THE EFFECT OF ACCRUED PENSION BENEFIT PRESERVATION ON WORKER MOBILITY IN MULTIEMPLOYER PLANS

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(ABSTRACT)

The relationship between mobility of vested plan participants and the use of reciprocity agreements in multiemployer plans was investigated. The assumption that pension benefit forfeiture retards worker mobility was considered. The assumption that worker mobility is enhanced by benefit preservation is one of the justifications for tax incentives provided retirement plans.

Several variables were considered in addition to the use or nonuse of reciprocity agreements; however, none of the variables were found to be significantly related to the turnover rate for vested plan participants in multiemployer plans. The primary conclusion of the research was that the hypothesis that benefit preservation through the use of reciprocity agreements in multiemployer plans is ineffective in increasing turnover for vested plan participants could not be rejected.

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I. Problem Discussion

Introduction

In 1974, Congress passed the Employee Retirement Security Act (ERISA). The Act has several purposes including the improvement of private sector pension benefits and increased worker mobility. ERISA does not require an employer to provide pension coverage for employees; however, the legislation contains tax incentives for employers who operate pension plans in accordance with prescribed guidelines. Some of the guidelines are designed to preserve pension benefits for the mobile worker. Such pension benefit preservation is assumed to increase worker mobility because the threat of pension benefit forfeiture is reduced. It is this mobility assumption which is the focus of this dissertation.

Preservation Techniques

Pension benefit preservation refers to any method whereby accrued pension benefit forfeitures are reduced or eliminated. McGill indicates there are only two basic approaches to preserving accrued pension benefits in terms of legal rights, namely vesting and reciprocity.[1]

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[1] Dan M. McGill, Preservation of Pension Benefit Rights (Homewood, Illinois: Richard D. Irwin, 1972), p. 3.

Vesting removes the obligation of a plan participant to remain in the employment to be legally entitled to a retirement benefit while reciprocity involves mutual recognition of service by two or more pension plans. Both preservation techniques will be discussed more fully below.

Although vesting and reciprocity confer legal rights to accrued pension benefits, portability has the practical effect of preserving accrued pension benefits for the mobile worker. The U.S. Department of Labor indicates that, "Portability is a very misunderstood concept. Portability is NOT [author's emphasis] the ability to transfer all pension benefits accrued. Unless an employee has vested benefits, there is nothing to transfer."[2] Thus, portability refers to the right of a terminating employee to have the monetary value of his pension benefits transferred to a succeeding pension plan or other depository.

Phillips and Fletcher suggest that portability preserves accrued pension benefits in the following ways.

1. The former employer may experience financial difficulties which jeopardize the terminated participant's vested benefits.
2. Fragmentary benefits may not be worth filing for while combined benefits may be valuable.

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[2] U.S., Department of Labor, Pension and Welfare Benefit Programs. Women and Private Pension Plans, 1980, p. 7.

3. Subsequent employers may increase benefits for past service which is credited when funds are transferred.

4. The employer and/or employee may lose track of the benefit due to poor record keeping.[3]

While vesting, reciprocity and portability do not exhaust the possibilities for pension benefit preservation for the mobile worker, they do represent the most commonly used approaches. Congress primarily used vesting and portability in ERISA to preserve accrued pension benefits.

ERISA Accrued Pension Benefit Preservation

Congress expressed concern for accrued pension benefits forfeited by mobile workers in the ERISA legislative history. ERISA contains increased vesting rights for plan participants, portability provisions and protection against backloading. Backloading is the practice whereby early plan service has less value for pension benefit computation than does later service.

A Senate passed version of ERISA contained voluntary portability provisions.[4] The proposed legislation would have established a Pension Benefit Portability Fund. Qualified Pension plan distributions for terminated

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[3] Susan Meredith Phillips and Linda Pickthorne Fletcher, "The Future of the Portable Pension Concept," Industrial Labor Relations Review (January 1977):197.

[4] U.S., Congress, Senate, Retirement Income Security for Employees Act of 1973, S. 4, pp. 140-141.

participants would have been accepted by the Fund. Distributions would have been invested and distributed at retirement age. This voluntary portability fund provision was omitted by the Conference Committee; however, its consideration by Congress does illustrate the interest which Congress had in accrued pension benefit preservation. Nevertheless, certain portability provisions were included in ERISA including the right to transfer qualified plan distributions upon termination to Individual Retirement Accounts or other qualified plans.[5]

Thus, Congress was well aware of the plight of mobile workers in terms of accrued pension benefit forfeiture. ERISA incorporated vesting requirements, backloading guidelines and portability provisions to preserve the accrued pension benefits of the mobile worker. Such preservation was assumed to increase worker mobility.

Vesting

One of the significant ERISA requirements that tax qualified plans must include in their provisions is the vesting requirement. "In defined benefit plans, vesting refers to the right of a participant to receive his accrued pension benefit at normal or early retirement whether or not

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[5] I.R.C. §402(a)(5),(6).

he is in the service of the employer at the time."[6]

It is widely believed that improved vesting promotes worker mobility because the threat of pension benefit forfeiture is reduced or removed.[7] The Senate Finance Committee Report on ERISA notes this widely held belief.

> In general, although there has been some discernible progress to permit early vesting of benefits to employees, some employers are inclined to defer such vesting until the employee reaches a normal or early retirement formula. This is essentially based on the belief that it will discourage and deter such employees from leaving the job before reaching retirement age.[8]

Furthermore, the Senate Report indicates that the Senate Committee shared the belief that increased vesting would promote worker mobility. The Report states that the Senate Finance Committee "believes that more rapid vesting is desirable because it will improve the mobility of labor and in this manner promote a more healthy economy."[9] To improve mobility through vesting, ERISA provides minimum

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6 Dan M. McGill, Fundamentals of Private Pensions, 5th ed. (Homewood, Illinois: Richard D. Irwin, 1984), p. 135.

7 John B. Lansing and Eva Mueller, The Geographic Mobilty Labor (Ann Arbor, Michigan: Univ. of Michigan Survey Research Center, 1967), p. 159.

8 U.S., Congress, Senate, Finance Committee, Employee Retirement Income Security Act. S. Report 93-383, 93rd Congress., 1st sess., 1974, p. 595.

9 Ibid., p. 93.

vesting standards which permit the use of one of three vesting options.[10]

1. The simplest standard provides no vesting until the participant has ten years of service. After ten years of service the participant must be fully vested in all accrued benefits.

2. A second option requires at least 25 percent vesting of a participant's accrued benefit after five years of recognized service, another five percent each year during the next five years, and an additional ten percent each year during the following five years. Thus, after fifteen years the participant must be fully vested.

3. The third alternative is frequently referred to as the "Rule of 45". Under this alternative a participant with five years of service must be 50 percent vested whenever his attained age and years of recognized service total 45. After this point, the participant will receive an additional ten percent vesting in each following year until the accrued benefit is fully vested.

It is important to note that recognized service for vesting purposes generally includes all years of service with the employer- even years before the employee was a plan participant. ERISA provided, however, that years of service before age 22 could be excluded for vesting purposes. The age 22 guideline was reduced to age 18 by the Retirement Equity Act of 1983.[11] Thus, Congress has taken one more step towards full and immediate vesting.

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[10] ERISA §203(a), I.R.C. § 411(a).

[11] U.S., Congress, Senate, Retirement Equity Act of 1983. S. 19, 98th Cong., 1st sess., 1983.

Backloading

Even with full and immediate vesting there is no guarantee that a terminated participant will have adequate pension benefit protection without restrictions on backloading. In defined benefit plans, backloading is a threat to the early leaver. Backloading is an arrangement whereby long service is encouraged by providing a higher scale of pension benefits for the later years of service than for the earlier years. Backloading also results from the use of the final years salary average to compute the pension benefit. If backloading in its extreme form is permitted, the terminating participant may be fully vested in an inconsequential benefit.

The Federal Civil Service Retirement System has a backloading scheme whereby an annual benefit accrual of 1.5% is provided for the first five years of service, 1.75% for the next five years of service and 2% for all service beyond the first ten years. Since the Federal benefit is based on the high three years of pay, the latter years of service may be worth five times as much as the earlier years of service when computing retirement benefits.

ERISA has three alternative tests which are designed to limit backloading.[12] If a plan formula meets any one of these tests the arrangement is acceptable.

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[12] ERISA §204(b)(1), I.R.C. §411(b)(1).

1. The 3 percent rule requires the participant's accrued benefit at least equal the product of participation times 3 percent of the benefit that would have been payable if he started participation at the earliest possible age and served continuously to retirement age.

2. The 133 and one-third rule requires that the benefit accrual rate for any participant for any future year of service may not be more than one-third higher than the accrual rate for the current year.

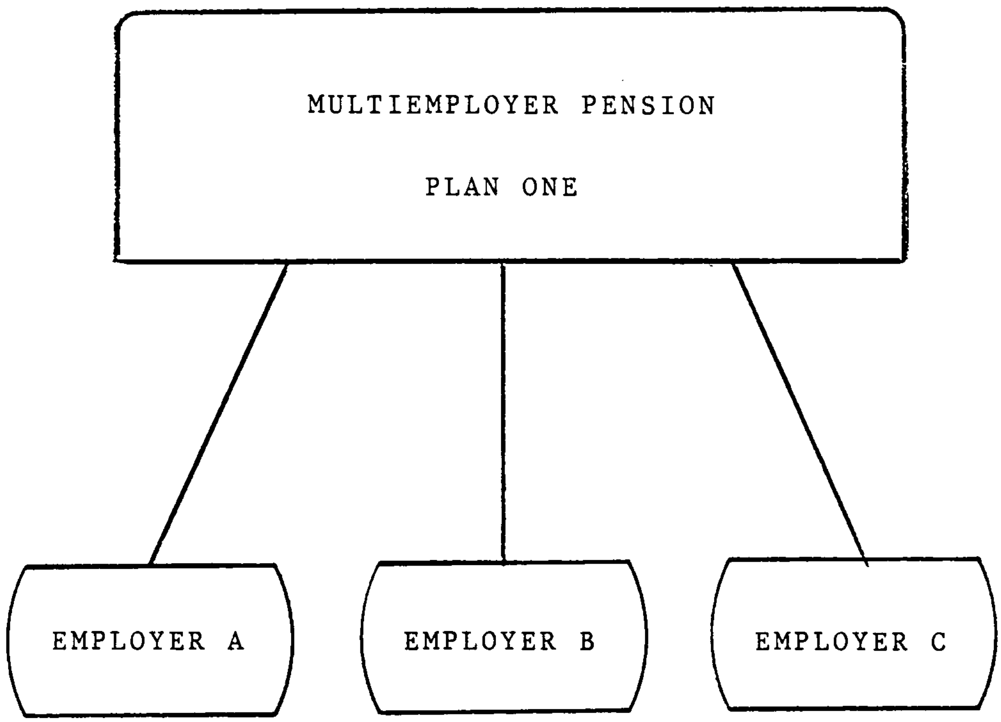
3. The fractional rule provides for proration of the projected normal retirement benefit over the years of plan participation.

The tests use current salary to compute the projected benefit; thus the terminating participant has no protection from inflation.

Research Objective

The objective of this study is to provide empirical evidence concerning the relationship between accrued pension benefit preservation and worker mobility. Congress assumes the relationship is positive and significant. This assumption is examined in this research.

The research focuses on the mobility of vested participants in multiemployer pension plans. Multiemployer plans are collectively bargained plans in which two or more employers participate. Illustration One shows an arrangement where three employers, A, B and C, participate in Multiemployer Plan One. Employees of A, B and C may move



Note: Employees of A, B and C may move among the employers and maintain full coverage under Multiemployer Pension Plan One.

Illustration One: Multiemployer Pension Plan Arrangement freely between the employers and maintain full coverage under Multiemployer Plan One. When employees of A, B and C leave employment within the group, the employees face the threat of substantial pension benefit forfeiture. The forfeiture threat is substantially reduced by the use of reciprocity agreements.

Reciprocity agreements are contractual arrangements between multiemployer plans as shown in Illustration Two. These agreements are designed to maintain pension coverage for the mobile worker as if the worker had coverage under only one plan. Such protection is accomplished frequently by insuring immediate and full vesting under the new plan and by using combined service under participating plans to compute the pension benefit. This research assesses the extent to which the preservation of pension benefits through the use of reciprocity agreements correlates with worker turnover.

The turnover rate for vested plan participants in plans using reciprocity agreements compares with the turnover rate for plans that do not engage in reciprocity agreements. Following the logic of Congress, one would expect the turnover rate to be substantially higher for those plans using reciprocity agreements because the threat of pension benefit forfeiture would be sharply curtailed or in many cases, eliminated. Workers would not be trapped in their job due to the fear of loss of pension benefits due to the preservation of their benefits under reciprocity.

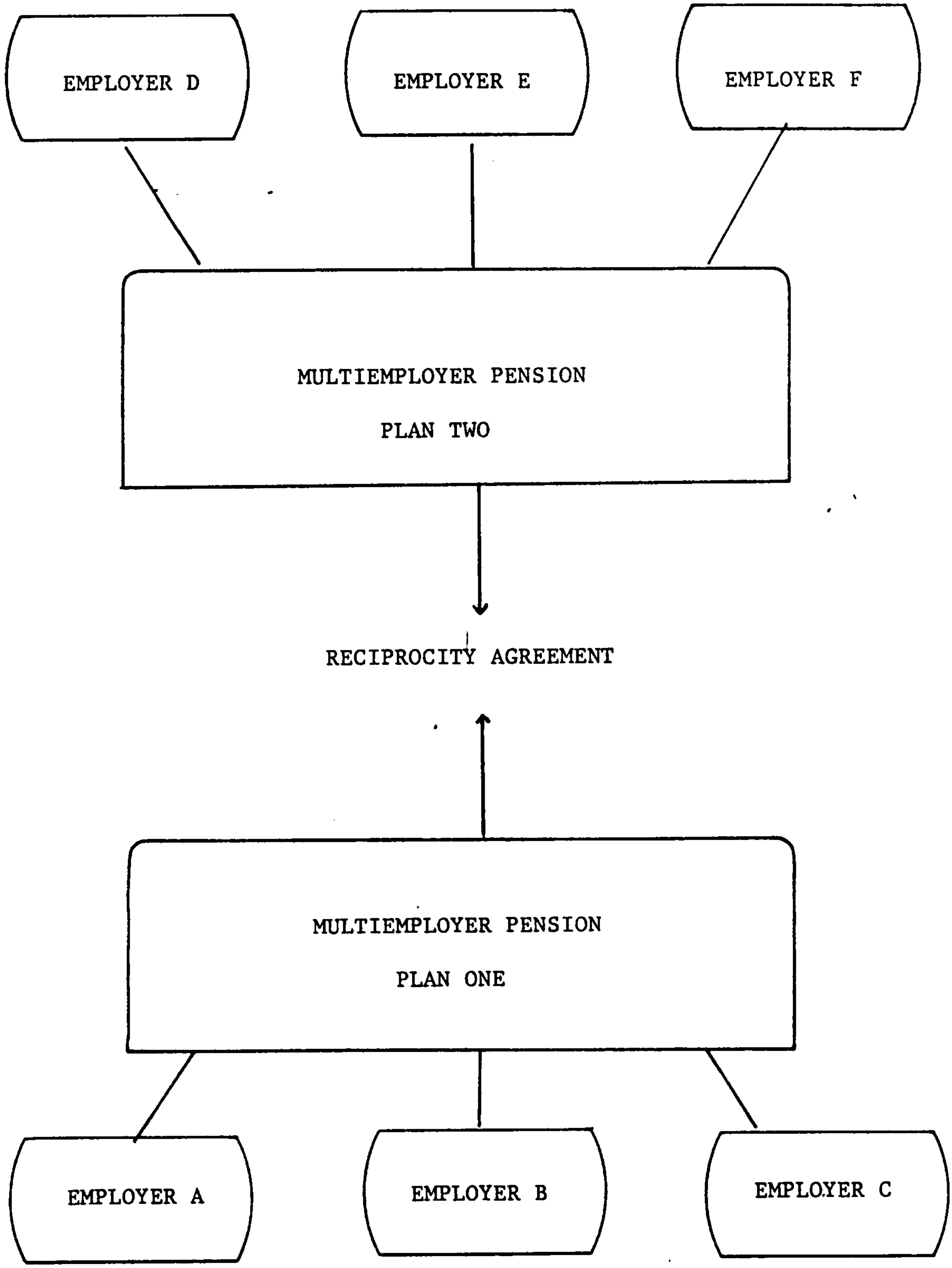


Illustration Two: Reciprocity Agreement Between Multiemployer Plans

Importance of the Research

The importance of the study is related to three significant issues. First, tax policy in the pension area is formulated to promote worker mobility through tax incentives which encourage pension benefit preservation. Is this objective of Federal tax policy being attained? Secondly, pension policy is based to a certain extent on the assumption that workers will behave in a rational manner when considering retirement matters. Are workers rational in their retirement planning? Third, the cost of reciprocity agreements to pension plans which participate in such contracts is unknown. The empirical evidence provided by this research will assist actuaries in determining the cost of reciprocity.

Tax Policy and Pension Benefit Preservation

There is a long history of tax incentives designed to promote adequate retirement benefits. One of the ways tax policy has sought to provide adequate retirement benefits is through increased pension preservation by vesting, portability and restrictions on backloading. Tax incentives have been used as a subsidy and as a regulatory device. The most significant pension legislation passed by Congress is ERISA. Prior to this legislation there was no requirement for minimum vesting nor portability provisions. The vesting requirements of ERISA are only a small portion of the rules controlling the operation of private sector pension plans.

It must be remembered, however, that pension law applies generally only to those plans which are taking advantage of the tax incentives provided by tax law. The more notable tax incentives include:

1. The employer receives an immediate deduction for contributions to a qualified plan.[13]

2. Income earned by assets of a qualified plan are not taxable until distribution.[14]

3. Plan participants are not taxed until funds are distributed.[15]

4. Lump-sum distributions may receive special tax treatment in the year of distribution.[16]

5. Voluntary contributions made in the form of salary reduction agreements are deductible by the employee and the tax is postponed until the year of distribution.[17]

6. If the distribution of employer securities qualifies as a lump-sum distribution the "net unrealized appreciation" in the employer's securities is not subject to tax until the securities are sold.[18]

7. If an employee receives a lump-sum distribution from a qualified plan and transfers all or part of the distribution to a rollover individual retirement account within 60 days thereafter,

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[13] I.R.C. §501(a).

[14] I.R.C. §402(a)(1).

[15] I.R.C. §402(a)(2) and (e).

[16] I.R.C. §2039(c) and (f).

[17] I.R.C. §401(k).

[18] I.R.C. §402(e)(4)(D).

the rollover amount is not taxed.[19] The rollover provision has been extended to the employee's spouse.[20]

8. A participant who irrevocably elects to provide a survivor benefit is not deemed to have made a taxable gift at the time of such election to the extent that benefits are funded by employer contributions.[21]

Such favorable tax treatment is not a recent phenomenon. Such incentives date back to the Revenue Act of 1921 which exempted from current taxation the income on trusts for stock bonus or profit sharing plans, and by administrative ruling pension trusts were awarded the same treatment.[22] The Revenue Act of 1926 formalized the exemption for income of pension trusts.[23]

Prior to the 1921 legislation, payments to cover current pension liabilities were usually deductible as an ordinary business expense while the interest income of a pension or profit sharing trust was taxable. The Revenue Act of 1928 for the first time permitted employers to deduct contributions in excess of current liabilities which were provided to reduce past liabilities.[24]

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[19] I.R.C. §402(a)(5).

[20] I.R.C. §402(a)(7).

[21] I.R.C. §2517.

[22] 42 Stat. 247, §219(f) (1921).

[23] 44 Stat. 33, §219(f) (1926).

[24] 52 Stat. 802, § 23(g) (1928).

Legislative regulation of retirement plans was continued in the Revenue Act of 1938. In 1938, legislation required the pension trust to be irrevocable thus stopping the practice of employers taking large deductions for contributions made to trusts during years of high earnings and recapturing those earnings by revoking the trust in poor years.[25] The 1942 Revenue Act continued the regulation. It permitted tax benefits for those plans that did not discriminate in favor of officers and highly paid employees.[26] The 1938 and 1942 legislation was reenacted in the Internal Revenue Code of 1954 which in amended form contains the basis of tax treatment of pension plans today. It should be remembered that the legislative requirements apply only to plans which take advantage of the favorable tax treatment. This carrot-stick approach has been used since the early stages of development.

Cymrot concluded that without tax incentives there would be no pension plans in labor contracts negotiated between employers and unions. He said that a progressive tax provides tax incentives for workers to stretch wage payments over as many periods as possible. This assertion is based on the reasoning that, ceteris paribus, the present value of after tax income is higher if the same amount is received

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[25] 52 Stat. 518, §165(a)(2) (1938).

[26] 56 Stat. 798, §162(a)(4) (1942).

over many periods rather than a few periods. In addition, Cymrot concluded that deferring tax payments also increases the present value of after tax income because a worker can take advantage of tax breaks by accepting deferred wages.

Cymrot based some of his findings on economic analysis as well as historical evidence. He pointed out that in the early years, income tax affected only a small portion of the population and pension coverage did not expand rapidly. In 1940 there were 4.1 million workers covered by U.S. pension plans. These were primarily in large noncompetitive industries. The most rapid coverage increase occurred during the period 1940 to 1960, when plan coverage reached 21.1 million. Such rapid growth in coverage was correlated with a rapid growth in the proportion of the workforce affected by income taxation.[27]

The private sector retirement programs have flourished in this favorable tax environment. There are more than 800,000 private employer pension plans which have assets in excess of $600 billion and which receive approximately $60 billion in contributions annually.[28] Private pension plans have become the single largest source of investment capital.

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[27] D.J. Cymrot, "Tax Incentives, Turnover Costs and Private Pensions," Southern Economic Journal (October 1981) 48:365-76.

[28] Stanford G. Ross, "Private Sector Retirement Security: Need for A Comprehensive National Income Security Policy," National Journal (March 31, 1984):640.

The tax incentives which encourage adequate pensions are expensive due to the tax deductions which are provided. Federal tax deductions for private pensions are estimated in the Reagan administration's budget to cost $68 billion for 1985.[29] Due to the increasing Federal deficit, the tax advantages provided retirement plans are coming under increasing scrutiny. Even if the Federal deficit is substantially reduced, opposition to Federal tax expenditures will continue to exist due to differences in opinion concerning tax policy.

Much of the current debate from a tax policy viewpoint centers on whether the tax concessions provided are a preference or whether they conform to a broad taxation philosophy. The predominant view is that the retirement oriented tax concessions are a preference and can be justified only in terms of overriding economic and social goals. A minority view considers the tax concessions to be part of a taxation scheme which focuses on consumption as the proper object of taxation rather than income.[30] In other words, a consumption tax would, by its very nature, exclude from taxation, income which is set aside for retirement. Since it is likely that tax policy concerning retirement plan

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[29] Ibid., p. 641.

[30] Joseph A. Pechman, Federal Tax Policy (Washington, D.C.: Brookings Institute, 1983), p. 205.

tax incentives will continue to be formulated based on the preference view, it is the social argument of the need to provide retirement benefits and the economic argument of the the need to promote worker mobility that will continue to sustain the incentives.

One of the economic arguments which has been presented in support of the preferential tax treatment afforded qualified retirement programs is that the desirable economic objective of labor, mobility is promoted by current tax law. Thus, labor mobility and adequate retirement benefits are viewed as objectives which are incompatible as long as the mobile worker faces the threat of substantial benefit forfeiture. Congress has tried to reduce the threat of substantial benefit forfeiture for the mobile worker by legislating vesting requirements, backloading restrictions and portability.

The results of this research provides empirical evidence as to the relationship between benefit preservation and worker mobility. Significant revenue is foregone each year in part to promote worker mobility through benefit preservation. This research gives insight in determining if our tax policy is effective in terms of promoting worker mobility. Tax policy should be based on empirical evidence to the extent possible and not on mere supposition. While further study may be indicated, this research provides preliminary empirical results concerning the issue.

Retirement Planning

The express assumption in ERISA and the legislative history is that the worker considers retirement benefits to be an important factor when making a job change decision. The Senate Finance Committee noted,

> Present law generally does not require a retirement plan to give a covered employee vested rights to benefits- that is, the right to receive benefits even if he leaves or loses his job before retirement age. ...failure to vest more rapidly is charged with interfering with the mobility of labor, to the detriment of the economy.[31]

This same view is shared by many authors in the pension field. Lynn notes, "Creation of a pension plan is a means of attracting and holding employees."[32] The clear implication in these comments is that the worker is cognizant of his pension benefit and concerned about its preservation. The expectation is that the worker who contemplates a job change will factor in the effect of such job change on his pension benefits.

It has been noted by other pension experts that the empirical evidence frequently does not support the assumption that the worker behaves as expected in terms of providing for retirement. McGill notes that before ERISA, virtually all

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31 U.S., Congress, Senate, Finance committee, Employee Retirement Income Security Act. S. Report 93-383, 93rd Cong., 1st sess., 1974, p 93.

32 Robert J. Lynn, The Pension Crisis (Lexington, Ma: Lexington Books, D.C. Heath & Co. 1983), p. 45.

contributory plans provided that, if a terminating employee exercised his right to withdraw his own contributions, with interest, if any, he would forfeit all rights to any pension benefits attributable to employer contributions. McGill points out that terminating employees attracted by lump-sum distributions, almost invariably withdrew their own contributions, in many cases relinquishing rights to deferred pensions having an actuarial present value greatly in excess of the employee contributions recovered.[33] Boulding notes that,

> It is argued however, that many people are not rationally motivated and that hardly anyone is completely motivated by their rational considerations and that therefore under a purely voluntary system of retirement many would not provide for themselves.[34]

The empirical evidence provided by this research permits insight into the worker in terms of retirement planning. If the results suggest the worker is not behaving as an "economic man" in terms of retirement planning then there would be additional support for increased government involvement in retirement planning. If the evidence indicates that workers behave as an "economic man" then the lack of retirement planning assumptions would be weakened, thus the argument for increased government involvement.

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[33] McGill, Fundamentals of Private Pensions, p. 133.

[34] Kenneth Boulding, The Economics of Aging, 2nd ed. (Belmont, Ca.: Wadsworth Publishing Co., 1980), p. 85.

The Cost of Reciprocity Agreements

Reciprocity agreements increase pension costs because the mobile worker is able to prevent at least a break in service which would enable the employee to participate immediately in the new plan. Also, combined service would permit employees to be vested in benefits under both plans where without the agreement the employee as a plan participant may not be eligible under either plan.

From an actuarial standpoint it would be necessary to lower the assumed turnover rate to provide for the increased reciprocal coverage. The use of a lower turnover rate for actuarial purposes does not mean that the actual turnover rate of employees will be lower where a reciprocity agreement is being used. The lower rate is the actuary's method of recognizing the effects of combined service under two or more plans.

McGinn indicated that the long range cost implications of reciprocal agreements are difficult to assess. He estimated, however, that using reasonable actuarial judgment, reciprocity agreements could add as little as one-half of 1% or as much as 8-10% to a plan's costs, depending on the plan's general level of employee turnover.[35]

The issue of plan liability estimation is of current

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[35] Daniel F. McGinn, Actuarial Fundamentals for Multiemployer Plans (Brookfield, Wi.: International Foundation of Employee Benefit Plans, 1982), p. 24.

concern to the accounting profession. This research should have relevance to the current activity of the Financial Accounting Standards Board (FASB) in establishing criteria for accounting for pension plans. In 1983, FASB issued a Discussion Memorandum entitled (an analysis of additional issues related to) Employer's Accounting for Pensions and Other Postemployment Benefits. Issue 11 of the Discussion Memorandum discussed some of the concerns of FASB in regard to accounting for multiemployer plans. One concern is the measurement of potential plan withdrawal liability.

Liability measurement is of recurring concern to the accounting profession. "One of the significant problems of pension accounting has been the variety of different acceptable methods of measuring or computing the amount of pension cost and pension liability."[36] The Board has been considering entering the actuarial domain and dictating certain actuarial assumptions to be used in computing plan liability. FASB suggested that the pension benefit obligation be measured as the actuarial present value of benefits attributed to employee service to the date of the financial statements.[37] Subsequent FASB guidelines have

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36 Preliminary Views. no. 1032 (Stamford, Ct.: FASB, 1982), p. 8.

37 FASB Statement No. 35, Accounting and Reporting by Defined Benefit Pension Plans (Stamford, Ct.: FASB, 1982), p. 8.

suggested the measurement technique recommended above be altered by making adjustments for changes in future compensation levels assuming the benefit is a function of future compensation levels.[38]

Clearly the FASB is interested in actuarial assumptions as they relate to determination of plan liability. An actuarial assumption that has received little attention thus far involves the use of reciprocity agreements. What assumptions should be made in regard to the cost of using a reciprocity agreement? The current actuarial practice is to reduce the withdrawal rate to increase the plan liability. An actuary of a national actuarial firm indicated in a conversation that he reduces the withdrawal rate by 25%; however, such a reduction is not based on specific data but primarily guesswork.

The problem is that the current record system is not adequate to keep track of the entire work history of a plan participant. It is possible under the current arrangement for employees to work with several employers and not earn a retirement benefit under any individual employer plan. However, by accumulating service under the terms of a reciprocity agreement the total service may be sufficient to create a liability for each employer's plan. Such potential liabilities create a measurement problem for the pension actuary and the accountant.

This research will give additional insight into the response of workers to the use of reciprocity agreements. In many respects actuarial science is more art than science. The results of this research will provide the actuary and the accountant with additional information when estimating the cost of participating in a reciprocity agreement.

Chapter Summary

Congress has provided tax incentives to promote worker mobility. Such mobility is indirectly promoted by requiring vesting, backloading limitations and portability for tax qualified plans. Such tax policy is promoted through substantial foregone revenues. In addition, such tax policy is based on the assumption that retirement planning is a significant factor when a worker makes a job change decision.

This study provides empirical evidence that will assist in assessing the extent to which pension benefits influence worker behavior. It provides insight into the job change decision in regard to pension benefits. Such findings thus indicate whether the foregone tax revenue is well spent.

The empirical evidence is the experience of multiemployer plan participants who are vested, i.e., generally those with ten or more years of service. Not only does the research provide insight into worker mobility and tax policy but it should be helpful to the actuarial and accounting profession in determining the cost of the use of reciprocity agreements.

II. Review of the Relevant Literature

Introduction

The literature review serves several purposes. First, it provides background information concerning multiemployer plans for a better understanding of the research. Furthermore, previous research concerning multiemployer plans is reviewed where it is appropriate to this research. The use of reciprocity agreements by multiemployer plans receives particular attention.

A second topic of primary concern is worker mobility. Worker mobility has received substantial research attention and this research is outlined. Research which has been designed to assess the influence of pension benefits in the job change decision is also reviewed.

Multiemployer Plans

Pension plans may be divided between single employer plans and multiple employer plans. Although certain plans are not easily classified, it is clear that multiemployer plans are a type of multiple employer plan. Multiemployer plans are defined by ERISA as a multiple employer plan maintained pursuant to a collective bargaining agreement to which more than one employer contributes.

The multiemployer plan was permitted for the first time in the Labor-Management Relations Act of 1947, commonly referred to as the Taft-Hartley Act. The Act requires that employer contributions for employee benefits be made to either a trust jointly and equally administered by union and employer representative or to a life insurer under an insurance contract issued to the employer as a contract holder.

The Act requires that the basis for contributions to a jointly managed trust be in a written contract between the union and the employer. This contract is generally referred to as the collective bargaining agreement. Taft-Hartley also requires that a procedure be established for resolving deadlocks between the parties and that the trust document be nondiscriminatory with regard to union and nonunion members. ERISA requires that funds be audited at least once a year and that all financial transactions of the trust be disclosed. Annual certification of the funding status is required.

Therefore, there may be three documents involved in the formation of a multiemployer pension plan which affect pension rights- (1) the collective bargaining agreement concerning contributions to a jointly administered trust; (2) a pension plan document which details the plan operations and the rights of participants and (3) reciprocity agreement which extends the rights of a terminating participant in his accrued benefits. The unions dominate the multiemployer plans because there are several employers and only one union.

The multiemployer plan population has grown rapidly and is estimated to include about 2,600 plans today with more than nine million participants.[40] There have been three major studies of multiemployer plans in the past fifteen years which have been largely descriptive in nature. In the early 1970's, McDonald studied plans with 100 or more employees. His study was limited to this segment of the multiemployer plan population because information for smaller plans was not available. He estimated that there were about 1,990 multiemployer plans with 100 or more employees. Of these 1990 plans he was able to locate and survey 1225. The survey yielded 681 usable responses. Some of the findings of his survey will be discussed below.

A second study of multiemployer plans was issued in 1978 by the Pension Benefit Guaranty Corporation (PBGC). The study was conducted as requested by Congress. The study used data as reported on FORM PBGC-1 and the Department of Labor FORM D-2. Some of the findings will be summarized below. The third study of multiemployer plans was released by the Department of Labor in 1979. It was conducted under contract by the private firm, Towers, Perrin, Forster & Crosby, Inc.

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[40] Ronald L. Huling, Study of Multiemployer Plans (Washington, D.C.: U.S. Government Printing Office, July 1, 1978), Appendix II, p. 3.

The purpose of the study was to determine the characteristics of multiemployer plans for guidance in future development of regulations and secondly, to assess the impact of ERISA on multiemployer plans. Some of the findings of this study will be detailed below.

The multiemployer plans usually have a common industry bond, for example, construction or transportation. Some plans, however, are in different industries and the union may be the only common bond. McDonald found that the multiemployer plans were distributed as shown in Table One.[41] Table One indicates that the construction industry had 73.4% of all reciprocity agreements in use while covering 36.5% of the plan participants for those plans using reciprocity agreements.

The PBGC study found that the distribution of plans by industry was somewhat different than that reported by McDonald. The PBGC findings are illustrated in Table Two.[42] Table Two illustrates that the dominance of the construction industry diminished significantly in the ten years since the McDonald study and the manufacturing and service industries had increased in representation for those plans which use reciprocity agreements.

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41 McDonald, p. 51.

42 Pension Benefit Guaranty Corporation, Multiemployer Study (Washington, D.C.: U.S. Government Printing Office, July 1, 1978), Appendix II, p. 3.

Table One

Industry Distribution Of Multiemployer Plans Using Reciprocity Agreements From The McDonald Study

Industry	Plans(%)	Employees(%)
Construction	73.4	36.5
Manufacturing	9.4	21.2
Service	6.6	8.9
Teamsters	10.6	33.4
	100.0	100.0

SOURCE: Maurice E. McDonald, *Reciprocity Among Private Multiemployer Pension Plans* (Homewood, Illinois,:Richard D. Irwin, INC. 1975), p. 51.

Table Two

Industry Distribution Of Multiemployer Plans Using Reciprocity Agreements From The PBGC Study

Industry	Plans(%)	Employees(%)
Manufacturing	14.1	22.7
Construction	50.3	27.5
Transportation	7.5	20.8
Communications and Utilities	1.5	0.3
Services	12.2	10.4
Trade	8.4	8.3
Other and Unknown	6.0	9.0
	100.00	100.0

SOURCE: Pension Benefit Guaranty Corporation, Multiemployer Study (Washington, D.C.: U.S. Government Printing Office, July 1, 1978), Appendix II, p. 3.

Table Three shows the distribution of plans using reciprocity agreements by industry as determined by the Department of Labor study.[43] The DOL study results support the conclusion that industries other than construction are becoming involved in reciprocity agreements and that proportionally non-construction industries represent the majority of the reciprocity agreement users. The service industry shows substantial gains in use as would be expected. The transportation industry has also grown proportionally.

The DOL study explained the variation as either a nonresponse bias or the economy during the middle seventies may have changed the pattern of reciprocity with fewer construction industry plans being willing to afford the added cost of reciprocity. The data collected in this research will be compared with the results of these previous studies.

In terms of the geographical distribution of plans using reciprocity agreements, the McDonald study findings are shown in Table Four.[44] The plans using reciprocity agreements are predominantly located in the northeast although the Pacific area has substantial representation with 17% and it has an even larger share of the covered population at 31%. The middle Atlantic states are the dominant geographical

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[43] Huling, p. IV-8B.

[44] McDonald, p. 55.

Table Three

Industry Distribution Of Multiemployer Plans Using Reciprocity Agreements From The DOL Study

Industry	Plans(%)
Construction	42
Transportation	18
Services	15
Utilities	2
Other	23
	100

SOURCE: Ronald L. Huling, Study of Multiemployer Plans (Washington, D.C.: U.S. Government Printing Office, July 1, 1978), Appendix II, p. 3.

Table Four

Geographical Distribution Of Multiemployer Plans Using Reciprocity Agreements From The McDonald Study

Location	Plans(%)	Employees(%)
NE	12.0	3.8
MA	40.8	30.9
SA	8.2	3.5
ENC	14.5	23.8
WNC	3.3	1.6
ESC	0.5	0.0
WSC	0.8	3.5
MTN	2.9	1.9
PAC	17.0	31.0
	100.0	100.0

Where:

NE= New England - CT., Me., Ma., N.H., R.I., Vt.

MA= Middle Atlantic - N.J., N.Y., Pa.

SA= South Atlantic - De., D.C., Fl., Ga., Md., N.C., S.C., Va., W.Va.

ENC=East North Central - Il., In., Mi., Oh., Ws.

WNC=West North Central - Ia., Ks., Mn., Mo., Nb., N.D., S.D.

ESC=East South Central - Al., Ky., Ms., Tn.

WSC=West South Central - Ar., La., Ok., Tx.

MTN=Mountain - Az., Co., Id., Mt., Mv., N.M., Ut.

PAC=Pacific - Ak., Ca., Ha., Or., Wa.

SOURCE: Maurice E. McDonald, Reciprocity Among Private Multiemployer Pension Plans (Homewood, Illinois: Richard D. Irwin, INC. 1975), p. 55.

location. The current geographic distribution of multiemployer plans will be contrasted with the McDonald findings to determine if there has been a significant change in geographical distribution.

The profile of a multiemployer plan as found in the DOL study is:[45]

Fiscal Year End- December

Year Plan Started- 1962

Scope of Plan- Single Metropolitan Area

Participation Requirement- Immediate plan entry

Vesting- 100% after 10 years

Normal Retirement- Age 65 and 10 years of service

Early Retirement- Age 55 and 10 years of service

Disability- Total disability and 19 years of service

Death- Age 55 and 10 years of service

Employee Contributions- None

The McDonald study revealed that about 45% of multiemployer plans were using reciprocity agreements.[46] The DOL study found that 42% of the plans entered into reciprocity agreements.[47] McGinn has estimated that as many as 80% to 90% of multiemployer plans use reciprocity agreements; however, he offers no empirical support for the

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[45] Huling, p. IV-8B.

[46] McDonald, p. 46.

[47] Huling, p. IV-4.

estimate.[48]

The PBGC study found the plan size distribution for plans using reciprocity agreements to be as shown in Table Five.[49] The plans with participants of 25,000 or more comprise only 2.7% of the plans; however, these plans have more than half the participants. This illustrates that reciprocity agreements are used primarily by large union dominated plans. The DOL study found that the largest plan covered over 600,000 participants while the smallest had fewer than 50 participants. The DOL study found that about 42% of all multiemployer plans have fewer than 500 active members.[50] The data collected in this research will be contrasted with the data findings in the previous studies. Such comparisions will be helpful in understanding the research environment and in interpreting the statistical analysis.

Reciprocity Agreements

Reciprocity agreements have been mentioned frequently thus far with only a brief explanation of them. While they can be complex in their operation, the basic purpose is

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[48] Daniel F. McGinn, Actuarial Fundamentals for Multiemployer Plans (Brookfield, Wi.: International Foundation of Employee Benefit Plans, 1982), p. 24.

[49] Pension Benefit Guaranty Corporation, Appendix II, p.1.

[50] Huling, p. III-7.

Table Five

Distribution By Plan Size For Multiemployer Plans Using Reciprocity Agreements From The DOL Study

Number of Plan Participants	Plans(%)	Participants(%)
Less than 100	10.4	0.1
100-499	29.8	1.8
500-999	16.6	2.7
1,000-4,999	29.8	15.5
5,000-24,999	10.7	25.8
25,000 or more	2.7	54.1
	100.0	100.0

SOURCE: Ronald L. Huling, Study of Multiemployer Plans (Washington, D.C.: U.S. Government Printing Office, July 1, 1978), Appendix II, p. 3.

relatively simple. The agreements are designed to preserve pension benefits for mobile workers. The ultimate in benefit preservation would be for the individual worker to be treated for pension purposes as though he had been under one plan throughout his working life.

While there has been substantial legislation to encourage vesting and portability of benefits, there has been very little effort to encourage reciprocity, i.e., the recognition by one plan of service under another plan. Reciprocity agreements are contractual arrangements between independent entities whereby recognition is given for employee service under one plan by participating plans for the purpose of (1) establishing an employee's eligibility to accrue benefit credits in a plan, (2) determining an employee's entitlement to receive benefits from a plan, and/or (3) determining the amount of benefits payable to an employee.[51]

This definition refers to three possible ways by which benefit credits may be preserved or extended. First, the agreement may involve the establishment of eligibility to participate in a plan, which refers to satisfaction of any service requirement. As noted in the profile of a multiemployer plan above there is generally no waiting period to enter a multiemployer plan; thus, the principle effect of

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[51] McDonald, pp. 18-19.

reciprocity agreements are centered in the next two points. Second, the agreement may also establish the employee's right to receive a benefit under one or more plans. This aspect may also include satisfaction of any service requirement for vesting under one or more of the plans. Third, the agreement may stipulate that benefit amounts may be based upon service in all plans, whether benefits are payable from a single plan or separately from the several participating plans. A sample reciprocity agreement is included in Appendix A. This agreement is representative of the third approach.

The disposition of accrued benefits is usually handled in one of two ways. Under the pro rata method there is no actual transfer of credit or money between plans. Each plan under which credits have been accrued will provide its pro rata share of the total pension due the plan participant at retirement. A typical benefit formula would be:

$$\begin{array}{c}\text{Total}\\\text{Combined}\\\text{Service}\end{array} \times \begin{array}{c}\text{Plan}\\\text{Unit}\\\text{Benefit}\end{array} \times \frac{\text{Total Plan Service}}{\text{Total Combined Service}} = \begin{array}{c}\text{Plan Partial}\\\text{Pension}\end{array}$$ [52]

While unnecessary in the equation, the term "Total Combined Service" is included to emphasize that the participant's benefit is computed under each plan as though all service was under each plan with the exception that once the benefit is

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[52] Ibid., p. 115.

computed it will be prorated based on the service under each participating plan. The formula is based on the assumption that a participant is paid a specified unit benefit for each year of service, e.g., $10 per month for each year of service. It is not necessary that both plans pay the same unit benefit, however. Each plan combines the individual's service under each participating plan. This combined service is considered to be served entirely under each participating plan for all purposes of benefit computation with the exception that the final benefit is pro rated based on the individual's service under each plan.

The alternative to the pro rata method is the money transfer method. This method is used much less often than the pro rata method. The money transfer method provides that all contributions made for a terminating employee will be transferred to the participant's "home" plan. The "home" plan will then pay a single benefit to the retiree where the pro rata method may result in multiple pension payouts. McGinn points out that the pro rata method is preferred by most multiemployer plans mainly because it achieves greater equity among reciprocating plans with respect to actuarial gains generated by withdrawing emloyees who never qualify for benefits. Under the money transfer method such gains generally accrue to the home pension.[53]

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[53] McGinn, p. 22.

Labor Mobility

It is widely believed that the threat of pension benefit forfeiture tends to restrict the mobility of labor. What is meant by the term "labor mobility"?

Parnes defines labor mobility as "the actual movement of workers."[54] He classifies labor mobility as follows:

1. Interfirm movement
2. Occupational movement
3. Industrial movement
4. Geographic movement
5. Moves from unemployed to employed status and vice versa

"Turnover" is normally used to describe interfirm movement. Turnover will be the labor mobility measure used in this research. This research will study the turnover of vested plan participants who leave one firm and are reemployed with another firm.

Turnover has been measured many different ways. Gaudet identified twenty measures of turnover.[55] One of those turnover measures commonly referred to as the separation rate will be used in this research.

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[54] Herbert S. Parnes, Research on Labor Mobility (New York: Social Science Research on Labor Mobility, 1954), p. 20.

[55] Frederick J. Gaudet, Labor Turnover (New York: American Management Association Research Study 39), p. 40.

The separation rate is computed as follows:[56]

$$\text{Separation Rate} = \frac{\text{number of members who left during the period}}{\text{average number of members during the period}}$$

The separation rate is used because it is the most frequently used measure of turnover. Price indicates the separation rate has three advantages.[57]

1. It is easy to compute.
2. It is readily understandable.
3. It shows all movement into and out of an organization

He indicates that the separation rate has two disadvantages.[58]

1. The rates have no precise meaning. For example, a turnover of 100% may mean the entire labor force has turned over during the year or a quarter has turned over four times.
2. The separation rate is misleading because it does not control for variables related to turnover. The most important uncontrolled variable is length of service.

These two disadvantages of the separation rate are not considered applicable to this research. This is because the employees being studied are those with ten years or more of service. The first disadvantage is not applicable because

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[56] James L. Price, The Study of Labor Turnover (Ames, Ia.: The Iowa State University Press, 1977), p. 9.

[57] Ibid., pp. 16-17.

[58] Ibid.

the terminating employees must have more than ten years of service in order to be included in the termination rate. Thus there is no possibility that the termination rate would include multiple turnovers. The second disadvantage does not apply because control variables will be used in the analysis as a means of factoring out the effect of other variables. Also, only long service employees will be considered. The following discussion will set out the factors which will be used as control variables in this research.

Factors Promoting Worker Mobility

Substantial research has been conducted in an attempt to explain the variation in worker mobility. Several research efforts attempt to summarize research on worker mobility.[59] The conclusion of these summaries generally appears to be that there has been substantial research on worker mobility with mixed results. Some variables appear to consistently correlate with the various mobility measures. However, many other variables provide inconsistent results when examined.

There is a consensus that successively higher amounts of integration of the worker into the company will produce successively lower amounts of turnover. Integration is used

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[59] William H. Mobley, Employee Turnover: Causes, Consequences and Control (Reading, Ma.: Addison-Wesley Publishing Co., 1982), p. 50.

to mean the extent of participation in primary relationships which Price describes as "diffuse, emotionally involved, biased and governed by ascribed criteria."[60] Another determinant of worker turnover is the extent of communication. Successively higher amounts of instrumental communication will probably produce successively lower amounts of turnover, as will increased amounts of satisfaction and opportunity. In addition, successively higher amounts of centralization will produce successively higher amounts of turnover.[61] Note that these determinants of worker mobility are organizational characteristics which cannot be measured in this research. However, the workers studied in this research, i.e., vested participants in multiemployer plans, are employed by organizations which are similar in many respects. The organizations are highly unionized and in large part they are mature. This similarity will provide control among organizational variables.

Industry

Part of the variation in worker mobility has been found to be correlated with the industry.[62] Certain industries

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[60] Price, p.70.

[61] Ibid., p. 76.

[62] Mobley, p. 50.

such as the construction industry have experienced high turnover rates. Generally, those industries making substantial use of multiemployer plans are high turnover industries. Multiemployer plans have developed in response to the problems related to worker mobility pension benefit forfeiture. Industry type will be included as a control variable in this research.

Unemployment

Halin has determined that the turnover rate is related to the unemployment rate.[63] He found that there was a -.84 correlation between the worker turnover and the unemployment rate. In other words, his findings indicate that as employment becomes more difficult to find in an area the less likely it is that a worker will leave current employment.

Vesting

Vesting schedules may play a part in explaining worker mobility.[64] In those plans where full vesting occurs the earliest, a higher turnover rate may be expected because there no longer is the threat of accrued pension benefit

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63 E. Halin, Employment and Unemployment Levels (an unpublished paper presented at the annual meeting of the Academy of Management).

64 Arthur M. Ross, "Quit Rates in American Industry," American Economic Review (Vol. 48, 1958), p. 918.

forfeiture. Worker mobility may not be correlated to different vesting schedules, however, because of the backloading problem. Even though the worker is fully vested, one must consider in what the worker is fully vested. In the case of a defined benefit plan which provides a benefit based on the high consecutive three years pay without adjustment for inflation, the participant who leaves after ten years of service with full vesting will have a relatively inconsequential benefit to claim at retirement.

Company Age

Research has shown that as the company ages the turnover rate decreases.[65] Apparently the maturing process in an organization makes it a relatively more stable environment for the worker.

Company Size

A recent study by the Bureau of National Affairs indicates that the turnover rate is related to the company size.[66] Ross finds that it is well established that large firms tend to have low turnover rates.[67]

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[65] Mobley, p. 60.

[66] Bureau of National Affairs, Bulletin To Management, (December 8, 1983), p. 4.

[67] Ross, p. 914.

Geographical Location

The Bureau of National Affairs study indicated a relationship between worker turnover and geographical location. The northeast showed relatively lower turnover rates than the rest of the country. Geographical location will be used as a control variable in this research.

Compensation

The turnover research indicates that successively higher amounts of pay will produce successively lower amounts of turnover. Farris studied the relationship between 23 factors and turnover among 500 workers in two different organizations and concluded that workers with lower income have a higher turnover rate.[68]

Pay refers to the money, fringe benefits and other commodities that have financial value which organizations give to employees in return for their services.[69] Thus part of the worker's pay is pension benefits. It appears reasonable to assume the "economic man" would be influenced by the loss of pay in the form of pension benefit forfeiture when trying to make the job change decision.

There has been some research to investigate the

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68 G.F. Farris, "Turnover," Personnel Psychology (August 1961), pp. 311-328.

69 Edward E. Lawler, Pay and Organizational Effectiveness (New York: McGraw-Hill, 1971), p. 1.

assumption that the threat of pension benefit forfeiture restricts worker turnover. The Bureau of Employment Security compared turnover rates for firms with and without pension plan coverage.[70] It appeared that firms with pension plans had considerably lower turnover rates, even after controlling for industry, firm size and age of employee. In its report of the study the Bureau of Labor Statistics cautioned against the conclusion that pension plan coverage restricts mobility. BLS stated that firms with pension plans on the average pay higher wages; are more unionized and hence have more seniority protection and more kinds of other fringe benefits than nonunion plans.

The problem of correlation of pension benefit forfeiture with other factors such as those mentioned in the above criticism is less of a problem in this research because all of the plans studied are union dominated and are positioned in a few industries. These similarities will provide for a certain amount of control.

In another study, Parnes interviewed male workers aged 35-50 in plants with and without pension plans. He compared the worker attitudes toward changing jobs and their attitudes toward retirement. He concluded that seniority and uncertainty immobilized the workers interviewed and that the

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[70] U.S. Bureau of labor Statistics. Bulletin No. 1359, Private Pension Plans and Manpower Policy (Washington, D.C.: U.S.G.P.O., 1963), pp. 13-16.

threat of pension forfeiture was of little additional significance in increasing immobility.[71]

In a more recent study, the Survey Research Center considered the relationship between worker mobility and pension forfeiture.[72] Of the survey respondents, 28% indicated that they were covered by a pension plan. Simple two-way relationship tests between pension plan coverage and mobility measures and multivariate analysis of mobility indicated a very weak relationship between worker movement and pension forfeiture.

The study investigates the attitudes of recent movers concerning the success of their move. It was found that there was no significant difference in attitudes concerning move success based on a comparison between those who lost pension rights and those who did not. Furthermore, there was little difference in worker attitudes concerning prospective moves when vested and nonvested workers were compared.

A multivariate analysis was conducted wherein age was controlled and differences within age groups concerning pension coverage and geographic mobility were assessed. The findings were summarized as follows,

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[71] Herbert Parnes, "Workers' Attitudes To Job Changing: The Effect of Private Pension Plan," in The Reluctant Job Changer, (Philadelphia: University of Pennsylvania Press, 1964), p. 76.

[72] Lansing and Mueller, p. 162.

> Doubts about the importance of this relationship (between worker mobility and benefit forfeiture) arises from two considerations: (1) the fact that the moving plans data (i.e., data concerning the worker expectation) do not confirm it and (2) the fact that the relationship is statistically significiant only for the younger age groups, when one should expect pension plan considerations to be of importance primarily to workers in the middle and older age brackets.[73]

The study concludes that the data support those who express skepticism about the relationship between pension forfeiture and worker turnover.

Ross points out that quit rates in American industry have declined significantly since World War II.[74] Many observers indicate the decline is due to increased pension coverage and the accompanying threat of benefit forfeiture. However, Ross concludes that increased pension coverage is not a good reason for the decline in industry quit rates. He reasons that young workers are generally not covered and that older workers have other good reasons for not quitting including difficulty of finding another job, probable loss of economic status and a settled way of life. Ross finds little evidence to support the proposition that labor resources have become immobilized and a new "industrial feudalism" has been created because workers are bound to jobs by threat of pension forfeiture.

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[73] Lansing and Mueller, p. 166.

[74] Ross, p. 918.

In a recent study concerning the impact of private pensions on firm attachment, the researchers concluded from the outset that it had already been clearly established that the use of pension plans influences the workers job change decision.[75] The studies they referenced which are purported to support this conclusion provide limited support for such an assumption. The researchers attempted to assess the extent to which various pension provisions affected worker turnover rates. They reviewed plan provisions as on file with the Department of Labor for 133 large Fortune 500 firms and then compared the plan provisions to employment turnover data provided by the Social Security Administration. The conclusion was that the relationship between worker turnover and specific plan provisions such as vesting benefit levels, contributory status, benefit levels and early retirement options strongly influence worker attachment to the firm. Although the findings for several of the specific plan provision proved to be statistically significant; nevertheless, the R^2 was extremely low, i.e., in most cases R^2 less than .30. Thus, the research explained very little of the variation in the worker turnover rate- a result which draws into question the practical significance and

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[75] B.R. Schiller and Randall D. Weiss, "The Impact of Private Pensions on Firm Attachment," Southern Economic Journal (Vol. 50, August 1980). p. 378.

statistical significance of the findings.

Model misclassification errors result when the correct variables are not included. These errors are especially a problem in nonexperimental research because it is questionable whether the variables responsible for the unexplained variation are not correlated with the significant variables identified in the research. This problem will be discussed later in regard to the assumption underlying multiple regression.

Chapter Summary

The chapter has reviewed literature relevant to the research. Background information concerning multiemployer plans is presented and reciprocity agreements are more fully explained. Worker mobility is discussed and the specific worker mobility measure- separation rate, is explained. The separation rate of vested plan participants in multiemployer plans will be analyzed in this research.

Finally, the research concerning worker mobility is reviewed and the variables which have shown significant correlation with worker turnover are discussed. One of the variables which has received limited research attention is pension benefits. The research has been inconclusive in attempting to determine the correlation between worker mobility and the threat of accrued pension benefit forfeiture.

III. Research Design

Overview

Research Objective: To study the relationship between worker turnover and pension benefit forfeiture.

Research Question: Are reciprocity agreements effective in increasing mobility for vested participants in multiemployer plans?

Research Hypothesis: Reciprocity agreements are ineffective in increasing worker mobility for vested plan participants in multiemployer plans.

Population: Vested participants in multiemployer plans will be studied.

Sampling Techniques: A random sample of multiemployer plans from the PBGC premium list.

Data Sources: Data sources will be the Department of Labor operational data tapes and microfiche containing Internal Revenue Service Form 5500; multiemployer plan questionnaire results and the Geographic Profile of Employment and Unemployment (BLS).

Years Studied: The years studied will be 1979, 1980 and 1981.

Variables:

Categorical: -use or nonuse of reciprocity agreements
-business code -geographical location

Continuous: -separation rate -unemployment rate
-vesting schedule -company age
-company size

Data Analysis: The SPSS-X statistical package is used to analyze the data. The statistical procedures includes a T-test to evaluate the relationship between the dependent variable, worker turnover and the independent variable, the use or nonuse of reciprocity agreements. In addition, multiple regression is used to assess the relationship of joint effects of the use or nonuse of reciprocity agreements and other independent variables with the dependent variable, worker turnover.

Research Question

Worker mobility is considered by many to be a desirable objective. Regardless of the desirability of worker mobility, it is useful to understand the relationship between worker mobility and the independent variables which affect such mobility.

This research focuses primarily on the relationship between one independent variable, i.e., the use or nonuse of reciprocity agreements, and worker mobility. The primary research question is whether reciprocity agreements are effective in increasing mobility for workers who are vested participants in multiemployer pension plans.

Research Hypothesis

H_o: Reciprocity agreements are ineffective in increasing worker mobility for vested plan participants in multiemployer plans.

Although reciprocity agreements may increase worker mobility, there are other independent variables which may have an opposite effect on worker mobility such as loss of seniority and geographical ties. Such variables may be sufficient to offset the positive effect of reciprocity agreements on worker mobility. If the hypothesis is rejected this will indicate that at least in the case of vested participants in multiemployer plans, manipulation of benefit preservation will affect worker mobility. Failure to reject the research hypothesis will indicate that the research findings give no empirical support to the assumption that reduction in pension forfeitures enhances worker mobility.

Methodology

The research is exploratory in nature and is nonexperimental in the sense that there is no assignment of subjects nor manipulation of the environment. Multiemployer plans with more than 100 participants constitute the population being studied. This population is selected because it makes the predominant use of reciprocity agreements. The research assesses the relationship between the use of reciprocity agreements and worker mobiltiy. The primary statistical techniques used are the T-test, multiple regression and discriminant analysis. The statistical package, SPSS-X, is used for data analysis.

T-test

The T-test compares sample means by calculating Student's T and tests the significance of the difference between the means. The sample for each year 1979, 1980 and 1981 will be divided based on the use or non-use of reciprocity agreements. The mean of the separation rate will be computed for each group and compared to determine if there is a statistical difference between the means. If no difference between means is found, the research hypothesis can not be rejected based on the T-test. If no difference between the means is found, further analysis will be conducted to determine if the dependent variable, i.e., the use or nonuse of a reciprocity agreement, has a joint effect with other variables.

If there is a statistically significant difference between the separation rates of the sub-groups then the research hypothesis can be rejected based on the findings. However, further analysis will be conducted to determine if other variables discussed below correlate significantly with the use or nonuse of reciprocity agreements.

The difference in the means will be considered to be meaningful if the difference is statistically significant at the .05% significance level. The corresponding critical T value must be greater than 1.645 based on the large sample.

Assumptions: The Student's T and the corresponding tabulated critical values are based on the assumption that the sampled population possesses a normal probability distribution.[76] This property of the T statistic and the common occurrence of mound-shaped distributions of data in nature enhance the value of T for statistical inference.

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[76] William Mendenhall and James E. Reinmuth, Statistics for Management and Economics (North Scituate, Ma.: Duxbury Press, 1978), p. 282.

<u>Multiple Regression</u>

The regression model contains both categorical and continuous variables. These variables have been selected because previous research has shown them to have a significant statistical relationship with worker turnover. The multiple regression model will be as follows:

$$S = b_0 + b_1A + b_2I + b_3U + b_4V + b_5O + b_6C + b_7G + e$$

Where:

S=separation rate (continuous variable)

A=use or non use of reciprocity (categorical variable)

I=industry (categorical variable)

U=unemployment rate (continuous variable)

V=vesting schedule (categorical variable)

O=company age (continuous variable)

C=company size (continuous variable)

G=geographical location

b_0-b_7=regression coefficients

e=error term

While the basic model appears as outlined above, it is necessary to include joint effect terms to assess the joint effects between the categorical variables and the continuous variables. Pedhazur points out the need for the inclusion of the joint effect terms in the following quotation.

> Often, researchers appear to be operating under the mistaken assumption that in order to take into account a classificatory, or grouping variable (e.g., sex, race, religious affiliation) all that is necessary is to include in the analysis in addition to the continuous variables, coded vectors that represent the classificatory variable. It was shown in the preceding section that when product vectors between the categorical and the continuous variable are included in the combined analysis the separate regression equations for the groups under consideration are assumed to differ only in their intercepts. In other words separate regression equations with identical regression coefficients but with different intercepts are fitted when product terms are not included in the combined regression analysis.[77]

Overall and Klett make this point in slightly different terms.

> In order to use the general multiple-regression method to accomplish simple one-way-classification analysis of covariance, it is necessary to construct a design matrix indicating group membership (1,0 and -1), the scores on the covariate, plus the cross product of covariate scores with each dummy variate, [author's emphasis] and finally the score of the dependent variable.[78]

Thus the variables previously mentioned will be entered into a multiple regression equation along with selected cross-products. It should be noted, however, that the categorical variable, G, includes ten regions and the categorical variable, I, includes ten industry groups. Their

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77 Elazar J. Pedhazur, Multiple Regression in Behavioral Research, 2d ed., (New York: Holt, Rinehart and Winston, 1982), p. 474.

78 John E. Overall and C. James Klett, Applied Multivariate Analysis (New York: McGraw-Hill Book Co., 1972), p. 431.

entry into the multiple regression analysis would prove unduly cumbersome if dummy coding were used. This is because the categories for each variable less one would have to be represented by an individual variable in the regression analysis. Thus, 18 (20-2) variables would have to be coded to include the two categorical variables in the analysis. In addition, the analysis of the joint effects between S and I and G would add more than twenty variables. Thus the inclusion of the two categorical variables, I and G, would add more than 40 variables to the regression analysis. To say the least, such an analysis would be cumbersome. In addition, if one applied a variable selection procedure the results would likely include some of the categories of one or both of the categorical variables and exclude others. Such a result would be difficult to interpret.

To avoid the problems associated with the use of categorical variables as discussed above, criterion scaling is used. Pedhazur describes criterion scaling as follows:

> The idea of criterion scaling is very simple. It will be recalled that the regression equation obtained from the regression of the dependent variable on a set of coded vectors yields predicted scores that are equal to the mean of the group or categories on the dependent variable. In other words, errors of prediction are minimized when this predicted score for each individual is equal to the mean on the criterion for the groups to which he or she belongs. A categorical variable is said to be criterion scaled when it is transformed to a single vector in which each individual's score is equal to the

> criterion mean of the group to which he or she belongs. Stated differently, a criterion scaled variable is one that is composed of the predicted scores of the individuals under consideration.[79]

Thus criterion scaling will permit a reduction in the number of the variables in the multiple regression equation.

$$S=b_0 + b_1A + b_2I + b_3U + b_4V + b_5O + b_6C + b_7G + b_8AI + b_9AU + b_{10}AV + b_{11}AO + b_{12}AC + b_{13}AG + e$$

Where:

S=separation rate
A=use or nonuse of a reciprocity agreement
I=industry
U=unemployment rate
V=vesting schedule
O=company age
C=company size
G=geographical location
AI=joint effects of A & I
AU=joint effects of A & U
AV=joint effects of A & V
AO=joint effects of A & O
AC=joint effects of A & C
AG=joint effects of A & G
b_0-b_{13}=regression coefficients
e=error term

The interpretation of the data analysis will be based on the statistics R square, Adjusted R square, the F statistic and the T value for the coefficients.

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[79] Pedhazur, p. 388.

R-Square- This is the squared multiple correlation coefficient. It indicates the proportion of the variance of the dependent variable accounted for by the independent variables. Its statistical significance will be tested by the use of the F statistic. The F statistic indicates if at least one of the regression independent variables is statistically significant, i.e., it will answer the question - is at least one regression coefficient different from zero?

The F statistic is computed as follows:

$$F = \frac{R^2/k}{(1-R^2)/(N-k-1)}$$

with k and N-k-1 degrees of freedom.

Where: k= number of independent variables
N= sample size

or in other terms:

$$F = \frac{ss_{reg}/df_{reg}}{ss_{res}/df_{res}}$$

Adjusted R-square- The choice of a set of weights in a regression analysis is designed to yield the highest possible correlation between the independent variables and the dependent variable. The multiple correlation can be expressed as the correlation between the predicted scores based on the regression equation and the observed scores. If one were to apply a set of weights derived in one sample to the predictor scores of another sample and then correlate these predicted scores with the observed criterion scores, the resulting R^2 would usually be less than the original R^2. This phenomenon is referred to as the shrinkage of the multiple correlation. The reason for the shrinkage is that in calculating the weights to obtain a maximum R, the zero-order correlations are treated as if they were error-free. This of course is never the case. Consequently, there is a certain amount of capitalization on chance and the resulting R is biased upwards.

Even though it is not possible to determine exactly the shrinkage of R^2, several formulas for the estimation of R^2 have been proposed. One of these formulas which is used in the SPSS-X statistical package is as follows:

$$R^2 = 1-(1-R^2) \times \frac{(N-1)}{(N-k-1)}$$

where: N= sample size

k=number of independent variables

R^2=initial value

R^2=adjusted value

Note the effect of the sample size on the shrinkage. As the sample size increases the shrinkage is less assuming the number of variables is constant.

T Statistic

The F statistic indicates whether at least one of the variables in the equation is statistically significant. The T statistic indicates which independent variable is significant.

Multicollinearity affects the magnitude of the coefficient as well as the standard error of the coefficient. Multicollinearity arises when two or more of the independent variables are highly correlated. This problem is considered in more detail later.

The T statistic is computed as follows:

$$T = \frac{b}{S_b}$$

Where: b= regression coefficient
S_b=standard error of b

Incremental R^2

The coefficient of determination will be computed with and without the reciprocity agreement independent variable in the model. The change in the coefficient of determination will then be tested by means of an F test at the alpha=.05 level of significance to determine if there is a statistically significant difference in the two coefficients of determination. The results for the three reporting years will be compared.

This statistical methodology has been discussed by Pedhazur. He indicates that incremental partitioning of the variance of the dependent variable is acceptable where the use is to study the effect of an independent variable on the dependent variable after having controlled for other variables. He emphasizes that the important thing to keep in mind is that such an incremental partitioning is not intended to provide information about the relative importance of variables, but rather about the effect of a variable after having controlled for other variables.[80]

Assumptions Underlying Multiple Regression

1. The variables are random which means that they have a range of possible values, each having an associated probability.

2. Each observation of the dependent variable is assumed to be composed of two components: a fixed component, alpha + beta(X), and a random error, e_i.

3. The mean of errors for each observation of the dependent variable over many replications is zero.

4. Errors associated with one observation of the dependent variable are not correlated with errors associated with any other observation of the dependent variable.

5. The variance of the errors at all values of X is constant. This property is referred to as homoscedasticity.

6. The errors are assumed not to be correlated with the independent variables.

7. For the purpose of conducting tests of significance it is assumed that the errors are normally distributed.

It has been demonstrated that regression analysis is

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[79] Ibid., p. 178.

generally robust in the presence of departures from assumptions, except for specification errors.[81] Specification errors refer to any errors committed in specifying the model. This is particularly a problem in nonexperimental design because when a low R^2 is found, e.g., .10, it is questionable that of all the variables responsible for the remaining .90 that none are correlated with variables which are found to be significant. This limitation on the robustness of multiple regression analysis will be considered in the data analysis section.

Multiple Regression Variables

Separation Rate- The separation rate will be computed as follows:

$$S = \frac{DV_{t+1}}{(PV_t + FV_t + DV_{t+1} + PV_{t+1} + FV_{t+1})/2}$$

Where: S = separation rate

DV_{t+1} = deferred vested terminated participants

PV_t = partially vested active participants at the beginning of the year

PV_{t+1} = partially vested active participants at the end of the year.

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[81] Ibid., p. 34.

FV_t = fully vested active participants at the beginning of the year

FV_{t+1} = fully vested active participants at the end of the year

The separation rate approximates terminations due to job change. The variation in the separation rate is studied.

"Deferred vested terminated participants (DV)" refers to those employees who terminate employment with deferred vested benefits under the terms of a pension plan in which they had been a participant. "Partially vested terminated participants (PV)" and "fully vested terminated participants (FV)" refers to the number of participants in a plan year which are partially or fully vested as of the end of a plan year. Therefore, the separation rate has deferred vested terminations in the numerator and the average of the sum of deferred vested participants, partially vested participants and fully vested participants in the denominator. Thus, the separation rate approximates the percentage of vested participants who terminate and go to a new job. The separation rate does not include those who have retired, died or become disabled during the plan year. The data source for the elements of the termination rate is the operational data tapes and microfiche for 1979, 1980 and 1981 5500's as collected and compiled by the Internal Revenue Service and the Department of Labor. These are the only years for which the data are available. The 5500 is a report form filed annually with the Internal Revenue Service by employee benefit plans and is entitled "Annual Return/Report of Employee Benefit Plan (with 100 or more Participants)".

Form 5500 in Appendix B contains the data items which are used in the computation of the termination rate. The number of participants who were fully vested as of the end of the plan year is reported on line 7(a)(i). The number of participants who were partially vested as of the end of the plan year is reported on line 7(a)(ii) and the number of participants which were separated from service with a deferred vested benefit for which a Schedule SSA (Form 5500) is required is reported on line 7(g)(ii).

A brief discussion of the Schedule SSA (Form 5500) is helpful in understanding the numerator of the separation rate. The Internal Revenue Service has issued regulation section 301.6057-1 which details the Schedule SSA (Form 5500) reporting requirements. The regulation requires the plan administrator to list the terminated participants with deferred vested benefits on Schedule SSA. The regulation further states that no information relating to the deferred vested retirement benefit of a separated participant is required to be filed on Schedule SSA if, before the date such Schedule SSA is required to be filed, the participant (A) is paid some or all of the deferred vested retirement benefit under the plan, (B) returns to service covered by the plan, or (C) forfeits all of the deferred vested retirement benefit under the plan. Thus, Schedule SSA (Form 5500) reports primarily on those terminations in which a participant has a vested benefit and leaves employment due to a job change. Schedule SSA does not identify terminating participants who have retired, died or become disabled.

Use or Nonuse of Reciprocity Agreements

The questionnaire in Appendix C is used to determine which multiemployer plans use reciprocity agreements. The multiemployer plans list of 2600 plans available from the Pension Benefit Guarantee Corporation (PBGC) will be used to select a random sample. Numbers will be assigned to each of the multiemployer plans and a random number table will be used to select 400 plans for 1980, and 200 plans for 1979 and 1981.

The sample size was determined in light of the ability to obtain the data from the Department of Labor and the potential problem of overestimating the R^2. The Department of Labor permits viewing of only five microfiche per day therefore it is a slow process to procure a large amount of data. Secondly, the larger the ratio of sample size to independent variables the better. Some authors recommend at least 30 subjects per independent variable while others prefer a sample of at least 400 subjects.[82] Thus the

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[82] Ibid., p. 148.

sample size was a compromise between data accessibility and the rules of thumb.

The response to the questionnaire will indicate whether or not the plans use a reciprocity agreement. A second mailing will be made for nonresponses.

Industry

An industry code is assigned to each plan. The code is selected from a list contained in the instructions for IRS Form 5500. This list as presented in the instruction guide for plan administrators is included in Appendix D. As indicated in the code list, the codes are based on the Enterprise Standard Industrial Classification System developed by the Office of Federal Statistical Policy and Standards, Department of Commerce, to classify enterprises by type of activity in which they are engaged. The system follows closely the Standard Industrial Classification System. The codes will be dummy coded into ten categories.

Unemployment Rate

The data source for the state unemployment rate is the Geographic Profile of Employment and Unemployment, a publication of the Bureau of Labor Statistics.[83]

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83 Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, (Bulletin 2156) (Washington, D.C.: U.S. G.P.O., 1980).

Vesting Schedule

The vesting schedules will be obtained from the Department of Labor microfiche containing Form 5500.

Company Age

The company age is obtained from the Department of Labor microfiche containing Form 5500.

Company Size

A surrogate for the company size will be computed by dividing the total number of participants in the plan by the number of companies participating in the plan. The number of participants in the plan will be obtained from the Department of Labor microfiche containing Form 5500 while the number of companies participating in the plan will be obtained from the questionnaire.

Geographical Location

The geographical location will be obtained from the Department of Labor microfiche containing Form 5500. The geographical regions used will be those used by the Bureau of Labor Statistics. There will be ten categories which will represent the various regions as shown in Appendix E.

Chapter Summary

The research is designed to assess the relationship between worker turnover and pension benefit forfeiture. This relationship will be analyzed specifically in the case of vested participants in multiemployer plans. A T-test will be used to compare separation rates of plans that do participate in reciprocity agreements with those plans that do not participate in such agreements. In addition, multiple regression will be used to assess the joint effect of other variables with the use or nonuse of reciprocity agreements.

IV. Data Analysis

Introduction

The data were collected from several sources including the multiemployer plan questionnaire, the Department of Labor operational data tapes and microfiche containing Internal Revenue Form 5500 and the Bureau of Labor Statistics. The questionnaire provided information concerning the use or nonuse of reciprocity agreements among multiemployer plans and the number of employers participating in each plan. The DOL tapes and microfiche contained data on buiness type, geographical location, turnover rate for vested participants, vesting schedule, company age, and company size. The Bureau of Labor Statistics provided the state unemployment rate.

The questionnaire results are discussed first. Next, a comparison is made between information contained in previous multiemployer plan studies and data collected during this research. The comparison includes the usage of reciprocity agreements, the geographical distribution of multiemployer plans, the distribution of multiemployer plans by industry and by size. This comparison is made in order to discover multiemployer plan trends which may effect this research. Finally, the SPSS-X statistical package results are discussed including the results of the T-test, the multiple regression analysis and the discriminant analysis.

Questionnaire Results

The questionnaire in Appendix C was used to determine which plans use reciprocity agreements and which do not. The questionnaire also determined how many companies participate in each multiemployer plan. The sample was selected from the Pension Benefit Guarantee Corporation multiemployer list of 2,600 plans. Plans were assigned a number and a random number table was used to select the sample.

The results of the questionnaire were as follows.

Year	Questionnaires Mailed	Total Responses	% Responses
1979	200	169	84.5
1980	400	319	79.8
1981	200	135	67.5

"Total Responses" represents the results of two mailings. Some plans were included in all three samples thus the reason for the format of the questionnaire. The initial response produced about a 50% response rate for each year. The response rate was excellent possibly due to the subpoena power of the U.S. General Accounting Office. Thus there is a limited possibility of nonresponse bias.

Reciprocity Agreement Usage

The McDonald study concluded that about 45% of the multiemployer plans used some form of reciprocity agreement. This estimate was revised in the DOL study and a 60% usage rate was determined. The usage rate among the multiemployer plans responding to the questionnaire is as follows:

Year	Use Agreement	No Agreement	Use(%)	No(%)
1979	107	62	63	37
1980	192	127	60	40
1981	88	47	65	35

Using the binomial distribution the findings of this study indicate the number of plans using reciprocity agreements has grown substantially in the 15 years since the McDonald study. The following computation supports this assumption.[85]

$$\sigma = \sqrt{N \times P \times Q}$$

Where: σ =standard deviation

N =number of observations

P =expected percentage using reciprocity agreements

Q =expected percentage not using agreements

At a .95 confidence level the expected range about the .45 usage rate found by McDonald is computed as follows for the three years.

Year	Computation	Expected Range	Observed
1979	$\sigma = \sqrt{169 \times .45 \times .55} = 7$	$.45 \times 169 = 76 \pm 14$	107
1980	$\sigma = \sqrt{319 \times .45 \times .55} = 9$	$.45 \times 319 = 144 \pm 18$	192
1981	$\sigma = \sqrt{135 \times .45 \times .55} = 6$	$.45 \times 135 = 61 \pm 12$	88

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85 Mendenhall, p. 157.

If McDonald's earlier findings of a .45 usage rate is used the expected range of observed users would be between 60 and 90 for 1979 as indicated above. However, the observed usage for 1979 is 107 users out of 169 observed. This result is well above the upper range limit of 90. Thus, the probability is very high that the usage of reciprocity agreements has expanded significantly since the McDonald study. The same analysis for 1980 and 1981 indicates similar results.

This increased usage of reciprocity agreements indicates that such agreements are used in many industries. Since the agreements have been used for more than thirty years and their use is widespread, such agreements must be considered useful. Even though the dominance of their use in the construction industry is declining, they apparently have gained wide acceptance beyond the construction industry.

Geographical Distribution

The McDonald study revealed a geographical distribution for multiemployer plans using reciprocity agreements as shown in Table Four at page 34. The following analysis compares the McDonald study with the research results to determine if there is a significant change in geographical distribution for those plans which use reciprocity agreements. The data are summarized in Table Six.

Table Six

Geographical Distribution of Multiemployer Plans Using Reciprocity Agreements

Location	Plans(%)				Employee(%)			
	1979	1980	1981	McDonald	1979	1980	1981	McDonald
NE	7	5	6	12.0	4	1	1	3.8
MA	23	32	26	40.8	16	18	12	30.9
SA	9	9	13	8.2	3	21	29	3.5
ENC	31	24	25	14.5	36	19	7	23.3
WNC	8	6	5	3.3	7	4	4	1.6
ESC	3	4	2	0.5	1	1	1	0.0
WSC	2	1	1	0.3	3	1	1	3.5
MTN	3	3	6	2.9	4	3	13	0.9
PAC	14	16	16	17.0	27	32	33	31.0

Where:

NE=New England, MA=Middle Atlantic, SA=South Atlantic, ENC=East North Central, WNC=West North Central, WNC=West North Central, ESC=East South Central, WSC=West South Central, MTN=Mountain, PAC=Pacific

A comparison of the geographical distribution of the plans as revealed by this research with the McDonald findings indicates that there has been little change in the distribution. The only notable exception is that there appears to be a significant decline in the proportion of plans located in the middle Atlantic states. The east north central region has shown a significant increase in its proportion of the plans. Likewise with the employee distribution among those plans using reciprocity agreements, there appears to be only minimal change from the McDonald study.

Distribution by Industry

Table Seven contains the distribution by industry for those plans using reciprocity agreements based on the data collected in this research. The distribution by industry for those plans using reciprocity agreements in this research is compared in Table Eight with the distribution noted in the Table One (page 30), Table Two (page 31) and Table Three (page 33) for selected industries. This comparison highlights the changes in usage among the industries which have traditionally used reciprocity agreements such as the construction industry and the manufacturing industry. It also illustrates the extent to which the service industry has adopted the reciprocity agreements as the industry has grown.

Table Seven

Industry Distribution of Multiemployer Plans Using Reciprocity Agreements from Current Study

Industry	Plans(%)			Employees(%)		
	1979	1980	1981	1979	1980	1981
Agriculture	0	2	1	0	1	1
Mining	10	1	8	31	1	4
Construction	50	59	52	27	55	45
Manufacturing	7	5	8	6	5	15
Transportation	7	6	6	16	8	3
Wholesale	2	4	5	1	3	2
Retail	5	4	3	8	11	3
Finance	0	1	0	0	1	0
Services	1	2	5	1	1	4
Tax-Exempt	18	16	12	10	17	23

Table Eight

A Comparison of
Industry Distribution of Multiemployer Plans
Using Reciprocity Agreements

Industry	Plans(%)					
	1979	1980	1981	DOL	MCDonald	PBGC
Construction	53	59	52	42	73	50
Manufacturing	7	5	8	--	9	14
Transportation	7	6	6	18	--	21
Services	1	2	5	15	7	10

The distribution by industry shows a significant change from the McDonald study. The construction industry continues to dominate plans using reciprocity agreements; however, that dominance is substantially reduced when compared to the McDonald results. Classification of plans by industry may confuse comparisons. For example, the service industry has declined if one compares the results of this study with earlier studies. This result is likely due to lack of classification uniformity. It is clear, however that many industries have begun using reciprocity agreements in the past 30 years and that the users are diverse.

Distribution by Plan Size

Table Nine compares the distribution of plans using reciprocity agreements by plan size as determined in this research with the results found in the DOL study shown in Table Five (page 37). The distribution by plan size is the same as it was in the Department of Labor study. Although those plans with 25,000 or more participants are a small part of the total plan population, the number of participants in them is more than 50% of the total participants in plans using reciprocity agreements. There is an even distribution of plans having 100 to 25,000 employees in terms of total plans; however, a relatively small proportion of the employees are in the smaller plans.

Table Nine

Comparison of
Distributions by Plan Size For Multiemployer Plans
Using Reciprocity Agreements

Size	Plans(%) 1979	1980	1981	DOL78	Participants(%) 1979	1980	1981	DOL78
Less than 100	4	4	2	10	1	1	1	1
100-499	30	31	23	30	3	3	2	2
500-999	21	21	22	17	6	5	5	3
1,000-4,999	26	28	43	30	17	18	29	26
5,000-24,999	18	15	6	11	64	54	14	26
25,000 or more	1	1	4	3	10	22	51	54

T-Test for Differences in the Separation Rate

T-tests compare the mean separation rate for the groups using reciprocity agreements with groups not using reciprocity agreements. The results are presented in Table Ten. The T-tests are conducted for 1979, 1980 and 1981.

In each year the results are the same. At the .05 signifcance level, there is no statistical difference between the separation rate for those plans using reciprocity agreements and the separation rate for those plans not participating in reciprocity agreements. In fact, in each year the separation rate is higher for those plans not using reciprocity agreements than it is for those plans using reciprocity agreements. This result is opposite that expected; however, it must be emphasized that the difference is not statistically significant at the .05 significance level. However, for 1979 the difference would be significant at the .90 confidence level. This indicates that separation rates are higher among those plans not participating in reciprocity agreements. The separation rates are very nearly the same for 1980 while for 1979 and 1981 the rates for plans not using reciprocity agreements are substantially higher than the separation rate for plans using agreements.

The uniformity of the results indicates that the null hypothesis can not be rejected thus the T-test provides no empirical support for the proposition that increased pension

Table Ten

T-test for Differences in the Mean Separation Rate

Agreement? Yes/No	Number Of Cases	Mean S	Standard Deviation	T-Value	Df	One Tail Prob.
1979						
No	62	.0723	.072			
				1.47	167	.072
Yes	172	.0577	.056			
1980						
No	127	.0674	.082			
				.22	317	.412
Yes	192	.0653	.080			
1981						
No	47	.0606	.067			
				1.02	133	.15
Yes	88	.0485	.065			

benefit preservation correlates with increased worker mobility for vested participants in multiemployer plans. While the null hypothesis can not be accepted in any case, failure to reject it does draw into question the Congressional assumption that increased pension benefit preservation correlates with increased worker mobility. Congress should reexamine the assumption since substantial revenue is foregone, in part, to promote worker mobility.

Joint Effects

Although the T-tests indicate no statistical basis upon which to reject the null hypothesis, such a result indicates only that the main effect of the use or nonuse of reciprocity agreements on separation is not statistically significant.

Use or nonuse of reciprocity agreements may join with one or more other factors to influence the separation rate. The following discussion explores the joint effects of factors on separation with particular emphasis on the factor of use or nonuse of reciprocity agreements. Data referred to in this discussion are presented in Table Eleven, Table Twelve and Table Thirteen for years 1979, 1980 and 1981 respectively.

These Tables present the results of the multiple regression analysis and indicate the extent to which the variables correlate with the dependent variable.

Table Eleven

Multiple Regression Analysis for 1979

Variables (Code)	B	SE B	BETA	T	SIG T
Unemployment (U)	-0.02	7.08	-.26	-2.212	.0284
Agreement/ Co. Size (AC)	2.29	1.73	.26	1.328	.1862
Industry (I)	2.33	0.68	.40	3.431	.0008
Agreement/ Geographic (AG)	-1.12	0.44	-.47	-2.534	.0122
Company Age (O)	-1.8	1.73	-.13	-1.093	.2762
Geographic (G)	1.5	0.38	.42	3.940	.0001
Agreement/ Age (AO)	8.14	2.09	.09	.389	.6977
Co. Size (C)	-1.96	1.62	-.23	-1.202	.2310
Agreement/ Industry (AI)	-1.71	0.74	-.69	-2.295	.0231
Agreement/ Unemployment (AU)	0.02	7.44	.91	2.764	.0064
(Constant)	-0.03	0.06		-0.531	.5963

R Square	.25685
Adjusted R Square	.19969
Standard Error	.07845
F	4.49319
Significance of F	0.0000

Table Twelve

Multiple Regression Analysis for 1980

Variables (Code)	B	SE B	BETA	T	SIG T
Geographic (G)	1.05	0.34	.17	3.110	.0020
Industry (I)	1.11	0.45	.13	2.434	.0155
Company Age (O)	-0.04	-0.04	.98	-0.811	.4181
Unemployment (U)	0.06	0.06	.94	1.146	.2528
Agreement/ Industry (AI)	-0.04	-0.04	.80	-0.635	.5261
Agreement/ Co. Size (AC)	0.06	0.06	.99	1.140	.2552
Agreement/ Age (AO)	-0.07	-0.07	.93	-1.312	.1904
Agreement/ Unemployment (AU)	-0.04	-0.04	.91	-0.716	.4748

R Square	.04404
Adjusted R Square	.03799
Standard Error	.07933
F	7.27928
Significance of F	.0008

Table Thirteen

Multiple Regression Analysis for 1981

Variables (Code)		B	SE B	BETA	T	SIG T
Company Age	(O)	-1.5	1.8	-.177	-0.818	.4151
Unemployment	(U)	-2.6	6.9	-.056	-0.377	.7067
Industry	(I)	1.4	0.4	.454	3.959	.0001
Geographic	(G)	0.8	0.8	.114	0.953	.3423
Company Size	(C)	-2.2	2.6	-.12	-0.840	.4026
Agreement/ Industry	(AI)	-1.3	0.6	-.53	-2.315	.0223
Agreement/ Co. Size	(AC)	1.1	3.3	.05	0.329	.7425
Agreement/ Geographic	(AG)	0.0	1.2	.04	0.078	.9378
Agreement/ Co. Age	(AO)	1.3	1.9	.22	0.667	.5061
Agreement/ Unemployment	(AU)	-1.8	8.4	-.01	-0.021	.9831
Agreement	(A)	0.4	0.1	.29	0.429	.6687
(Constant)		-0.2	0.1		-0.312	.7559

R Square	.15333
Adjusted R Square	.10116
Standard Error	.06219
F	2.24743
Significance of F	.0133

Table Fourteen

Multiple Regression Summary

Summary of R Square

	1979	1980	1981
R Square	.25	.04	.15
Adjusted R Square	.19	.03	.10

Summary of F Statistic

	1979	1980	1981
F statistic	4.5	7.3	2.2
Significance of F	.00	.00	.01

Significant Variable Summary

	1979	1980	1981
Unemployment (U)	X		
Industry (I)	X	X	X
Agreement/Geographic (AG)	X		
Geographic Location (G)	X	X	
Agreement/Industry (I)	X		X
Agreement/Unemployment (AU)	X		

None of the R squares or adjusted R squares show substantial amounts of explanatory power. Since none of the independent variables included in the models was A, or the joint effect of A with the other independent variables, there is no statistical basis to reject the null hypothesis. Neither A nor its joint effects with the other independent variables explain a significant portion of the variation in S, the separation rate.

The F statistic indicates that for each year at least one of the independent variables in the model is statistically significant. The summary of the multiple regression statistics in Table Fourteen indicates that the F statistic is significant for each year at a high level.

The significant variables for each year are summarized in Table Fourteen and only industry type is significant in each year while geographical location and the joint effect of agreement and industry is significant in two years. Even though certain variables are significant, there may be other variables not included in the analysis which are highly correlated with the significant variables and which explain a significant portion of the variation in S as well. Thus, the significance of variables in an analysis with a low R^2 is not something upon which conclusions can be based. In summary, the multiple regression provides no basis upon which to reject the null hypothesis.

Multicollinearity[86]

Multicollinearity involves the intercorrelation among independent variables. Such intercorrelation can lead to a reduction in the magnitudes of the coefficients and increase the standard error thus distorting the significance of an independent variable. The standard errors do not appear to to be inflated thus no multicollinearity is indicated.

In all three years the analysis revealed an inconsequential R^2. It should be emphasized that multicollinearity does not pose difficulties when the researcher's sole purpose is the determination and interpretation of R^2.[87] Since the R^2 which results in this research provides limited explanatory power it may be assumed that the use or nonuse of a reciprocity agreement contributes insignificantly to explaining the variation in S regardless of multicollinearity which may distort the individual coefficient and standard error associated with variable S.

Chapter Summary

The questionnaire results indicated the use of reciprocity agreements has grown to a 60% usage rate among

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[86] Discriminant analysis using variable A as the grouping variable and the remaining independent variables as the predictor variables was used to further evaluate the presence of multicollinearity. There is no indication that any linear relationship exists between the grouping and predictor variables thus no multicollinearity exists.

[87] Pedhazur, p. 290.

multiemployer plans in the past 15 years. The geographical distribution of multiemployer plans using reciprocity agreements has remained relatively constant while the dominance of the construction industry in the use of reciprocity agreements has declined substantially.

The statistical analysis revealed that there was no basis upon which to reject the null hypothesis, i.e., reciprocity agreements are ineffective in increasing worker mobility for vested plan participants in multiemployer plans. The T-tests indicated no difference for separation rates for those plans using reciprocity agreements as compared with those not using agreements. The multiple regression analyses showed a low R^2 for each year even with the inclusion of joint effects in the model.

V. Summary and Conclusions

Summary

There is a widely held assumption that the threat of pension benefit forfeiture prevents workers from moving freely from job to job. The assumption appears to be reasonable. One can envision a worker who wants to move to a new employer but does not do so due to concern about loss of accrued benefits.

This assumed restriction of worker mobility is viewed as an inefficiency in our economy. There are many devices that are used to reduce the threat of pension benefit forfeiture including vesting, reciprocity and portability. Congress is foregoing substantial revenue to encourage pension benefit preservation for the mobile employee through vesting requirements. This research focuses on the assumption that workers are locked into their jobs by the threat of pension benefit forfeiture.

The population studied is comprised of participants in multiemployer plans. Multiemployer plans are collectively bargained with more than one employer participating. This group of plans was selected because the plans have had extensive experience in preserving pension benefits through the use of reciprocity agreements. Reciprocity agreements are contracts between multiemployer plans which preserve pension benefits for those workers who move from an employer under one multiemployer plan to an employer under another multiemployer plan. The experience of the multiemployer plans for the years 1979, 1980 and 1981 was studied.

A sample of multiemployer plans was selected and a questionnaire was mailed. The questionnaire provided information concerning the use or nonuse of reciprocity agreements and the number of employers participating in the plans. Additional data were collected from the Department of Labor including the separation rate for vested participants, industry type, vesting schedule, company age, company size and geographic location. Data were collected for 169 plans in 1979, 319 plans in 1980 and 135 plans in 1981.

The data were analyzed first by comparing it with earlier studies by McDonald, the PBGC and the Department of Labor. The comparison indicates that substantially more plans use reciprocity agreements today than in 1969. The reciprocity agreement has been used for more than thirty years and apparently it has received wide acceptance.

Another finding was that the use of reciprocity agreements in the construction industry has diminished in terms of percent of total usage. Other industries are adopting reciprocity agreements thus indicating wide acceptance and growth of the use of reciprocity agreements. Furthermore, the comparisons revealed that neither the geographic distribution of plans using reciprocity agreements nor the distribution of plan size for plans using reciprocity agreements have changed significantly.

The data were further analyzed using statistical procedures including the T-test, multiple regression and discriminant analysis. The T-tests indicate the mean separation rate for plans using reciprocity agreements was not significantly different from the mean separation rate for plans not using reciprocity agreements. Thus, the T-tests give no basis upon which to reject the null hypothesis, i.e., that reciprocity agreements are ineffective in increasing worker mobility for vested plan participants in multiemployer plans. The inability to reject the null hypothesis indicates no support for the assumption that worker mobility among vested participants in multiemployer plans is increased by benefit preservation through the use of reciprocity agreements.

The multiple regression analyses were conducted to determine if there were joint effects from the use or nonuse of reciprocity agreements and other variables on the separation rate. Negligible R^2's were computed for each year analyzed. Thus, the multiple regression analyses provide no support for the assumption that the use of reciprocity agreements in conjunction with other variables including company age, industry type, geographic location and company size promotes increased worker mobility among vested participants of multiemployer plans.

Discriminant analysis was used to determine if there was a significant relationship between the use of reciprocity agreements and other variables such as plan age, industry type, company size and geographic location. The discriminant analysis indicates a high Wilks Lambda statistic for each year studied thus indicating the grouping variables were not significantly correlated with the use or nonuse of reciprocity agreements. The lack of significant correlation as revealed by the discriminant analysis is considered important in two respects. First, the use of reciprocity agreements is apparently a random process within multiemployer plans thus it does not appear in any unique setting. This finding gives support to the ability to generalize the findings of the research beyond multiemployer plans. Secondly, since there is no significant correlation there is no multicollinearity problem in terms of the coefficient and standard error for the variable A in the multiple regression analysis.

Conclusions

The results of this study have broad policy implications in the pension and tax area. Much of tax policy and pension policy is based on assumptions that are not supported by empirical evidence. Two such assumptions are that workers are more mobile if their pension benefits are preserved and that workers are rational when it comes to retirement planning.

The empirical results of this research indicates that there is not a significant correlation between the mobility of vested participants in multiemployer plans and pension benefit preservation. Furthermore, the results indicate that workers are not greatly influenced by pension benefit considerations.

In regard to mobility and pension benefit preservation, the empirical results pertain only to vested participants in multiemployer plans. It must be remembered that this group is comprised of about 5 million workers among the nearly 10 million workers participating in multiemployer plans. Thus the population studied represents a sizeable segment of the workers in the United States. What can be said about the mobility of other workers such as nonvested participants in multiemployer plans and workers outside the multiemployer plans area? While the results of the research cannot be directly extended to other workers, consider the following.

1. The multiemployer plan coverage is in excess of nine million workers with about one-half of these being vested participants. Thus, the results of the study do not have to be extended to other workers to make a significant statement about worker mobility and benefit preservation.

2. The manner in which the mobility assumptions are stated in the ERISA legislative history clearly indicates that Congress believes that worker mobility will be increased whereever pension benefits are preserved. This research presents one example of a situation where this assumption can be seriously

questioned. If the Congressional assumption is drawn into question in one setting, then certainly this assumption should be reviewed for other settings. This is especially true when significant amounts of revenue are foregone partly because Congress assumes that worker mobility thus economic efficiency is enhanced.

3. There are few covered pension participants who have more to lose than vested participants in multiemployer plans. Most of the multiemployer plans are defined benefit plans which means that backloading is a serious problem. Thus, the first ten years of vested service in a defined benefit plan are of relatively little value without a reciprocity agreements that combines service and permits benefit computation on the high years of salary which occur at the end of the working life. Full vesting has little meaning if the benefit is inconsequential. A participant in a multiemployer plan who is fully vested will forfeit substantial benefit if there is termination without the benefits of reciprocity agreement. The first ten years of service without a reciprocity agreement could be worth as little as one-fifth the first ten years of service with a reciprocity agreement. Therefore, if any worker should be tied to a job because of the threat of pension benefit forfeitures it would be the vested participant in a multiemployer plan because nearly all of these workers have a mininimum of ten years of service which are going to mean relatively little if they leave without the protection of a reciprocity agreement.

Implicit in the ERISA legislative history is the assumption that workers are rational in terms of pension planning. Workers are viewed as rational individuals who consider the effect of their decisions such as a job change on their retirement benefits. This assumption of rationality is not supported by this research. This research indicates that workers in multiemployer plans who stand to lose significant pension benefits will make a job change decision without giving substantial weight to the pension loss.

As our population continues to age, the need for adequate pension benefits will become increasingly apparent. The political influence of the senior segment of the population will grow correspondingly as the likelihood of intergenerational conflict concerning a just allocation of the resources. If workers do not approach retirement issues in a rational manner perhaps there is a need for increased government involvement in the retirement area.

Such increased government involvement does not have to be viewed in a paternalistic manner. There is a substantial body of economic thought which lays a framework for the legitimate involvement of government where external diseconomies arise. Pigou defines externalities as where, "... one person A, in the course of rendering some service, for which payment is made to a second person B, incidentally also renders services or disservices to other persons... of such a sort that payment cannot be exacted from the benefited parties or compensation enforced on behalf of the injured parties."[88] For example it is generally accepted that government has a role in controlling the external diseconomy involved in pollution. The polluter would not otherwise bear the full cost of the enterprise which includes the cost of

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[88] A.C. Pigou, The Economics of Welfare 4th ed. (London: London School of Economics, 1932) p.183.

cleaning up or protecting the environment.

Are there externalities in the pension area? The worker and the retiree although physically one person may be viewed emotionally and rationally as two separate persons whose interests are in conflict. The worker wants current consumption while the retiree wants current saving with consumption postponed until retirement. Thus, employer and the worker may very well conduct retirement planning in a manner which ignores the cost to be borne by the retiree.

When the situation is viewed from this standpoint, government may have a legitimate role to establish pension policy in regard to the external diseconomy suffered by the retiree. To those who rue government involvement in the life of its citizens, Samuelson notes,

> Much as you and I may dislike government interferences in economic life, we must face the positive fact that the motivations for higher living standards that a free market channels into the Walrasian equilibrium when the special conditions for that pattern happen to be favorable- these same motivations often lead to social collusions and myriad uses of the apparatus of the state. For good or evil these may not be aberrations from laissez faire, but theorems entailed by its intrinsic axioms."[89]

Finally, the results of the research have importance in regard to the estimation of the cost of agreements. Although the actuarial domain is referred to as a

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[89] Paul Samuelson, The Journal of Political Economy (December 1958): 467-482.

science, it may be more art than science. The actuary certainly deals with scientific methods and statistical analysis in performing the actuarial function; however, there is always an element of educated guesswork by the actuary.

In the area of estimating the cost of a reciprocity agreement there is limited experience upon which the actuary can make an estimate. While thirty years of experience with reciprocity agreements may appear to be a significant amount of time, actually thirty years experience is scanty evidence upon which an actuary can form an opinion. Relatively few plans participating in reciprocity agreements have sufficient experience to estimate the cost because the workforce which has received coverage under these plans is only now beginning to retire. The actuary in most cases will not know who is going to claim retirement benefits under reciprocity agreements until the worker retires and makes the claim.

This research should assist the actuary in making the estimate of the cost of reciprocity agreements. The actuary is going to be conservative in cost estimation when facing the unknown. Thus, the actuary could easily overestimate the cost of a reciprocity agreement. This overestimation could easily occur where the actuary is working under the assumption that the worker is rational about retirement planning and is careful about staying under the umbrella protection of the reciprocity agreement. This research gives no support to the assumption that workers are considering retirement matters as a significant factor when making a job change decision. Thus, the results of this research may influence the actuary to reduce the projected plan liability as it relates to reciprocity agreements.

Limitations of the Research

The research was conducted on vested plan participants in multiemployer plans. While the results of the study provide inferences about a significant portion of the work force, one should be cautious about generalizing to all workers.

Due to data source limitations, the research was confined to a three year period. A longer time period would be preferable.

Reciprocity agreements are not standard. Their provisions are varied; thus, the agreements' influence or lack of influence on worker mobility may vary. Resource limitations prevent the collection and analysis of all of the various reciprocity agreements.

The independent variables used in the research represent only a portion of those which might have been included had the data been available. Therefore, the results may be quite different with the addition of only one more variable if it proved to be interactive with variable A, Also, the worker may be moved without his consent by an employer, thus the assumption of freedom of choice which underlies this research may frequently be invalid. An additional variable which may control for this limitation is the community size. As the community size increases, there is a greater likelihood that the worker can move to a new employer without leaving the multiemployer plan.

Suggestions for Further Research

The relationship between worker turnover and pension benefit forfeiture should be more fully explored. The provisions of reciprocity agreements vary from one agreement to the next. The amount of benefit preservation that is provided by reciprocity agreements also varies. A thorough study of a representative group of reciprocity agreements would be helpful. Such a study would lead to a better understanding of the types of preservation schemes. Also, the variations in reciprocity agreements could possibly be categorized and used as variables in future research.

Sample reciprocity agreements could be gathered to determine the variation in the plans. Also, data could be gathered indicating the specific length of service of each departing participant as well as age. An exit interview in which the participant was questioned concerning the reasons for leaving would be helpful.

It is a frequent occurrence for a job changer to require the new employer to provide additional compensation to replace the lost pension benefits under the previous employer. It would be interesting to study the relationship between the additional compensation required and the pension benefits lost. The principal barrier to this type of research is the lack of adequate data. Government support such as the use of the U.S. General Accounting Office influence may be essential to the collection of adequate data.

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APPENDIX A

The has formulated a general pension reciprocity agreement which is available to all local and regional plans. The text of this agreement is reproduced below. Although each national agreement differs in some respects, the agreement exemplifies those national agreements providing pro-rata-benefit reciprocity.

RECIPROCAL AGREEMENT FOR

This Reciprocal Agreement for teamsters pension funds (hereinafter called "Reciprocal Agreement") is made and entered into by and among the Boards of Trustees of the signatory Pension Funds which provide retirement and pension benefits for employees represented for the purpose of collective bargaining by one or more local unions affiliated with the

The Effective Date of this Reciprocal Agreement shall be, for each signatory Pension Fund, the date set forth as the "Effective Date" on the signature page used by the Fund to become a party to this Reciprocal Agreement and such Effective Date shall have the significance set forth hereinafter.

The persons who sign this Reciprocal Agreement shall be Employer or Union Trustees of the Pension Fund on whose behalf they sign and who are duly authorized to execute this Reciprocal Agreement for the pension fund they represent (hereinafter called individually and collectively the "trustees").

WITNESSETH:

WHEREAS, the Trustees of each signatory Pension Fund acting under separate Trust Agreements, are authorized and empowered to grant and administer retirement and pension benefits, under their respective retirement and pension plans, to employees who are or have been represented in collective bargaining by Local Unions affiliated with the

; and

WHEREAS, many employees have been, are or may be from time to time employed by employers under contract to contribute to one of the signatory Pension Funds and at another time employed by an employer under contract to contribute to another of the signatory Pension Funds based on the hours worked by such employees and, as a consequence, an employee may be subject to the provisions of different pension plans; and

WHEREAS, many employees whose employment has been, is or may be divided among employers obligated to contribute to more than one of the signatory Pension Funds may not be eligible for any pension benefits from any signatory Pension Fund or may not qualify for a full pension benefit because their years of covered employment have been or will be divided among various employers and Local Union jurisdictions; and

WHEREAS, the Trustees of each signatory Pension Fund desire to provide Partial Pensions for employees who would be ineligible for any pension benefits from any signatory Pension Fund, or would not qualify for full pension benefits under any one of the signatory Pension Funds administered by the Trustees, because their years of covered employment have been divided between employers making contributions to two or more such Pension Funds; and

WHEREAS, the Trustees of each signatory Pension Fund have each adopted an amendment to their Pension Plan governing eligibility for and payment of Partial Pensions, in the form annexed hereto as Exhibit A; and

WHEREAS, the Trustees of each signatory Pension Fund desire to provide for the implementation of the amendments providing for Partial Pensions and the establishment of uniform procedures to carry out the terms of this Reciprocal Agreement; and

WHEREAS, the Trustees of each signatory Pension Fund executing this Reciprocal Agreement on behalf of their respective Pension Fund represent and warrant that they have been duly authorized to make, execute and deliver this Reciprocal Agreement,

NOW, THEREFORE, in consideration of the premises, it is mutually understood and agreed as follows:

Section 1. Recognition—Each signatory Pension Fund, for the period it is bound by this Reciprocal Agreement, recognizes each other signatory Pension Fund as a "Related Plan" for the purposes of the Article attached as Exhibit A, and for the further purposes set forth in this Reciprocal Agreement.

Section 2. Cooperation—The effective administration of Partial Pensions benefits by the Trustees of the signatory Pension Funds requires that each Fund exchange information with respect to the credited service of persons covered by such Fund, the status of Partial Pensions paid from time to time by such Fund and the details of the plans of benefits provided by such Fund. The Trustees of each signatory Pension Fund agree to cooperate in the exchange of relevant information and documents to permit implementation of the Partial Pensions provisions in the attached Exhibit A. Each signatory Pension Fund shall comply promptly with any reasonable written request by another signatory Pension Fund for information or data necessary to carry out the purposes of this Reciprocal Agreement.

Section 3. No Change in Exhibit A—The Trustees of each signatory Pension Fund agree that no change shall be made in the provisions of the Article attached as Exhibit A, either by change of language or by any modification of the Pension Plan which would have the effect of changing the provisions of Exhibit A. It is further agreed that the only way a signatory Pension Fund can terminate the operation of the provisions of Exhibit A is to follow the "termination" provisions of this Reciprocal Agreement set forth in Section 7 hereof.

Section 4. Effective Date—The date this Reciprocal Agreement becomes operative as to any signatory Pension Fund shall be the date shown as the "Effective Date" on the signature page used by the Fund to become a party to this Reciprocal Agreement. The date this Reciprocal Agreement becomes operative as to any two signatory Pension Funds shall be the Effective Date of each such Related Plan if they are the same Effective Date or the later of the two Effective Dates if they are not the same.

Section 5. Duration of Reciprocal Agreement—This Reciprocal Agreement shall first be operative when at least two Pension Funds become signatories and shall continue to be operative so long as two or more Pension Funds continue as signatories.

Section 6. Central Filing of Reciprocal Agreements—Within ten days from the date of execution of this Reciprocal Agreement each Pension Fund which becomes a signatory shall file a signed copy of the Reciprocal Agreement and the attached Exhibit A with each of the following:

It is understood that the said

will cause to be published periodically, but at least annually a list of all Pension Funds which have become and which remain parties to the Reciprocal Agreement based on the filing of a copy of such Reciprocal Agreements with them as provided for in this section and based on the filing of notices of termination of participation in this Reciprocal Agreement as hereinafter provided. Such publication shall be in a form which will assure appropriate notice to representatives of all signatory Pension Funds.

Section 7. Termination—The Trustees of any signatory Pension Fund may terminate such Fund's participation in this Reciprocal Agreement upon 90 days written notice in advance of the date of such termination provided that such written notice complies with the following:

a. It states the effective date of termination of participation in the Reciprocal Agreement and such date shall not be less than 90 days from the date of mailing of such written notice.

b. A copy is sent by certified mail addressed to each of the following:

c. It is signed by a majority of the Union and Employer Trustees of the Pension Fund.

It is agreed that once a signatory Pension Fund has terminated its participation in this Reciprocal Agreement it may not thereafter become a party to this agreement unless written consent is received from all Pension Funds participating as signatory Pension Funds at the time such Pension Fund may wish to reparticipate.

Section 8. Arbitration—Any dispute, controversy or claim arising out of or relating to the application of this Reciprocal Agreement, or branch thereof, shall be settled by arbitration. Either signatory Pension Fund which is a party to a dispute, controversy or claim involving another signatory Pension Fund under this agreement which the Trustees involved cannot resolve within 90 days after the matter has been presented in writing by the aggrieved or moving signatory Pension Fund to the other signatory Pension Fund may request arbitration of the issue by filing a written notice or its desire for arbitration in which notice it shall set forth the nature of such dispute, controversy or claim by certified mail. If the Trustees of the signatory Pension Funds involved in the dispute cannot agree upon an arbitrator within 30 calendar days, then the Trustees of any of the signatory Pension Funds may apply to the senior judge of the United States District Court for the District in which the Fund has its situs, for the appointment of an arbitrator to hear the unresolved dispute, and such arbitration shall be conducted in accordance with such procedure as the arbitrator shall determine. The award of the arbitrator shall be final, binding and conclusive upon the parties to the dispute and may be enforced in any court of competent jurisdiction.

Section 9. Separate Liability.

a. It is expressly understood and agreed that none of the signatory Pension Funds assumes any of the liabilities or obligations of any of the other signatory Pension Funds or parties to this Reciprocal Agreement. Each signatory Pension Fund shall be liable solely and exclusively for pension benefits due under its own pension plan, and no signatory Pension Fund shall be liable for the acts or omissions of any other Pension Fund.

b. The Trustees of each signatory Pension Fund shall be fully protected in acting upon any instrument, certificate, report or paper believed by them to be genuine, and the Trustees of each signatory Pension Fund shall be under no duty to make any investigation or inquiry as to any statement, but may accept the same as conclusive evidence of the accuracy of the statement contained therein and the authority to make it.

Section 10. Miscellaneous.

a. Except as herein expressly provided, this Reciprocal Agreement may not be modified, varied, or altered except in writing executed by all of the then participating signatory Pension Funds.

b. This Reciprocal Agreement shall be construed and enforced according to the laws of the State and the Trustees of the signatory Pension Funds shall be liable to account with respect to this Reciprocal Agreement, and any rights and duties thereunder, only in the courts of the State

EXHIBIT A: Article ______. Partial Pensions

Section 1. Purposes—Partial Pensions are provided under this Plan for employees who would otherwise lack sufficient service credit to be eligible for any pension because their years of employment were divided between different pension plans or, if eligible, whose pensions would be less than the full amount because of such division of employment.

Section 2. Related Plans—By resolution duly adopted, the Trustees recognize one or more other pension plans, which have executed a Reciprocal Agreement to which this Plan is a party, as a Related Plan.

Section 3. Related Service Credits—Service credits accumulated and maintained by an employee under a Related Plan shall be recognized under this Plan as Related Service Credits. The Trustees shall compute Related Service Credits on the basis on which that credit has been earned and credited under the Related Plan and certified by the Related Plan to this Plan.

Section 4. Combined Service Credit—The total of an employee's service credit under this Plan and Related Service Credit together comprise the employee's Combined Service Credit. Not more than one year of Combined Service Credit shall be counted in any calendar year.

Section 5. Eligibility—An employee shall be eligible for a Partial Pension under this Plan if he satisfies all of the following requirements:

a. He would be eligible for any type of pension under this Plan (other than a Partial Pension) if his Combined Service Credit were treated as service credit under this Plan; and

b. In addition to any other requirements necessary to be eligible under (*a*), he has, under this Plan, at least two years of service credit based on actual employment after his Effective Date of coverage; and

c. He is found to be (1) eligible for a partial pension from a Related Plan and (2) eligible for a partial pension from the Terminal Plan. The Terminal Plan shall be deemed to be the Plan associated with the local union which represents the employee at the time of, or immediately prior to, his retirement. If at that time the employee was not represented by any one such local union, then the Terminal Plan is the one to which the bulk of contributions were paid on behalf of the employee in the 36 consecutive calendar months immediately preceding his retirement, and

d. A pension is not payable to him from a Related Plan independently of its provisions for a Partial Pension. However, an employee who is entitled to a pension other than a Partial Pension from this Plan or a Related Plan may elect to waive the other pension and qualify for the Partial Pension.

Section 6. Breaks in Service—In applying the rules of this Plan with respect to cancellation of service credit, any period in which an employee has earned Related Service shall not be counted in determining whether there has been a period of no covered employment sufficient to constitute a break in service. Employment not covered by a Related Plan or Terminal Plan for less than five years shall not constitute a break in service.

Section 7. Election of Pensions—If an employee is eligible for more than one type of pension under this Plan, he shall be entitled to elect the type of pension he is to receive.

Section 8. Partial Pension Amount—The amount of the Partial Pension shall be determined as follows:

a. The amount of the pension to which the employee would be entitled under this Plan taking into account his Combined Service Credit shall be determined, then

b. The amount of service credit earned with this Plan since January 1, 1955, shall be divided by the total amount of Combined Service Credit earned by the employee since January 1, 1955, then

c. The fraction so determined in (*b*) shall be multiplied by the pension amount determined in (*a*) and the result be the Partial Pension amount payable by this Plan.

Section 9. Payment of Partial Pensions—The payment of a Partial Pension shall be subject to all of the conditions contained in this Plan applicable to other types of pensions including, but not limited to, retirement as herein defined and timely application. Partial Pension payments subject to this Article shall be limited to monthly pension payments to a pensioner or to monthly payments or death benefits to the survivor of a pensioner.

Section 10. Effective Date—This Article and the payment of partial pensions hereunder, shall be effective on ________________ 196__.

Form 5500
Department of the Treasury
Internal Revenue Service
Department of Labor
Pension and Welfare Benefit Programs
Pension Benefit Guaranty Corporation

Annual Return/Report of Employee Benefit Plan (With 100 or more participants)

This form is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 and sections 6057(b) and 6058(a) of the Internal Revenue Code, referred to as the Code.

1979
Amended ☐
This Form is Open to Public Inspection

For the calendar plan year 1979 or fiscal plan year beginning , 1979 and ending , 19 .

File original of this form, including schedules and attachments, completed in ink or type.

- ▶ Keogh (H.R. 10) plans with fewer than 100 participants and with at least one owner-employee participant do not file this form. File Form 5500–K instead.
- ▶ Other pension benefit plans and certain welfare benefit plans with fewer than 100 participants do not file this form. File Form 5500–C instead.
- ▶ Governmental plans and church plans (not electing coverage under section 410(d) of the Code). Do not file this form. File Form 5500–G instead.
- ▶ Welfare benefit plans with 100 or more participants complete only items 1 through 16 and item 22.
- ▶ Pension benefit plans, unless otherwise excepted, complete all items. Annuity arrangements of certain exempt organizations and individual retirement account trusts of employers complete only items 1 through 6, 9 and 10.
- ▶ Plan number—Your 3 digit plan number must be entered in item 5(c); see instruction 5(c) for explanation of "plan number."
- ▶ If any item does not apply, enter "N/A."

1 (a) Name of plan sponsor (employer if for a single employer plan)	1 (b) Employer identification number
Address (number and street)	1 (c) Telephone number of sponsor ( )
City or town, State and ZIP code	1 (d) If plan year changed since last return/report check here . . ▶ ☐
2 (a) Name of plan administrator (if other than plan sponsor)	1 (e) Business code number
Address (number and street)	2 (b) Administrator's employer identification no.
City or town, State and ZIP code	2 (c) Telephone number of administrator ( )

3 Name, address and identification number of plan sponsor and/or plan administrator as they appeared on the last return/report filed for this plan if not the same as in 1 or 2 above: (a) Sponsor ▶

(b) Administrator ▶

4 Check appropriate box to indicate the type of plan entity (check only one box):

(a) ☐ Single-employer plan
(b) ☐ Plan of controlled group of corporations or common control employers
(c) ☐ Multiemployer plan
(d) ☐ Multiple-employer-collectively-bargained plan
(e) ☐ Multiple-employer plan (other)
(f) ☐ Group insurance arrangement (of welfare plans)

5 (a) (i) Name of plan ▶	5 (b) Effective date of plan
(ii) ☐ Check if name of plan changed since last return/report	5 (c) Enter three digit plan number ▶

6 Check at least one item in (a) or (b) and applicable items in (c).

(a) Welfare benefit plan: (i) ☐ Health insurance (ii) ☐ Life insurance (iii) ☐ Supplemental unemployment
(iv) ☐ Other (specify) ▶

(b) Pension benefit plan:
(i) Defined benefit plan—(indicate type of defined benefit plan below):
(A) ☐ Fixed benefit (B) ☐ Unit benefit (C) ☐ Flat benefit
(D) ☐ Other (specify) ▶
(ii) Defined contribution plan—(indicate type of defined contribution plan below):
(A) ☐ Profit-sharing (B) ☐ Stock bonus (C) ☐ Target benefit (D) ☐ Other money purchase
(E) ☐ Other (specify) ▶
(iii) ☐ Defined benefit plan with benefits based partly on balance of separate account of participant (section 414(k) of the Code)
(iv) ☐ Annuity arrangement of a certain exempt organization (section 403(b)(1) of the Code)
(v) ☐ Custodial account for regulated investment company stock (section 403(b)(7) of the Code)
(vi) ☐ Trust treated as an individual retirement account (section 408(c) of the Code)
(vii) ☐ Other (specify) ▶

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this report, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete.

Date ▶ Signature of employer/plan sponsor ▶

Date ▶ Signature of plan administrator ▶

6 (Continued)

(c) Other plan features: (i) ☐ Thrift-savings (ii) ☐ Keogh (H.R. 10) plan
(iii) ☐ Pension plan maintained outside the United States (iv) ☐ Participant-directed account plan

(d) Sponsor's taxable year ends . . . . ▶ Month Day Year

7 Number of participants as of the end of the plan year (welfare plans complete only (a)(iv), (b), (c) and (d)):

(a) Active participants (employed or carried as active) (i) Number fully vested . . ______
(ii) Number partially vested . ______
(iii) Number nonvested . . . ______
(iv) Total . . . . ______

(b) Retired or separated participants receiving benefits . . . . ______

(c) Retired or separated participants entitled to future benefits . . . . ______

(d) Subtotal, sum of (a), (b) and (c) . . . . ______

(e) Deceased participants whose beneficiaries are receiving or are entitled to receive benefits . . . . ______

(f) Total, (d) plus (e) . . . . ______

(g) (i) During this plan year or prior plan year was any participant(s) separated from service with a deferred vested benefit for which a Schedule SSA (Form 5500) is required to be attached to this form? . . . . Yes No
(ii) If "Yes," enter the number of separated participants . . . . ▶

8 Plan amendment information (welfare plans do not complete (b)(ii)):

(a) Was any amendment to this plan adopted in this plan year? . . . .

(b) If "Yes," (i) And if any amendments have resulted in a change in the information contained in a summary plan description or previously furnished summary description of modifications—
(A) Have summary descriptions of change(s) been sent to participants? . . . .
(B) Have summary descriptions of the change(s) been filed with DOL? . . . .
(ii) Does any such amendment result in the reduction of the accrued benefit of any participant under the plan? . . . .

(c) Enter the date the most recent amendment was adopted . . ▶ Month Day Year

9 Plan termination information (welfare plans complete only (a), (b), (c) and (f)): Yes No

(a) Was this plan terminated during ☐ this plan year or ☐ any prior plan year? . . . .

(b) If "Yes," were all trust assets distributed to participants or beneficiaries or transferred to another plan? . .

(c) Was a resolution to terminate this plan adopted during this plan year or any prior plan year? . . . .

(d) If (a) or (c) is "Yes," have you received a favorable determination letter from IRS with respect to such termination? . . . . .

(e) If (d) is "No," has a determination letter been requested from IRS? . . . .

(f) If (a) or (c) is "Yes," have participants and beneficiaries been notified of the termination or the proposed termination? . . . .

(g) If either item 10(a) or (c) is "Yes," and this plan is covered under PBGC termination insurance program has a notice of intent to terminate been filed with PBGC? . . . .

10 (a) In this plan year, was this plan merged or consolidated into another plan or were assets or liabilities transferred to another plan? . .

If "Yes," identify other plan(s): (c) Employer identification number(s) (d) Plan number(s)

(b) Name of plan(s) ▶ ______

(e) Has Form 5310 been filed? . . . . ☐ Yes ☐ No

11 Indicate funding arrangement:

(a) ☐ Trust (benefits provided in whole from trust funds)

(b) ☐ Trust or arrangement providing benefits partially through insurance and/or annuity contracts

(c) ☐ Trust or arrangement providing benefits exclusively through insurance and/or annuity contracts

(d) ☐ Custodial account described in section 401(f) of the Code and not included in (c) above

(e) ☐ Other (specify) ▶ ______

(f) If (b) or (c) is checked, enter the number of Schedule A's (Form 5500) which are attached . . . . ▶

12 Did any person who rendered services to the plan receive, directly or indirectly, compensation from the plan in the plan year? . . ☐ Yes ☐ No

If "Yes," furnish the following information:

a. Name	b. Official plan position	c. Relationship to employer, employee organization or person known to be a party-in-interest	d. Gross salary or allowances paid by plan	e. Fees and commissions paid by plan	f. Nature of service code (see instructions)

APPENDIX C

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

GENERAL GOVERNMENT
DIVISION

June 1, 1984

Re: Plan Number___________________

Dear Plan Administrator:

Adequate retirement income is a major concern in our society. As a larger proportion of the population enters the retirement years this concern will increase.

Congress is studying the problem of inadequate retirement income. As part of the study, the U.S. General Accounting Office is evaluating the transferability of benefits. In order to further this study, your help is needed.

Please complete the questions below and return this letter in the envelope provided by June 15, 1984.

1. How many employers participated in your pension plan for the plan year beginning in 1979?_____1980?_____1981?_____

2. A reciprocity agreement is a contract between two or more financially independent pension plans by which they mutually agree to recognize service in the other plan or plans for specifically defined purposes such as to prevent a break in service or to provide eligibility credit or to determine benefits.

Did your plan participate in at least one reciprocity agreement in 1979 (Yes__No__)? 1980 (Yes__No__)? 1981 (Yes__No__)?

Thank you for your assistance.

Sincerely,

Rosslyn S. Kleeman
Associate Director

Codes for Principal Business Activity and Principal Product or Service

These industry titles and definitions are based, in general, on the Enterprise Standard Industrial Classification system authorized by the Statistical Policy Division, Office of Information and Regulatory Affairs, Office of Management and Budget, to classify enterprises by type of activity in which they are engaged. The system follows closely the Standard Industrial Classification used to classify establishments.

AGRICULTURE, FORESTRY, AND FISHING

Code

Farms:

0120 Field crop.
0150 Fruit, tree nut, and vegetable.
0180 Horticultural specialty.
0230 Livestock.
0270 Animal specialty.

Agricultural services and forestry:

0740 Veterinary services.
0750 Animal services, except veterinary.
0780 Landscape and horticultural services.
0790 Other agricultural services.
0800 Forestry.

Fishing, hunting, and trapping:

0930 Commercial fishing, hatcheries and preserves.
0970 Hunting, trapping, and game propagation.

MINING

Metal mining:

1010 Iron ores.
1070 Copper, lead and zinc, gold and silver ores.
1098 Other metal mining.
1150 Coal mining.

Oil and gas extraction:

1330 Crude petroleum, natural gas, and natural gas liquids.
1380 Oil and gas field services.

Nonmetallic minerals (except fuels) mining:

1430 Dimension, crushed and broken stone; sand and gravel.
1498 Other nonmetallic minerals, except fuels.

CONSTRUCTION

General building contractors and operative builders:

1510 General-building contractors.
1531 Operative builders.

Heavy construction contractors:

1611 Highway and street construction.
1620 Heavy construction, except highway.

Special trade contractors:

1711 Plumbing, heating, and air conditioning.
1721 Painting, paperhanging, and decorating.
1731 Electrical work.
1740 Masonry, stonework, and plastering.
1750 Carpentering and flooring.
1761 Roofing and sheet metal work.
1771 Concrete work.
1781 Water well drilling.
1790 Miscellaneous special trade contractors.

MANUFACTURING

Food and kindred products:

2010 Meat products.
2020 Dairy products.
2030 Preserved fruits and vegetables.
2040 Grain mill products.
2050 Bakery products.
2060 Sugar and confectionery products.
2081 Malt liquors and malt.
2088 Alcoholic beverages, except malt liquors and malt.
2089 Bottled soft drinks, and flavorings.
2096 Other food and kindred products.
2100 Tobacco manufacturers.

Textile mill products:

2228 Weaving mills and textile finishing.
2250 Knitting mills.
2298 Other textile mill products.

Apparel and other textile products:

2315 Men's and boys' clothing.
2345 Women's and children's clothing.
2388 Hats, caps, millinery, fur goods, and other apparel and accessories.
2390 Misc. fabricated textile products.

Lumber and wood products, except furniture:

2415 Logging camps and logging contractors, sawmills and planing mills.
2430 Millwork, plywood, and related products.

Code

2498 Other wood products, including wood buildings and mobile homes.
2500 Furniture and fixtures.

Paper and allied products:

2625 Pulp, paper, and board mills.
2699 Other paper products.

Printing, publishing, and allied industries:

2710 Newspapers.
2720 Periodicals.
2735 Books, greeting cards, and misc. publishing.
2799 Commercial and other printing, and printing trade services.

Chemical and allied products:

2815 Industrial chemicals, plastics materials, and synthetics.
2830 Drugs.
2840 Soap, cleaners, and toilet goods.
2850 Paints and allied products.
2898 Agricultural and other chemical products

Petroleum refining and related industries (including those integrated with extraction):

2910 Petroleum refining (including those integrated with extraction).
2998 Other petroleum and coal products.

Rubber and misc. plastics products:

3050 Rubber products; plastics footwear, hose and belting.
3070 Misc. plastics products.

Leather and leather products:

3140 Footwear, except rubber.
3198 Other leather and leather products.

Stone, clay, glass, and concrete products:

3225 Glass products.
3240 Cement, hydraulic.
3270 Concrete, gypsum, and plaster products.
3298 Other nonmetallic mineral products.

Primary metal industries:

3370 Ferrous metal industries; misc. primary metal products.
3380 Nonferrous metal industries.

Fabricated metal products, except machinery and transportation equipment:

3410 Metal cans and shipping containers.
3428 Cutlery, hand tools, and hardware; screw machine products, bolts, and similar products.
3430 Plumbing and heating, except electric and warm air.
3440 Fabricated structural metal products.
3460 Metal forgings and stampings.
3470 Coating, engraving, and allied services.
3480 Ordnance and accessories, except vehicles and guided missiles.
3490 Misc. fabricated metal products.

Machinery, except electrical:

3520 Farm machinery.
3530 Construction, mining and materials handling machinery and equipment.
3540 Metalworking machinery.
3550 Special industry machinery, except metalworking machinery.
3560 General industrial machinery.
3570 Office, computing, and accounting machines.
3598 Engines and turbines, service industry machinery, and other machinery, except electrical.

Electrical and electronic machinery, equipment, and supplies:

3630 Household appliances.
3665 Radio, television, and communication equipment.
3670 Electronic components and accessories.
3698 Other electric equipment.

Transportation equipment:

3710 Motor vehicles and equipment.
3725 Aircraft, guided missiles and parts.
3730 Ship and boat building and repairing.
3798 Other transportation equipment.

Code

Measuring and controlling instruments; photographic and medical goods, watches and clocks:

3815 Scientific instruments and measuring devices; watches and clocks.
3845 Optical, medical, and ophthalmic goods.
3860 Photographic equipment and supplies.
3998 Other manufacturing products.

TRANSPORTATION, COMMUNICATION, ELECTRIC, GAS, SANITARY SERVICES

Transportation:

4000 Railroad transportation.

Local and interurban passenger transit:

4121 Taxicabs.
4189 Other passenger transportation.

Trucking and warehousing:

4210 Trucking, local and long distance.
4289 Public warehousing and trucking terminals.

Other transportation including transportation services:

4400 Water transportation.
4500 Transportation by air.
4600 Pipelines, except natural gas.
4722 Passenger transportation arrangement.
4723 Freight transportation arrangement.
4799 Other transportation services.

Communication:

4825 Telephone, telegraph, and other communication services.
4830 Radio television broadcasting.

Electric, gas, and sanitary services:

4910 Electric services.
4920 Gas production and distribution.
4930 Combination utility services.
4990 Water supply and other sanitary services.

WHOLESALE TRADE

Durable:

5010 Motor vehicles and automotive equipment.
5020 Furniture and home furnishings.
5030 Lumber and construction materials.
5040 Sporting, recreational, photographic, and hobby goods, toys, and supplies.
5050 Metals and minerals, except petroleum and scrap.
5060 Electrical goods.
5070 Hardware, plumbing and heating equipment.
5083 Farm machinery and equipment.
5089 Other machinery, equipment, and supplies.
5098 Other durable goods.

Nondurables:

5110 Paper and paper products.
5129 Drugs, drug proprietaries, and druggists' sundries.
5130 Apparel, piece goods, and notions.
5140 Groceries and related products, except meats and meat products.
5147 Meats and meat products.
5150 Farm product raw materials.
5160 Chemicals and allied products.
5170 Petroleum and petroleum products.
5180 Alcoholic beverages.
5190 Misc. nondurable goods.

RETAIL TRADE

Building materials hardware, garden supply, and mobile home dealers:

5211 Lumber and other building materials dealers.
5231 Paint, glass and wallpaper stores.
5251 Hardware stores.
5261 Retail nurseries and garden stores.
5271 Mobile home dealers.

General merchandise:

5331 Variety stores.
5398 Other general merchandise stores.

Code

Food stores:

5411 Grocery stores.
5420 Meat and fish markets and freezer provisioners.
5431 Fruit stores and, vegetable markets.
5441 Candy, nut, and confectionery stores.
5451 Dairy products stores.
5460 Retail bakeries.
5490 Other food stores.

Automotive dealers and service stations:

5511 New car dealers (franchised).
5521 Used car dealers.
5531 Auto and home supply stores.
5541 Gasoline service stations.
5551 Boat dealers.
5561 Recreational vehicle dealers.
5571 Motorcycle dealers.
5599 Aircraft and other automotive dealers.

Apparel and accessory stores:

5611 Men's and boys' clothing and furnishings.
5621 Women's ready-to-wear stores.
5631 Women's accessory and specialty stores.
5641 Children's and infants' wear stores.
5651 Family clothing stores.
5661 Shoe stores.
5681 Furriers and fur shops.
5699 Other apparel and accessory stores.

Furniture, home furnishings, and equipment stores:

5712 Furniture stores.
5713 Floor covering stores.
5714 Drapery, curtain, and upholstery stores.
5719 Home furnishings, except appliances.
5722 Household appliance stores.
5732 Radio and television stores.
5733 Music stores.

Eating and drinking places:

5812 Eating places.
5813 Drinking places.

Miscellaneous retail stores:

5912 Drug stores and proprietary stores.
5921 Liquor stores.
5931 Used merchandise stores.
5941 Sporting goods stores and bicycle shops.
5942 Book stores.
5943 Stationery stores.
5944 Jewelry stores.
5945 Hobby, toy, and game shops.
5946 Camera and photographic supply stores.
5947 Gift, novelty, and souvenir shops.
5948 Luggage and leather goods stores.
5949 Sewing, needlework, and place goods stores.
5961 Mail order houses.
5962 Merchandising machine operators.
5963 Direct selling organizations.
5982 Fuel and ice dealers (except fuel oil and bottle gas dealers).
5983 Fuel oil dealers.
5984 Liquefied petroleum gas (bottled gas).
5992 Florists.
5993 Cigar stores and stands.
5994 News dealers and newsstands.
5996 Other miscellaneous retail stores.

Code

FINANCE, INSURANCE, AND REAL ESTATE

Banking:

6030 Mutual savings banks.
6060 Banking holding companies.
6090 Banks, except mutual savings banks and bank holding companies.

Credit agencies other than banks:

6120 Savings and loan associations.
6140 Personal credit institutions.
6150 Business credit institutions.
6199 Other credit agencies.

Security, commodity brokers, dealers, exchanges, and services:

6212 Security underwriting syndicates.
6218 Security brokers and dealers, except underwriting syndicates.
6299 Commodity contracts brokers and dealers; security and commodity exchanges; and allied services.

Insurance:

6355 Life insurance.
6356 Mutual insurance, except life or marine and certain fire or flood insurance companies.
6359 Other insurance companies.
6411 Insurance agents, brokers, and services.

Real estate:

6511 Real estate operators (except developers) and lessors of buildings.
6516 Lessors of mining, oil, and similar property.
6518 Lessors of railroad property and other real property.
6531 Real estate agents, brokers and managers.
6541 Title abstract offices.
6552 Subdividers and developers, except cemeteries.
6553 Cemetery subdividers and developers.
6599 Other real estate.
6611 Combined real estate, insurance, loans and law offices.

Holding and other investment companies:

6742 Regulated investment companies.
6743 Real estate investment trusts.
6744 Small business investment companies.
6749 Holding and other investment companies, except bank holding companies.

SERVICES

Hotels and other lodging places:

7012 Hotels.
7013 Motels, motor hotels, and tourist courts.
7021 Rooming and boarding houses.
7032 Sporting and recreational camps.
7033 Trailer parks and camp sites.
7041 Organizational hotels and lodging houses on a membership basis.

Personal services:

7215 Coin-operated laundries and dry cleaning.
7219 Other laundry, cleaning and garment services.
7221 Photographic studios, portrait.
7231 Beauty shops.

Code

7241 Barber shops.
7251 Shoe repair and hat cleaning shops.
7261 Funeral services and crematories.
7299 Miscellaneous personal services.

Business services:

7310 Advertising.
7340 Services to buildings.
7370 Computer and data processing services.
7392 Management, consulting, and public relations services.
7394 Equipment rental and leasing.
7398 Other business services.

Automotive repair and services:

7510 Automotive rentals and leasing, without drivers.
7520 Automobile parking.
7531 Automobile top and body repair shops.
7538 General automobile repair shops.
7539 Other automobile repair shops.
7540 Automobile services, except repair.

Miscellaneous repair services:

7622 Radio and TV repair shops.
7628 Electrical repair shops, except radio and TV.
7641 Reupholstery and furniture repair.
7680 Other miscellaneous repair shops.

Motion pictures:

7812 Motion picture production, distribution, and services.
7830 Motion picture theaters.

Amusement and recreation services:

7920 Producers, orchestras, and entertainers.
7932 Billiard and pool establishments.
7933 Bowling alleys.
7980 Other amusement and recreation services.

Medical and health services:

8011 Offices of physicians.
8021 Offices of dentists.
8031 Offices of osteopathic physicians.
8041 Offices of chiropractors.
8042 Offices of optometrists.
8048 Registered and practical nurses.
8050 Nursing and personal care facilities.
8060 Hospitals.
8071 Medical laboratories.
8072 Dental laboratories.
8098 Other medical and health services.

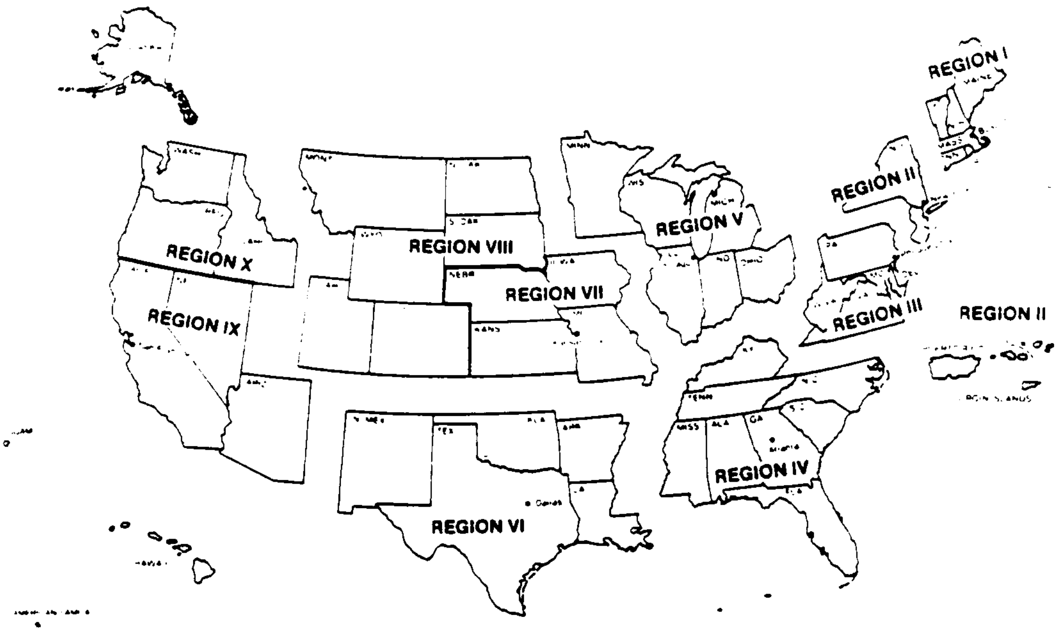
Other services:

8111 Legal services.
8200 Educational services.
8911 Engineering and architectural services.
8932 Certified public accountants.
8933 Other accounting, auditing, and bookkeeping services.
8999 Other services, not elsewhere classified.

TAX-EXEMPT ORGANIZATIONS

9001 Church.
9002 Church plans making an election under section 410(d) of the Internal Revenue Code.
9319 Other tax-exempt organizations.
9904 Governmental instrumentality or agency.

Bureau of Labor Statistics Regional Offices



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