Research Evidence on the Prevalence and Effects of Employee Ownership

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The Enron debacle and other events have led to an ongoing debate about the use of company stock in retirement plans and proposed legislative changes in the rules governing such plans. In this article, originally presented as congressional testimony, a leading academic expert on employee ownership explains what the research shows about employee ownership. He then closes with a discussion of the policy implications of the research.

Employee ownership has attracted attention and interest for a wide variety of reasons. Much of the interest has focused on the potential for better economic performance, particularly through enhanced motivation and commitment from employees who have a direct stake in firm performance. Strong majorities of the public believe that employee-owners work harder and pay more attention to the quality of their work than non-owners and are more likely than outside shareholders to vote their shares in the long-term interest of the company.[1] There have also been social arguments for employee ownership, based on its potential to broaden the distribution of wealth, decrease labor-management conflict, and enhance social cohesion and equality by distributing the fruits of economic success more widely and equitably (Gates 1998). The idea of employee ownership has attracted support across the political spectrum, often being seen as a form of economic democracy that complements the U.S.'s political democracy.[2] Along with these positive views, however, there have been many concerns expressed about employee ownership—particularly that it can expose workers to

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excessive risk and may in some cases increase labor-management conflict and lower economic performance.

How much employee ownership exists in the U.S., and what are the lessons from the accumulated evidence? There have been over 70 empirical studies on the effects of employee ownership in the past 25 years. These can be categorized into studies of: (1) employee attitudes and behavior; (2) firm performance; (3) employment stability, growth, and firm survival; and (4) employee wealth and wages. The studies have mostly been done on samples of U.S. firms and employees, although several have been done on firms in other Western industrialized countries. Here I will first present data on the extent of employee ownership in the U.S. and then briefly summarize the results from these studies and discuss some implications for public policy.

Prevalence of Employee Ownership

There are a variety of forms that employee ownership can take. Employee ownership is not a simple, unidimensional concept that permits an easy classification of a firm as "employee-owned" or of an employee as an "employee-owner." Four dimensions of employee ownership within a company are: (1) The percentage of employees who participate in ownership; (2) the percentage of ownership held within the company by employees; (3) the inequality of ownership stakes among employee-owners; and (4) the prerogatives and rights that ownership confers upon employees. These prerogatives and rights are determined in part by whether ownership is direct (where employees can freely buy and sell company stock) or indirect (where stock is held through an employee trust or cooperative), and in part by the voting rights and other forms of participation accompanying the ownership. Here I use a broad definition of employee ownership, covering the variety of ways in which employees other than top managers can own stock in their companies. I do not cover research on the closely related topics of profit sharing (in which employees can receive a share of company profits without an ownership stake) and broad-based stock options (in which employees receive options to buy company stock at a fixed price which they can then sell for the market price).[3]

The most recent data from the Department of Labor pension database show that:

There are between 17 and 20 million U.S. employees participating in large ESOPs or other defined contribution plans holding employer stock.

In the U.S., the main vehicle for employee ownership is the employee stock ownership plan (ESOP), which was first given recognition and special tax treatment as a form of pension plan in the 1974 ERISA law. As with other pension plans, ESOP administrators must file the federal Form 5500 each year for large plans (100 or more participants), and at least once every three years for small plans (fewer than 100 participants). Appendix A presents new calculations for large plans from the most recent Form 5500 database.[4] As can be seen, there are about 3.2 million participants in large non-401(k) ESOPs, and 4.8 million participants in large 401(k) ESOPs. There are an additional 225,000 participants in small ESOPs, for a total of 8.2 million ESOP participants, representing 7.7% of private-sector employees.[5]

Apart from ESOPs, there are 11.0 million participants in large non-ESOP 401(k) plans that hold employer stock, and 1.4 million participants in large profit sharing and other defined contribution pension plans that hold employer stock (appendix A). When added to the figures on large ESOPs, there are about 20.3 million participants in large ESOPs or pension plans that hold employer stock. This may include some double-counting of employees who are in more than one plan. A lower-bound estimate is that 16.8 million employees are participants in at least one of these plans, representing 15.8% of private-sector employees.[6] Employees may also own stock directly in their companies through stock purchase programs, or be members of worker cooperatives.[7] Combining the various methods of owning employer stock, survey evidence indicates that about one-fifth of American employees report holding stock in the company in which they work.[8]

While a large number of U.S. employees own employer stock, almost all of this stock is in firms that are only minority employee-owned. Of U.S. companies with more than 10 employees, between 3,000 and 4,000 have a majority of stock owned by their employees.[9] Several other important findings are:

Employer stock represents close to 20% of the assets of all defined contribution plans.

As appendix A shows, $330 billion, or 19.8%, of the total $1.7 trillion of assets in defined contribution plans are invested in employer stock.

The average dollar value of employer stock per participant ranges from $10,140 to $27,244 across the different types of plans that hold employer stock.

The average employer stock per participant is $16,933 in non-401(k) ESOPs, $27,244 in 401(k) ESOPs, $12,040 in non-ESOP 401(k)s with employer stock, and $10,410 in other defined contribution plans with employer stock (appendix A).

Employer stock in defined contribution pension plans is concentrated in plans maintained by publicly held companies and plans with 5000 or more participants.

As shown in appendix A, publicly held companies represent a minority of total participants in defined contribution plans but account for the bulk of employer stock and total plan assets. The percent of plan assets in employer stock is 9.7% in private companies and 28.0% in publicly-held companies. Similarly, appendix B shows that the largest plans (with 5000 or more participants) account for most employer stock and plan assets, with a larger share of employer stock in plan assets than exists in smaller plans (26.1% compared to 8.7%).

About 70% to 75% of participants in plans that are heavily invested in employer stock are in companies that also maintain diversified pension plans, indicating that such plans tend to supplement rather than substitute for diversified plans.

Employees are especially exposed to financial risk when they have no other retirement funds, either from other employer plans or from their household savings. Appendix C shows the overlap of diversified and non-diversified plans maintained by employers. Among participants in large ESOPs, 66.2% are in companies also sponsoring defined benefit plans, 34.7% are in companies also sponsoring diversified defined contribution plans, and 75% are in companies that sponsor either of these diversified plans. The numbers are similar for non-ESOP plans that invest more than 10% of assets in employer stock—70% of these participants are in companies that also sponsor either type of diversified plan. While exactly comparable numbers for the full workforce are not available, employer survey data from the Bureau of Labor Statistics show that only 32% of all private-sector employees, and 50% of employees in medium and large establishments, participate in defined benefit pension plans (U.S. Department of Labor 2001, table 44).

This is consistent with other evidence showing that private ESOP companies are about four times more likely than their industry counterparts to maintain defined benefit pension plans, and that public companies are more likely to adopt an ESOP if they already have a defined benefit plan.[10] Therefore it appears that participants in ESOPs and other plans heavily-invested in employer stock are more likely than other employees to be covered by defined benefit pension plans.

Employee Attitudes and Behavior

How does employee ownership affect employee attitudes and behavior? Employee ownership may have positive effects if employees value ownership in itself or perceive that it brings greater income, job security, or control over jobs and the workplace. On the other hand, it may have negligible or even negative effects if employees perceive no difference in their work lives, dislike the extra risk to their income or wealth, or have raised expectations that are not fulfilled.

There have been over two dozen published studies on employee attitudes and behavior under employee ownership in the past two decades. This section summarizes the key conclusions from reviewing 31 of these studies.[11] Most of the studies have made cross-sectional comparisons between employee-owners and non-owners (who may be in the same firm or in different firms), while a few have made longitudinal comparisons before and after the adoption or termination of employee ownership, and others have looked within groups of employee-owners to see how attitudes are related to different plan features or employee characteristics.

The studies surveyed here each addressed a number of topics, including: employee satisfaction (analyzed in 10 studies); organizational commitment and identification (12 studies); employee motivation (6 studies); attitudes toward union (3 studies); perceived and desired employee participation and influence in decisions (11 studies); satisfaction with an ESOP (3 studies); and behavioral measures such as turnover, absenteeism, grievances, tardiness, and injuries (7 studies). The main conclusions from these 31 studies are as follows.

Most studies find higher organizational commitment and identification under employee ownership, while studies are mixed between favorable and neutral findings on job satisfaction, motivation, and other behavioral measures.

It is rare to find worse attitudes and behavior under employee ownership—only one study found lower satisfaction among employee-owners compared to a nationwide sample, but this was in an ESOP company where the union had lost a bitter strike the year before.[12]

There is clearly no *automatic* improvement of attitudes and behavior associated with being simply an employee-owner.

A number of the studies find higher satisfaction, commitment, and motivation among employee-owners, but others find no significant differences between owners and non-owners, or before and after an employee buyout.

Where studies find improved attitudes under employee ownership, this is almost always due to the status of being an employee-owner, rather than to the size of one's ownership stake.

While there is no automatic improvement in attitudes, when it does occur it tends to be due to employee-owner status.

Greater employee participation and influence in decision-making may help to generate feelings of ownership, but studies are mixed on whether employee-owners are more likely to perceive and desire greater participation in decisions.

Increasing employee participation and influence can make greater use of employee skills and knowledge, and may be an important complement of employee ownership that can improve attitudes and performance. The importance of participation is indicated by the finding of Pendleton et al. (1998) that opportunities for participation in decision-making were more important than ownership per se in generating feelings of ownership.

There is no evidence of decreased desire for union representation in employee ownership firms.

While some unions have resisted employee ownership out of concern that it may divide worker loyalties or make the union appear obsolete, others such as the Steelworkers, Pilots, and Machinists have negotiated for employee ownership stakes in concession situations. Both survey evidence and occasional strikes at employee ownership firms indicate that desires for union representation appear unaffected by employee ownership.

Employees generally like the idea of employee ownership.

A 1994 EBRI/Gallup national poll found that employees were more likely to prefer a share in company ownership than having additional cash in their paychecks now, and 80% said that employers should be allowed to contribute company stock to fund retirement plans (Kruse and Blasi 1999).

Corporate Performance

Employee ownership may improve corporate performance by decreasing labor-management conflict and serving as a collective incentive to improve workplace cooperation, information-sharing, and organizational citizenship behavior. This may be limited by the free rider problem—when rewards are shared with co-workers, direct incentives for better work become weak as the number of co-workers expands. To counteract this problem and encourage higher performance, firms may combine employee ownership with employee participation in decision-making and other human resource policies to encourage a sense of ownership, draw more fully on worker skills and information, and create company spirit and higher work norms.[13]

Over 30 studies in the past 20 years have addressed the question of whether and how employee ownership affects firm performance. This section briefly summarizes the main conclusions from a review of 32 of these studies.[14] Some of these studies are of U.S. ESOPs only (comparing ESOP and non-ESOP firms either cross-sectionally, or before and after the adoption of an ESOP), while other studies look within groups of worker cooperatives and attempting to measure the effects of different cooperative features. Several studies examine other forms or combinations of employee ownership, using comparisons with non-employee-owned firms and/or comparisons based on employee ownership features within firms.

The major conclusions are:

Studies are split between favorable and neutral findings on the relationship between employee ownership and firm performance.

While the majority of studies could not reject the null hypothesis of no significant relationship between employee ownership and performance, our meta-analysis of the ESOP studies found that we could reject this null hypothesis overall based on the disproportionate number of positive and significant estimates (Kruse and Blasi 1997).

Productivity improves by an extra 4%–5% on average in the year an ESOP is adopted, and the higher productivity level is maintained in subsequent years. This one-time jump is more than twice the average annual productivity growth of the U.S. economy over the past 20 years.

The average estimated productivity difference between ESOP and non-ESOP firms is 6.2%, and the average estimated additional increase in productivity following adoption is 4.4% (relative to the increase among otherwise-similar firms in the same period).[15] This roughly corresponds to the productivity increase associated with a 25% increase in capital stock and is more than twice the economy-wide annual productivity growth rate of 2.0% from 1980–2000.[16] A number of studies have attempted to control for self-selection bias resulting from the types of companies that adopt employee ownership plans, but these corrections have made little substantive difference in the results.[17]

Employment Stability, Growth, and Firm Survival

Closely related to corporate performance are the issues of employment stability, growth, and firm survival. In employee ownership firms managers may try to stabilize employment to maintain a high-commitment workplace, and employees may exert formal or informal pressures to increase job security.[18]

There have been seven empirical studies on employee ownership and employment behavior. The results from these studies are:

Employee ownership is associated with greater employment stability, which does not come at the expense of lower efficiency.

This was the conclusion of a study tracking U.S. public companies with broad-based employee ownership plans holding more than 17% of company stock over the 1983-95 period, comparing them to otherwise-similar firms in their industries (Blair et al. 2000). The employment stability did not, however, appear to come at the expense of firm efficiency, given that the stock market performance of the employee ownership firms was slightly better than that of other firms. Similarly, a study of U.S. plywood cooperatives in the Pacific Northwest found that these cooperatives tended to adjust pay rather than employment as plywood demand changed, and these firms had higher average productivity levels than conventional plywood firms (Craig and Pencavel 1992, 1993, 1995).[19]

Employee ownership was linked to faster employment growth in three of four studies.

Two studies comparing companies before and after the adoption of ESOPs found faster employment growth after ESOP adoption, particularly among firms that had greater levels of employee participation in decision-making (Quarrey and Rosen 1993; Winther and Marens 1997). Ohio ESOP companies also grew faster than their industry counterparts (Logue and Yates 2001), although the study tracking U.S. public companies from 1983 found similar employment growth between those with and without employee ownership.

Employee ownership is linked to higher rates of firm survival.

The study tracking U.S. public companies from 1983 found that those with substantial employee ownership stakes were 20% more likely than their industry counterparts to survive through 1995 (Blair et al. 2000). Similarly, Joseph Blasi and I recently tracked all privately-held companies with ESOPs in 1988, and found they had higher survival rates than closely-matched firms without ESOPs in 1988.[20] A long-term study of French worker cooperatives also found that they had high rates of survival (Estrin and Jones 1992).

Employee Wealth and Wages

Do employees sacrifice other pay and benefits for a share in ownership, or do these purely add to worker income and wealth? There were a number of cases in the early 1980s in which unionized employees accepted employee ownership in exchange for concessions in pay or benefits. In addition, some employees have taken lower wages as part of employee buyouts, such as occurred in the United Airlines case. Among the nearly 1,000 public companies that developed employee ownership stakes of 4% or greater over the 1980s, however, there were only 40 reports of wage and benefit restructuring linked to employee ownership (Blasi and Kruse 1991). There have been only three broad studies of employee compensation in relation to employee ownership. The overall finding is that:

Company stock appears to come on top of, and not in place of, other compensation.

A study of public companies in which broad-based employee ownership plans held at least 5% of company stock as of 1990 found that these companies had 8% higher average compensation levels than other comparable public companies (Blasi et al. 1996). Compensation levels increased with the percentage of stock held by employees. Closer studies of pay and benefits in ESOP and non-ESOP firms in Massachusetts and Washington state also found that the levels of pay and other benefits were similar between these two types of firms, so that ESOPs appear to come on top of other worker pay and benefits (Kardas et al. 1998; Scharf and Mackin 2000). Therefore while some employees do accept lower compensation in exchange for employee ownership, the overall average pay of workers in these plans appears to be at least as high as—and may be higher than—that of other workers. This may partly reflect higher average productivity levels in employee ownership companies or the use of high wages in combination with employee ownership to motivate workers.

These studies are consistent with the evidence presented earlier showing that ESOP companies are more likely to have defined benefit pension plans, so that plans heavily invested in company stock appear generally to supplement, rather than substitute for, diversified pensions.

Implications for Public Policy

The broad conclusions from over 70 studies of employee ownership in the past 25 years are as follows:

- Studies are generally split between favorable and neutral findings on the effects of employee ownership on employee attitudes and firm performance, with very few negative findings.
- On average, employee ownership is linked to 4%–5% higher productivity levels, and greater employment stability, growth, and firm survival.
- While employee ownership may often improve attitudes or performance, it clearly does not automatically improve these outcomes whenever it is implemented. The distribution of outcomes may be shifted in a positive direction, but the dispersion is probably as great among employee ownership firms as among other firms.
- Employee-owners generally do not sacrifice pay or benefits in exchange for employee ownership, and in fact are more likely than other employees to have diversified retirement plans.

Based on these findings, employee ownership appears generally to provide benefits both to firms and to workers. It is obvious, however, that employee ownership companies sometimes fail, which destroys both the jobs and the employee ownership stakes of the employee-owners. It is very similar to the situation facing farmers and small business owners, who may lose both their livelihoods and a substantial portion of their assets if their farms or businesses fail. It is a staple of retirement planning that individuals should have a diversified retirement portfolio, particularly as they approach retirement age, so that a substantial swing in the value of one asset does not greatly impair their quality of life. Due to this consideration, one policy implication is that:

Employees who own substantial amounts of employer stock should constantly be reminded that such investments are not the basis for sound retirement planning—perhaps in boldly lettered words on each plan statement they receive.

If employees do not have access to a defined benefit or diversified defined contribution plan from the employer, they should have access to investment advice from the employer or elsewhere in order to do sound retirement planning. Employer stock should be seen as a possible supplement to, but not the basis of, retirement funds.

Like all owners, employees who own company stock should have good access to information on the state of the company, possibly in some cases through employee representatives or monitors in board or trustee meetings.

Employee-owners may have very limited information on the overall state of the company and the financial risks associated with their ownership stake, which prevents them from doing sound financial planning. While individual employees can sometimes obtain better information in various ways (such as by attending shareholder meetings in public companies), the information has a public good character that leads to well-known disincentives for individual action. Employees as a whole may greatly benefit from information that may be costly for one individual to obtain, which can support a case for new policies to ensure information access. There should be careful thought given to ensuring and possibly expanding mechanisms for employees to gain necessary information on the state of the company. Such mechanisms might include employee representatives or monitors at board or trustee meetings, both to increase information flow for employees and to keep board members and trustees aware of their responsibilities to employees.

Cutting back on the ability of companies to provide stock to employees, and the extent to which employees can own employer stock, could destroy many of the potential benefits of employee ownership for firms and workers.

Employees clearly need good information and investment advice to ensure that they make intelligent decisions; once they receive such information and advice, they should not be prevented from accepting company stock from employers or investing their own assets in company stock. Obviously many individuals make well-informed choices to invest much of their assets in farms or small businesses that they operate, which are often very risky assets. Limiting workers' involvement in employee ownership plans due to a concern about their financial risk would be akin to preventing individuals from owning their own farms or small businesses. Substantial new restrictions on employee ownership of stock would very likely cut back a potentially lucrative benefit for employees, without providing anything of value in return since employees generally do not sacrifice pay or other benefits when they participate in employee ownership plans.

In conclusion, employee-owners represent a substantial portion of the U.S. workforce, and 25 years of research shows that employee ownership often leads to higher-performing workplaces and better compensation and work lives for employees. Given the potential economic and social benefits of employee ownership, public policy should seek to ensure that employee-owners have standard perquisites of ownership such as good information to enhance workplace and financial decision-making, but should not substantially restrict employees' ability to own company stock.

Notes

1. Based on results from a 1986 BNA/NCEO/Bruskin poll, and 1989 and 1994 EBRI/Gallup polls, summarized in Kruse and Blasi (1999).
2. Albert Gallatin, Thomas Jefferson's Secretary of the Treasury, made such arguments with regard to the closely-related idea of profit sharing, claiming that the "democratic principle upon which this nation was founded should not be restricted to the political processes but should be applied to the industrial operation" (quoted in U.S. Senate 1939, 72).
3. For evidence on profit sharing see Kruse (1993) and Pliskin et al. (1997), and for evidence on broad-based stock options see U.S. Bureau of Labor Statistics (2000), Blasi et al. (2000), and Sesil et al. (2002).

4. These figures are based on the Form 5500 Research File for fiscal year 1998, made available by the Pension and Welfare Benefits Administration. Many of the plans report assets in common and collective trusts, which hold assets of several pension plans within a company. Failing to account for employer stock held by these trusts will understate the amount of employer stock in pension plans. Since the fiscal year 1998 data do not break out investments of these trusts, this analysis uses data from the regular and "spread" files of fiscal year 1996 (when the Pension and Welfare Administration had such data broken out) matched to 1998 data to impute employer stock in common/collective trusts in fiscal year 1998.
5. Figures on small pension plans are not shown in appendix A, since the research file does not contain data on employer stock in small plans. There were 106.5 million employees of private companies in March 1999, from calculations using Current Population Survey data.
6. The lower-bound estimate is based on summing only the participants in the largest plan in each company, eliminating any possibility of double-counting.
7. Brickley and Hevert (1991) found that 8.9% of employees directly owned company stock in 1983. Only a very small percentage of U.S. workers are in worker cooperatives (see Craig and Pencavel 1995, and Bonin et al. 1993).
8. This is based on a December 1993 Gallup survey and January 1997 Princeton Survey Research Associates survey, summarized in Kruse and Blasi (1999). This does not include employees in stock option plans.
9. Estimate by Corey Rosen of the National Center for Employee Ownership (NCEO), Oakland, CA.
10. The data on private companies is on the NCEO's Web site at *http://www.nceo.org/library/esop_perf.html,* and the study of ESOP adoption among public companies is in Kruse (1996).
11. This is based on the 26 studies reviewed in Kruse and Blasi (1997), plus Grunberg et al. (1996), Pendleton et al. (1998), Keef (1998), Brown et al. (1999), and Logur and Yates (2001). The studies were selected based upon the criteria that they used systematic data collection from representative samples of employees, and used statistical techniques to rule out sampling error. Many but not all of the studies used multivariate analysis to hold constant the effect of other salient variables on employee attitudes or behavior.
12. Reminders by management that the strike would hurt ESOP account values brought the response "We don't vote; we don't control the company; we don't care" (Kruse 1984).
13. Another theoretical objection to group incentive schemes such as employee ownership is that they can weaken managerial incentives to moni-

tor workers closely (Alchian and Demsetz 1972). Group incentives may, however, lead to better performance if workers have greater information about co-worker performance and group incentives elicit useful information-sharing and peer pressure (Nalbantian 1987; Putterman and Skillman 1988).

14. Kruse and Blasi (1997) review 29 of these studies; the additional three are Smith et al. (1997), Ohkusa and Ohtake (1997), and McNabb and Whitfield (1998). As with the employee attitude studies surveyed above, these studies used systematic data collection across a large sample of firms (excluding individual case studies), and statistical techniques to control for other influences upon performance and rule out sampling error.
15. See Logue and Yates (2001) for a detailed examination of the routes through which ESOPs can affect productivity and profits.
16. Based on figures for the nonfinancial corporate sector from U.S. Department of Labor (2001, table 27).
17. In addition, evidence on the type of worker who chooses to work in group incentive plans indicates that the generally positive performance results are unlikely to be explained by worker self-selection (Weiss 1987).
18. For example, a majority of Americans say that if they owned company stock and an outside investor was attempting a takeover, they would not sell even for twice the market value of the stock (1994 EBRI/Gallup poll summarized in Kruse and Blasi 1999).
19. The study also found that these plywood cooperatives did not have the "perverse" response to demand shocks predicted in theory on labor-managed firms.
20. Among 1176 private companies with ESOPs in 1988, 69.6% survived through 1999, compared to only 54.8% of non-ESOP companies in the same industry and of the same size (*http://www.nceo.org/library/esop_perf.html*).

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Appendix A

Employer Stock Held in Pension Plans: Comparison by Plan Type and Whether Company Is Publicly Held

Based on federal Form 5500 data for all large pension plans (100+ participants) for FY98 (latest data available) from Pension and Welfare Benefits Administration, U.S. Department of Labor. Excludes terminated plans and those not reporting assets. Compiled February 2002. See note 4 above for more information on this data.

These data are being combined with information on other forms of employee ownership and updated to 2002, and new comprehensive estimates are presented in the forthcoming book *In the Company of Owners,* by Joseph Blasi, Douglas Kruse, and Aaron Bernstein (New York: Basic Books, 2002).

Appendix A. Employer Stock Held in Pension Plans:

	Number of plans (1)	Number of participants (2)
All defined contribution plans		
All	50,769	50,933,238
Privately held	46,664	30,609,811
Publicly held	4,105	20,323,427
ESOP non-401(k) plans		
All	2,056	3,170,045
Privately held	1,672	1,291,957
Publicly held	384	1,878,088
ESOP 401(k) plans		
All	613	4,757,356
Privately held	331	770,202
Publicly held	282	3,987,154
Non-ESOP 401(k)s with employer stock		
All	2,275	11,037,790
Privately held	1,141	3,183,154
Publicly held	1,134	7,854,636
Non-ESOP 401(k)s without employer stock		
All	36,832	23,474,392
Privately held	35,013	18,887,780
Publicly held	1,819	4,586,612
Profit sharing and other defined contribution plans with employer stock (non-ESOP, non-401(k))		
All	355	1,377,825
Privately held	227	749,471
Publicly held	128	628,354
Profit sharing and other defined contribution plans without employer stock		
All	8,633	7,115,015
Privately held	8,275	5,726,432
Publicly held	358	1,388,583

Comparison by Plan Type and Whether Company Is Publicly Held

Total employer stock held by plans (millions) (3)	Employer stock per participant (4)	Total plan assets (millions) (5)	Employer stock as percentage of total assets (6)
$330,529.6	$6,489	$1,671,703.6	19.8%
$73,346.0	$2,396	$753,571.8	9.7%
$257,183.6	$12,655	$918,131.8	28.0%
$53,677.1	$16,933	$69,635.8	77.1%
$26,358.4	$20,402	$34,900.0	75.5%
$27,318.7	$14,546	$34,735.7	78.6%
$129,609.8	$27,244	$332,712.8	39.0%
$10,310.1	$13,386	$29,110.1	35.4%
$119,299.6	$29,921	$303,602.7	39.3%
$132,899.4	$12,040	$472,176.1	28.1%
$31,794.0	$9,988	$115,436.7	27.5%
$101,105.4	$12,872	$356,739.4	28.3%
$0	$0	$567,223.1	0.0%
$0	$0	$419,586.3	0.0%
$0	$0	$147,636.9	0.0%
$14,343.3	$10,410	$47,501.5	30.2%
$4,883.4	$6,516	$20,111.4	24.3%
$9,459.9	$15,055	$27,390.1	34.5%
$0	$0	$182,432.0	0.0%
$0	$0	$134,404.9	0.0%
$0	$0	$48,027.1	0.0%

Appendix B

Employer Stock Held in Pension Plans: Comparison by Plan Type and Size of Plan

Based on federal Form 5500 data for all large pension plans (100+ participants) for FY98 (latest data available) from Pension and Welfare Benefits Administration, U.S. Department of Labor. Excludes terminated plans and those not reporting assets. Compiled February 2002. See note 4 above for more information.

These data are being combined with information on other forms of employee ownership and updated to 2002, and new comprehensive estimates are presented in the forthcoming book *In the Company of Owners,* by Joseph Blasi, Douglas Kruse, and Aaron Bernstein (New York: Basic Books, 2002).

Appendix B. Employer Stock Held in Pension Plans:

	Number of plans (1)	Number of participants (2)
All defined contribution plans		
All	50,769	50,933,238
Less than 5000 participants	49,225	23,978,346
5000+ participants	1,544	26,954,892
ESOP non-401(k) plans		
All	2,056	3,170,045
Less than 5000 participants	1,964	1,054,331
5000+ participants	92	2,115,714
ESOP 401(k) plans		
All	613	4,757,356
Less than 5000 participants	452	441,996
5000+ participants	161	4,315,360
Non-ESOP 401(k)s with employer stock		
All	2,275	11,037,790
Less than 5000 participants	1835	2,236,178
5000+ participants	440	8,801,612
Non-ESOP 401(k)s without employer stock		
All	36,832	23,474,392
Less than 5000 participants	36240	15,968,776
5000+ participants	592	7,505,616
Profit sharing and other defined contribution plans with employer stock (non-ESOP, non-401(k))		
All	355	1,377,825
Less than 5000 participants	296	265,268
5000+ participants	59	1,112,557
Profit sharing and other defined contribution plans without employer stock		
All	8,633	7,115,015
Less than 5000 participants	8433	4,010,982
5000+ participants	200	3,104,033

Comparison by Plan Type and Size of Plan

Total employer stock held by plans (millions) (3)	Employer stock per participant (4)	Total plan assets (millions) (5)	Employer stock as percentage of total assets (6)
$330,529.6	$6,489	$1,671,703.6	19.8%
$53,408.5	$2,227	$610,788.8	8.7%
$277,121.1	$10,281	$1,060,914.8	26.1%
$53,677.1	$16,933	$69,635.8	77.1%
$23,146.5	$21,954	$31,523.9	73.4%
$30,530.6	$14,430	$38,111.8	80.1%
$129,609.8	$27,244	$332,712.8	39.0%
$10,354.0	$23,426	$23,681.0	43.7%
$119,255.8	$27,635	$309,031.8	38.6%
$132,899.4	$12,040	$472,176.1	28.1%
$16,728.6	$7,481	$84,036.2	19.9%
$116,170.8	$13,199	$388,139.8	29.9%
$0	$0	$567,223.1	0.0%
$0	$0	$350,299.6	0.0%
$0	$0	$216,923.5	0.0%
$14,343.3	$10,410	$47,501.5	30.2%
$3,179.5	$11,986	$12,335.1	25.8%
$11,163.9	$10,034	$35,166.4	31.7%
$0	$0	$182,432.0	0.0%
$0	$0	$108,890.6	0.0%
$0	$0	$73,541.3	0.0%

Appendix C: Overlap of Diversified and Non-diversified Pension Plans

	Percentage of participants who are in companies that have:			
	Defined benefit pensions (1)	Diversified defined contribution pensions* (2)	Either (1) or (2) (3)	Total participants (4)
1 ESOP participants	66.2%	34.7%	75.0%	7,927,401
2 Participants in non-ESOP plans that have more than 10% of assets in employer stock	67.7%	24.9%	70.4%	8,771,335

	Percentage of employees who are covered by defined benefit pensions:
3 All companies	32.0%
4 Small establishments	15.0%
5 Medium and large establishments	50.0%

*No more than 10% of plan assets in employer stock.

Sources:

Rows 1-2: Calculations using federal Form 5500 data for FY98 for large plans (100+ participants).

Rows 3-5: *2001 Report on the American Workforce,* U.S. Department of Labor, Table 44.