years x prob(12) + 14 years x prob(13 and higher)

We reported the average of these expected times as the high estimate of how long participants would have kept working had there been no incentive.

Low Estimate

To make our low estimate, we assumed that those who would have retired in the same year (based on our estimates in Appendix B) would have retired, on average, on the same day as the actual retirement. We assumed that the other participants would have retired one year later. Thus our estimates are as follows:

State employees: 50 percent would have retired at the same time as the actual retirement; 50 percent would have retired one year later. Average time equals 0.5 years.

Employees covered by PERA: 60 percent would have retired at the same time; 40 percent would have retired one year later. Average time equals 0.4 years.

Teachers and other employees covered by TRA: 45 percent would have retired at the same time; 55 percent would have retired one year later. Average time equals 0.55 years.

Appendix D: Estimated Cost of the 1993 Incentive Program

Chapter 3 presents our estimate of the cost of the 1993 early retirement incentive. This appendix describes how we estimated the cost of the pension incentive in more detail.

For each participant, we estimated what the cost would be under five different assumptions of how much longer the participant would have worked had there not been a 1993 incentive: (1) no additional time, (2) 1 year, (3) 2 years, (4) 3 years, (5) 5 years. In each case, we assumed that the average high-5-salary would increase by 5.25 percent per year and that the retirement annuity received by retirees would increase by 3.5 percent per year. We used a discount rate of 8.5 percent.

Definitions:

Cost (x): Cost of the 1993 early retirement incentive to the retirement association if the retiree would have worked x more years had there not been a 1993 incentive.

Present Value(with incentive): The actual amount transferred to the post retirement fund after the participant retires to cover the expected retirement benefits. This equals the present value of expected retirement benefits, including the extra benefits produced by the 1993 incentive.

Present Value (x): Present value, as measured on the actual retirement date, of retirement benefits if participant would have worked x more years had there not been a 1993 incentive. We calculated what the retirement benefit would have been based on the higher salary, higher age, and more years of service.

Contributions (x years): Employer and employee contributions to the retirement association that would have been paid if the participant would have worked x years had there not been a 1993 incentive.

Prob(x): The probability that the employee would have worked x more years had there not been a 1993 incentive, as calculated in Appendix C.

We estimated the costs as follows:

Cost (0) = Present Value(with incentive) - Present Value (0)

Cost (1) = Present Value(with incentive) - Present Value (1) + Contributions (one year)

Cost (2) = Present Value(with incentive) - Present Value (2) + Contributions (two years)

Cost (3) = Present Value(with incentive) - Present Value (3) + Contributions (three years)

Cost (5) = Present Value(with incentive) - Present Value (5) + Contributions (five years)

We used interpolation and extrapolation to estimate the cost if the participant would have worked 4, 6, 7, or 9 years had there not been a 1993 incentive. This seemed reasonable because, on average, the relationship between cost and additional years worked is close to linear.

cost(4) = (cost(3) + cost(5)) / 2

cost(6) = cost(5) + (cost(5)-cost(3)) / 2

cost(7) = cost(5) + (cost(5)-cost(3))

cost(9) = cost(5) + 2 x (cost(5)-cost(3))

To estimate the average cost, we made high and low estimates as shown below. The difference reflects the uncertainty concerning how long participants would have kept working without the incentive.

High Estimate

For each participant, we estimated the cost based on the above cost estimates and the retirement probabilities we used for the high estimate of how long participants would have kept working had there been no incentive (see Appendix C):

cost = cost(0) x prob(0) + cost(1) x prob(1) + cost(2) x prob(2) + cost(3) x prob(3) + cost(4) x prob(4) + cost(5) x prob(5) + cost(6) x prob(6) + cost(7) x prob(7) + cost(9) x prob (8 and higher).

Low Estimate

Our low cost estimate is based on the retirement assumptions we used in the low estimate of how long participants would have kept working without the incentive (from Appendix C).

State employees: cost = .5 x cost(0) + .5 x cost(1)

PERA members: cost = .57 x cost(0) + .43 x cost(1)

TRA members: cost = .45 x cost(0) + .55 x cost(1)

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