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FOR EMPLOYMENT RESEARCH

Upjohn Institute Press

Pensions and the Labor Market

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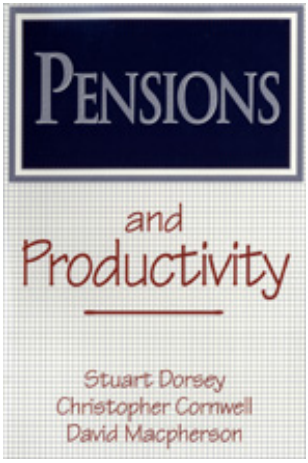


Chapter 1 (pp. 1-12) in:
Pensions and Productivity
Stuart Dorsey, Christopher Cornwell, David Macpherson
Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 1998

1 Pensions and the Labor Market

INTRODUCTION

The study of internal labor markets, also known as "the new economics of personnel," has made important contributions to labor economics. This research has attempted to explain policies governing employee-employer relationships when the job match is productive and durable, addressing such questions as, What is the economic basis for durable employment relationships? How can compensation and promotion policies provide incentives to attract and motivate quality employees? When job matches are productive, how can wages and benefits simultaneously allocate productivity gains and discourage quits and layoffs?

Internal labor market research is in the spirit of the "new institutional economics" (Simon 1991), in that a frequent theme is modeling labor market practices and policies as efficient and productivity-enhancing solutions to the incentive problems that arise from asymmetric or incomplete information. Economists have applied this approach to wage and employment factors such as earnings that rise with tenure, interindustry wage differentials, promotions and bonuses, and incentives for early retirement.[1]

Pensions are one of the most important workplace institutions. Nearly half of all private-sector employees participate in a retirement plan, and pension costs are approximately 5 percent of payroll for the sponsoring firms (U.S. Chamber of Commerce 1994). Most studies of private pensions have focused on the advantages of saving for retirement through a pension. Pensions provide a large and growing share of income for retirees: 44 percent of all households with persons above age 65 received pension income in 1994 (Grad 1996), and this figure is estimated to rise to 76 percent by 2018 (Silverman and Yakoboski 1994). Private pension plans paid $179.4 billion in benefits in 1994 (EBRI 1997), almost one-third of total retirement payments, and provided 9 percent of total income for the elderly (Grad 1996).

The internal labor market perspective suggests that pensions, in addition to providing a vehicle for retirement saving, establish incentives that promote productivity. The defined-benefit plan—which, despite recent trends to greater defined-contribution coverage, is still the dominant form of coverage—typically rewards long tenure and penalizes late retirement. Employees covered by a defined-benefit plan maximize their pension wealth by working without breaks in tenure until they reach retirement age. A pension loss is incurred by leaving either "too early" or "too late." Defined-contribution pensions, by their construction, are more neutral towards quit or retirement decisions.[2]

This monograph applies the internal labor market perspective to private pension incentives. The popularity of defined-benefit coverage—well over half of the workers with pensions still are covered by these plans—argues that pension incentives have important economic functions. Because private pensions are voluntary, and given the availability of defined-contribution plans that offer a simpler, lower-cost retirement savings vehicle, defined-benefit plans must convey distinct advantages. The internal labor market perspective suggests that one of the advantages is incentives for higher productivity.

PERSPECTIVES ON PENSIONS

Demand-Side

Why do employers compensate their employees with pensions? A large body of research has explored both demand- and supply-oriented theories of pension coverage.[3] Demand-side theories start from the proposition that employers are indifferent between paying cash wages or making contributions to a pension fund, and thus pensions are sponsored to satisfy employee demand for a retirement saving vehicle. A reduction in income taxes is a well-known reason for employees to prefer pension saving. Employer contributions and the interest and dividend earnings of pension assets are not taxed until benefits are paid. Therefore, compensating workers by credibly promising future pension benefits, rather than the equivalent value of cash wages, can yield important tax savings, especially for high-income employees. There is

much empirical evidence that pension coverage responds to tax incentives.[4]

Another demand-side theory is that pensions are an insurance policy against a number of retirement-age risks. One such risk is that retirees will live longer than expected and their savings will be depleted before death. The market solution to this risk is an annuity, which pays a fixed sum as long as the individual is alive. Adverse selection problems arise, however, when annuities are purchased late in life, because older persons in poor health will refuse to purchase annuities. Pensions solve this problem by requiring workers to, in effect, purchase a retirement annuity when they accept a job and begin participating in the plan. At this younger age, differences in expected lifespans are less evident.

A third reason why workers prefer pension saving is to shift the risk of poor investment performance to the employer. The employer appears to assume the risk of adverse asset performance in a defined-benefit plan by promising a retirement benefit based upon the worker's earnings, rather than the value of the pension fund. If future earnings are less variable than asset prices, employees enjoy greater certainty about retirement living standards under defined-benefit plans.[5]

Other demand-centered pension theories are that economies of scale in administering private pensions allow workers to earn higher rates of return, net of expenses, by group retirement saving (Mitchell and Andrews 1981); and that unions prefer pensions because they disproportionately benefit members with greater seniority (Freeman 1985). Evidence that pension coverage, especially through defined-benefit plans, is more likely in large, unionized establishments supports these theories (Dorsey 1987, for example).

While there are many demand-side theories of defined-benefit plans, most defined-contribution plans are consistent only with tax savings.[6] These plans create a retirement account to which the employer or employee make regular contributions. Benefits are based upon the value of the assets in the account at retirement, unlike defined-benefit plans, which pay an annuity based upon age, earnings, or years of service. Retirees also may elect a lump-sum benefit, unlike most defined-benefit participants.

Yet, demand-side theories do not address the incentives created by pensions, particularly by defined-benefit plans. The tax savings aspect

could be exploited with the administratively simpler defined-contribution plan, and defined-benefit plans could shift risk to employers, with age- and earnings-based annuities, without imposing quit or late retirement penalties.

Supply-Side

A supply-side perspective is that pension incentives raise workforce productivity and lower labor costs. Internal labor market theories suggest several mechanisms through which pensions promote productivity. The nonportability of defined-benefit pension wealth penalizes quits, an incentive which may promote investments in employee training. The threat of loss of pension benefits also may discourage shirking and lower the cost of monitoring employee effort. Pensions, whether defined-benefit or defined-contribution, are valued more by workers who have low internal discount rates. Many have suggested that such forward-looking persons are more productive long-term employees.[7] In addition, defined-benefit plans are a convenient vehicle for rewarding early retirement. With mandatory retirement rules no longer legal, pension bonuses are perhaps the only feasible way to encourage the early exit of older workers, whose productivity may have declined or become more variable.

An alternative supply-side perspective is based on the ability to underfund defined-benefit pensions. Underfunding, by definition impossible in defined-contribution plans, converts employees into unsecured bondholders. Ippolito (1986) has argued that this creates an incentive for group productivity gains, particularly in union settings. Some financial economists see underfunding as a less expensive source of financing than borrowing from outsiders, given imperfect information in credit markets.[8]

The supply-side view that pensions enhance productivity is primarily a theory of defined-benefit plans, because of the latter's ease of establishing incentives for tenure and retirement. Defined-contribution plans, however, also can attract workers who have low discount rates. Recent empirical pension studies suggest that defined-contribution plans also promote favorable labor market outcomes, such as reduced quits.

SIGNIFICANCE OF THE PRODUCTIVITY THEORY OF PENSIONS

Economic studies of pensions frequently assume that defined-benefit pensions raise productivity.[9] This supply-side view follows from the economist's presumption that pension incentives must create value sufficient to offset their costs. Constraints on workers' ability to move to more attractive jobs or to retire when they wish are costly, requiring employers to pay compensating wage premiums to attract workers. In firms where pension incentives serve no productive function, employers could attract workers at a lower cost by offering defined-contribution pensions. Alternatively, sponsors could write plan rules to increase benefit portability and to eliminate late retirement penalties. This reasoning implies that defined-benefit pensions are part of a compensation package in jobs where long tenure or early retirement is productive.

In contrast, outside the economics literature, the possibility that pensions may be a tool to enhance productivity is ignored or explicitly discounted in much of the discussion of pensions and pension policy. The human resource management perspective almost exclusively sees pensions as driven by employee preferences. For example, we reviewed several current human resource management college textbooks and found little discussion of the implications of different pension plan types for turnover or retirement decisions. Some texts failed even to describe the implications of the different incentive structures of defined-benefit and defined-contribution plans.[10] No book that we reviewed integrated pensions into discussions of designing strategic compensation systems.[11] The imperfect portability of benefits generally was presented as a disadvantage of defined-benefit plans, rather than as an intentional compensation policy. Pensions generally were discussed in the context of employee benefits, with attention strictly on providing for employees' retirement security, and nonportable benefits can lower pension wealth. This is a perspective in which pensions are exclusively a vehicle for providing retirement income.

The human resource management professional literature also is largely silent on the possible advantages of pension incentives. One of the authors searched the human resource professional journals and

found little research on the effect of pension plan choices on employee outcomes or performance (Dorsey 1995). Issues of equity and adequacy of replacement rates dominated the discussion of pension plan design. Again, nonportability was treated as a shortcoming of defined-benefit plans.[12]

Human resource professionals also assign little value to pension tenure incentives. Most, however, appreciate the ability of defined-benefit plans to encourage early retirement. The following statement by Marc W. Twinney, an administrator of a large pension fund, is fairly representative of the opinions of benefit professionals:

> The primary reason larger, international manufacturing firms provide private pensions is to remove the older, less efficient employee from the work force in a socially responsible way. Firms do not provide pensions to recruit. . . . (or) to tie employees to the work force and avoid recruiting or training costs. The fact that this occurs is incidental to the primary goal. These secondary effects result from controlling the costs of providing retirement income and are acceptable to the firm and its employees. (Schmitt 1993, p. 98.)

Lazear (1990) also concluded that benefit managers primarily understand pensions as retirement savings vehicles, suggesting that they frequently fail even to understand the implications of pension incentives on work force outcomes, let alone see them as having strategic value.

Economics is about incentives, so it is not surprising that economists are more likely to think about why pension tenure and retirement incentives might be useful to firms and workers. Even the economics literature, however, often has characterized pension quit penalties as impediments to efficient job mobility. Turner (1993) describes two arguments for legislation to enhance pension portability. First, greater portability will raise retirement benefits of workers who, for whatever reason, have experienced frequent or untimely job changes. Second, reduced quits induced by nonportability lowers productivity by tying workers to jobs where their productivity has fallen due to shifts in consumer tastes or technology shocks.

The latter concern, popularly known as "job lock," has been around for some time. Ross (1958) labeled it the "new industrial feudalism." Choate and Linger (1986, p. 245) wrote, "Weaknesses in pension availability, benefits, and portability are now impeding the mobility that is

so essential during this period of economic and technological turbulence, as an aging work force avoids job changes to protect pension rights." The claim that nonportability restricts productive job changes implies that pensions are motivated by tax and insurance functions and that incentives for long tenure are perhaps an historical accident based upon early optimistic assessments of their beneficial effects and preserved by institutional rigidity.

The productive value of pension incentives is an important issue in the economics of pensions and for evaluating pension policy. Consider the debate over pension portability policy. For the past 20 years, the United States and Canada have moved toward increasing retirement benefit portability. In the United States, the minimum vesting period has been lowered twice since 1975 and currently stands at five years. Most Canadian provinces now require vesting in defined-benefit plans after two years. In addition to mandating greater portability in defined-benefit plans, changes in tax and regulatory policy in the United States have increased the attractiveness of defined-contribution plans (Clark and McDermed 1990), which are by definition more portable.[13] Pension reform advocates continue to argue for higher portability standards for defined-benefit pensions. Mandatory portability may raise the value of workers' pension wealth[14] and promote job mobility. If pension incentives promote long tenure where the latter is productive, however, greater portability will have a cost.

An understanding of the productivity view of pensions also is needed to interpret and evaluate coverage trends. Primary coverage by defined-benefit plans declined from 87 percent of participants in 1975 to 57 percent in 1993. While the defined-benefit coverage remains important, the shift raises important questions. Do plan sponsors believe that pension incentives are less important today, i.e., have the productivity gains from defined-benefit plans diminished? Or do rising costs of administering these plans, fueled by federal regulations, explain much of the trend? If the latter, does the substitution of defined-contribution coverage imply weaker employee/firm attachment and lower productivity? Will this trend continue, with defined-benefit plans eventually becoming obsolete?

Finally, a clearer understanding of the importance of pension incentives provides a stronger foundation for future pension research. This monograph will review labor market models which feature long-term

employment and will survey previous empirical pension studies. An important outcome will be suggestions for future research. We will present some new empirical results; however, extensive testing of the productivity theory of pensions will require a major investment in data collection.

ORGANIZATION OF THIS DISCUSSION

Our analysis of the productivity theory of pensions is in three parts. First, we review the history and institutional practices of private pensions and government policy towards pensions. Chapter 2 traces the origins of private pensions in the United States and the evolution of current coverage. Tax rules and regulations have had a major impact on pensions, and this chapter concludes with an overview of federal policies. Chapter 3 describes institutional pension practices which create incentives. We show how workers who leave a job that has a defined-benefit pension are penalized. The advantages of defined-benefit plans in establishing retirement incentives also are presented. We also discuss more recent ideas about how defined-contribution plans may convey productive incentives.

Second, we consider whether pension incentives are consistent with models of internal labor markets. Chapter 4 reviews employment models in which specific training and monitoring costs generate job-specific productivity gains. Mechanisms to discourage early quitting or late retirement are needed to enforce long-term employment contracts. We compare pension incentives with ideal solutions.

Third, we evaluate empirical evidence that pensions promote productivity. Chapter 5 reviews empirical studies which test the pension-productivity hypothesis. We find little direct evidence that pensions enhance productivity, but a number of studies provide indirect evidence consistent with the hypothesis. This chapter also takes up the question of the growing popularity of defined-contribution plans and considers whether the declining market share of defined-benefit plans is evidence that pension incentives are no longer important.

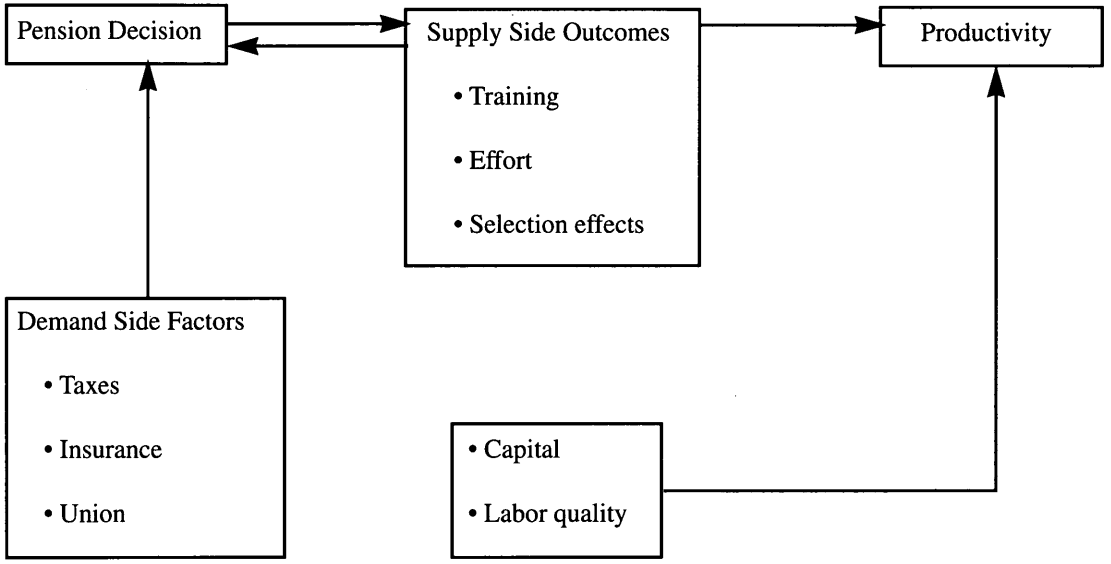
The next two chapters report new empirical evidence. Chapter 6 tests a channel through which pensions may enhance worker produc-

tivity: by promoting investments in worker training. We created a new data set by matching Current Population Surveys, allowing us to test the prediction of the specific-training model that pensions and training are complements. Chapter 7 reports direct estimates of productivity gains for firms that sponsor defined-benefit pensions. We estimate parameters of a production function using firm data from the Compustat file. These are pieces of evidence which advance the empirical literature, but significant data and modeling issues will remain.

We will disappoint readers looking for a single, definitive test of the productivity theory versus other pension theories. The ideal empirical study would be based on a structural model of pension coverage, labor force outcomes, and productivity (Figure 1.1). Such a model would recognize that pension coverage is endogenous and would test the importance of productivity factors against demand-side theories of why firms sponsor pensions. It simultaneously would estimate the channels through which pension incentives raised productivity, as suggested by long-term employment models: e.g., by encouraging employee training. Finally, it would link improved labor force outcomes to productivity gains. No data set exists which will support such a powerful test.[15] This should not be too surprising, given that such a data set would allow tests of more basic and direct incentives, such as wage policies, that also have eluded economists.

Although our goals are less ambitious than estimating a fully specified structural model, they are still important: to analyze and explain thoroughly the channels through which pensions may promote productivity; to summarize the existing literature; to advance the empirical literature with new results; and to help frame future empirical work.

Figure 1.1 A Unified Pension Model



NOTES

1. An excellent discussion of applying competitive market solutions to internal labor market problems of imperfect information and moral hazard is found in Lazear (1991). Carmichael (1989) provides a concise discussion of implicit labor contracts. Another fine nontechnical discussion of the internal labor market perspective is Wachter and Wright (1990).
2. After workers are vested, quit costs are zero in most defined-contribution plans. While it may be possible to increase contribution rates with age and tenure, the tax advantages of deferring compensation under defined-benefit plans are large compared with backloaded contributions or deferred wages. The reasons why defined-benefit plans are a superior vehicle for establishing tenure and retirement incentives are explored in Chapter 3.
3. For surveys of this literature, see Bodie (1990) and Gustman, Mitchell, and Steinmeier (1994).
4. Cross-section analyses show a large positive effect of income on pension coverage (Dorsey 1982). Alpert (1983), Woodbury and Huang (1991), and Reagan and Turner (1994) report that the likelihood of coverage rises with marginal tax rates.
5. Pesando and Hyatt (1992), however, point out that defined-benefit plans do not necessarily shield employees from investment risk. They present evidence that when lower investment earnings require higher pension contributions, employers reduce wage increases or other benefits. There also is direct evidence that ad hoc inflation adjustments are more likely when pension fund returns are high (Allen, Clark, and McDermed 1992), causing real pension benefits to fall when unexpected inflation lowers asset returns.
6. Defined-contribution plans in theory could prohibit lump-sum distributions. In practice, 96 percent of defined-contribution beneficiaries in 1989 received at least a portion of their benefits as a lump-sum distribution (Turner and Beller 1992).
7. See Ippolito (1998). There is a large body of research in the field of psychology which indicates that individuals who are able to delay gratification achieve higher levels of success (Mischel, Shoda, and Rodriguez 1989).
8. Of course, the reduction in financing costs must be sufficient to offset the tax losses when the firm's real pension obligations are underfunded.
9. These studies include, for example, Rice (1966), Blinder (1982), Long and Scott (1982), Ippolito (1986), Allen and Clark (1987), Even and Macpherson (1996), and Curme and Even (1995).
10. The most detailed presentations of pension incentives was found in Miner and Crane (1995).
11. An exception was Noe et al. (1994), who wrote that "The typical pension is *designed* to discourage employee turnover" (p. 644, our emphasis). They also note the importance of pensions as severance payments for firms that are reducing the size of their workforce. To provide some perspective, these texts also place less emphasis than labor economics on the incentive functions of wages and compensation policies in general. For example, there also was little mention of

deferred wages or efficiency wages in chapters on turnover or strategic compensation.

12. For example, Brennan (1984), in an article on restructuring corporate pension plans, recommended switching to a career-average benefit formula to enhance the portability of the defined-benefit plan.
13. These trends have been less evident in Canada; however, recent policy changes have caused concern that defined-benefit plans may begin to lose popularity there as well.
14. Employers may respond to portability requirements by lowering the generosity of pensions. Thus, legislation may have no effect on pension wealth or costs.
15. Gustman and Mitchell (1992) present a detailed discussion of the data needed to test a structural model of pension coverage. Data that are currently available fall well short of these requirements.