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Show Me the Money
Does Shared Capitalism Share the Wealth?

Robert Buchele, Douglas L. Kruse, Loren Rodgers, and Adria Scharf

Cheerleaders for the "ownership society" tout the growing share of US households owning stock—up from 31.7 percent in 1989 to 51.9 percent in 2001.[1] What is less often advertised is that stock ownership remains highly concentrated. The bottom 90 percent of households owns only 23 percent of all stock and just 12 percent of all directly held stock (which confers direct control or voting rights on stockholders).[2] Only 27 percent of households in the bottom 90 percent of the wealth distribution own (directly or indirectly) more than $10,000 of stock (calculated from Wolff [2004, table 13a]). If own-

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1. This figure includes both directly held stock and indirect holdings in mutual funds and retirement accounts. See Wolff (2004, table 12b). An important reason why the incidence of stock ownership has risen in recent decades is the replacement of defined benefit with defined contribution pension plans. Nevertheless, 34 percent of households have no (defined benefit or defined contribution) pension plan (Wolff 2005, table 5), and "more than one-fifth of all households nearing retirement (those between the ages of 56 and 64) had no retirement savings other than Social Security" (Weller and Wolff 2005, 2).

2. These statistics are from Wolff (2004, table 13a) and Kennickell (2003, table 10), respectively. All statistics in this section are for 2001.

ership is measured by households' ownership stake in the corporate sector of the US economy, a large majority of American households have little or no meaningful claim to membership in the ownership society.

This concentration of stock ownership implies a corresponding concentration of income from capital, which contributes to growing income inequality since dividends and capital gains have been a growing share of market-based income in the past thirty years, and capital income disproportionately goes to high-income households (Mishel, Bernstein, and Allegretto 2007, 79, 81). Employee stock ownership may help reduce this growing inequality by contributing to broad-based wealth building and income growth across the economic spectrum.

This chapter addresses four sets of questions surrounding employee stock ownership as a wealth-sharing tool, going beyond previous studies in the scope of the inquiry and the use of new data sources. First, how much on average do employee owners own in "shared capitalist" firms (those with broad-based employee ownership, profit sharing, gain sharing, and/or stock options), and more generally? Second, how is company stock distributed among employee-owners, which ownership structures distribute wealth most equitably, and how does the distribution of employee stock ownership wealth compare to the distribution of wealth among US households? Third, to what extent does employer stock substitute for other forms of compensation (higher pay and benefits) and for other forms of wealth? And fourth, what effect might universal employee ownership of employer stock have on the overall distribution of stock ownership and pension wealth in the United States?

11.1 History and Review of Employee Ownership

Employee ownership has a long history in the United States. Various progressive employers and labor unions worked at setting up a variety of profit-sharing and employee ownership plans in the 1800s. These attempts became more common in the early 1900s and culminated in some well-known attempts in the 1920s before the market collapse in 1929. Immediately after the market collapse, employee stock ownership was less popular but it increased in popularity as the government and employers supported a number of retirement savings plans that offered a role for employer stock and a number of tax benefits that made it possible for employees to buy stock on their own (Blasi, Kruse, and Bernstein 2003)

Employee stock ownership plans (ESOPs) were first promoted as a matter of public policy by a provision in the Employee Retirement and Security Act of 1974 (ERISA), authored by Senator Russell Long, allowing for tax deductible contributions of company stock to a workers' trust. Unlike forms of employee stock ownership in the 1920s, which were based on the investment of worker savings by working-class and middle-class workers,

the ESOP offered employers tax incentives to distribute shares to workers without workers buying the stock with their savings. The idea was to limit worker risk. Long was influenced by Louis Kelso, a San Francisco investment banker and lawyer who set up the first ESOP at a California newspaper in 1956 and published *The Capitalist Manifesto* (with Mortimer Adler) in 1958. Kelso advocated employee ownership as a means of counteracting (in his view) a declining share of labor income inevitably resulting from labor-saving technical change (Kelso and Adler 1958, chapter 4). Long advocated employee ownership on other grounds as well—including promoting labor peace, securing workers' allegiance to the capitalist system, and improving workers' motivation and productivity. But Long and Kelso's chief interest in ESOPs was as a vehicle for building workers' wealth and increasing their share of capital and income from capital.[3] And a chief interest of this chapter is to determine the extent to which companies with shared capitalism plans do this.

The stock of companies with ESOPs can be publicly traded or privately held and can be minority-owned or 100 percent owned by the employees. But in any case, according to the participation guidelines of ERISA, the ownership must be *broad-based.* With few exceptions, ESOPs are required by law to cover all employees age twenty-one and over who work more than 1,000 hours per year and have at least a year of service with the company.

Several recent studies have estimated the size of employees' ownership stakes in employee stock ownership plans. A census of Washington state ESOPs (Kardas, Scharf, and Keogh 1998) found median pension assets per participant of $31,600 (versus $5,400 for a matching sample of non-ESOP control companies). A 2005 study of Ohio companies found median ESOP account balances of $30,000 (cited in Rosen [2005, 4]), and two surveys of Massachusetts ESOPs found average assets to range from $39,900 per participant (Scharf and Mackin 2000) to $56,200 per participant (Mackin 2005). Finally, a survey of sixteen S corporation ESOPs found median employee account balances of $75,000 to $100,000 (Rosen 2005).

In addition to ESOPs, there are a number of other popular employee ownership mechanisms: employee stock purchase plans (ESPPs), company stock in 401(k) plans, and broad-based stock option plans. Each of these plans—like ESOPs—has implications for retirement savings and employee risk.

ESPPs emerged gradually in the late 1800s and early 1900s as various industrialists sought ways to encourage workers to buy company stock in order to secure loyalty and create a common bond between labor and management. These plans spread rapidly in the context of welfare capitalism

3. Paraphrasing Mill, Kelso and Adler (1958, 85) wrote that "no man's ownership of (capital) should be so extensive as to exclude others from an economically significant participation in the production of wealth."

before the crash of 1929. They grew again in popularity after World War II, encouraged by a variety of tax incentives created by changes in the federal Internal Revenue Code.

Today, ESPPs constitute one of the "quiet" mechanisms of employee ownership in many major American corporations. In recent times, companies have typically allowed workers to buy stock through a payroll deduction at 85 percent of the market price. Many workers have come to see ESPPs as a supplement to their retirement savings; however long-term employees can accumulate substantial ESPP investments that dominate their retirement savings and raise serious issues of diversification.

Another form of employee ownership is the 401(k) retirement plan. While the US Congress worked intentionally to expand employee ownership through ESOPs, other models of employee ownership emerged with little governmental guidance. In the late seventies, the Internal Revenue Code was amended to allow for company contributions to tax-sheltered individual retirement trusts. The idea was that both company and worker contributions to these plans would be invested in stocks, bonds, and other assets, and this accumulated wealth would provide a supplement to the worker's main retirement fund—a defined benefit pension plan. These 401(k) defined contribution plans (called that because only the initial employer contribution, and not the final benefit, was defined) were originally intended for top management. But many companies have replaced their workers' defined benefit pension plans with defined contribution plans, shifting the risk associated with retirement income planning from employers to employees.

Increasingly, workers came to see these plans as useful supplements to their retirement. As the plans grew in number and popularity in the late 1980s and early 1990s, companies began matching employee contributions in company stock, and 401(k) plans emerged as vehicles for employee ownership. Companies next added company stock as an investment choice whereby workers could direct their own contributions to be used to buy company stock. Many companies found that employee ownership often grew rapidly under such plans. Although this has raised concerns about diversification when retirement plans are excessively invested in company stock, most observers agree that matching contributions of company stock to 401(k) retirement plans—within reason—has a useful role to play in expanding employee ownership.

The most recent development in the world of employee ownership is the "broad-based" stock option plan. These gained currency in the 1980s when high-tech firms began offering them to workers involved in developing computer and information systems hardware and software, often broadly to all employees in these firms (see Blasi, Kruse and Bernstein [2003]). Unlike ESPPs and employee purchases of company stock in 401(k) plans, employee stock options often require no investment of employees' savings. Employees are awarded options to buy company stock (after a vesting period), typi-

cally at the price it is trading on the day the options are awarded, for a ten-year period. If employees exercise their options and hold the stock, broad-based stock options become a way to finance ongoing employee ownership. If employees exercise their stock options and immediately sell the stock (which is much more usually the case), they can pocket the profit on the stock price's increase. In this case, the stock options serve as a form of cash profit sharing, based on company performance as measured by its stock price.

Broad-based stock option plans have become more common in a variety of manufacturing and service businesses. Stock options for employees, like ESOPs, involve lower risk for workers because they do not require the investment of workers' savings. However, when stock options are used in lieu of higher base pay or conventional retirement plans—as was sometimes the case in the tech sector start-ups of the 1980s and early 1990s—they are, in effect, risking employees' savings. Mature high-tech companies today, however, typically use broad-based stock options in combination with market level base pay and benefits.

Today, employee stock ownership is well established in the US economy. Blasi, Kruse, and Bernstein (2003, appendix C) calculate that in 2002 there were 24.1 million participants in 11,561 pension plans that held company stock.[4] About 8.2 million (34 percent) of these participants were in employee stock ownership plans (including ESOPs and similar plans called KSOPs),[5] and these held 59 percent of all company stock in employee pension plans. The ESOPs are "by far the most common form of employee ownership in the US" (Rosen 2005, 5). Another 13.6 million employees held company stock in 401(k) plans and 1.4 million in ESPPs. In addition, 10.6 million employees held stock options in the companies they work for.

Employee-owners bear two distinct types of risk. First, employees who have their own "skin in the game," having purchased company stock with their own funds, bear the risk of potential investment loss. This risk is minimized in ESOPs because the company stock allocated to workers' ESOP accounts is almost always contributed by the employer with no out-of-pocket cost to the employee.[6] At the other extreme, company stock acquired

4. As Kruse (2002) points out, these figures double count companies and employees who have more than one plan. His calculations (for 1998) suggest a lower-bound estimate of around 20 million employees (or 18 percent of all private sector workers) holding stock in their companies through various defined contribution pension plans (ESOPs, KSOPs, and 401(k)s that hold employer stock) and profit-sharing and employee stock purchase plans in 2002. The individual respondent-based General Social Survey data discussed in chapter 1 avoids such double-counting.

5. A KSOP is a combination ESOP and 401(k) plan in which employees' 401(k) contributions are matched by employer contributions of company stock to their ESOP accounts.

6. In one company the initial purchase of company stock at the founding of the KSOP was financed by a rollover from employees' existing 401(k) accounts. Employees of this company are an exception to the "no skin in the game" depiction of ESOP participants. Subsequent stock allocations to the KSOP have been provided by the employer.

through employee stock purchase plans is financed primarily by employee savings.

Second, employees who have concentrations of assets invested in a single company bear risk associated with inadequate diversification. This problem is exacerbated by a firm-specific risk for employee-owners whose jobs (and incomes), as well as a substantial portion of their savings, depend on the fortunes of the company they work for. This is an inevitable feature of any form of employee ownership, but it is likely to be greatest for ESOP employees who accumulate company shares in retirement accounts with limited opportunities for diversification. Federal law now allows workers close to retirement to diversify holdings in their ESOP accounts. The risk, however, appears generally to be manageable: portfolio theory suggests that a moderate amount of employee ownership can be part of a prudent portfolio depending on how other assets are diversified (chapter 3, this volume).

The inadequate diversification issue has come up most frequently with respect to ESOPs because of their retirement-plan structure. Although ESOPs are legally organized as retirement plans, scholars caution that they should not be thought of as a substitute for a diversified retirement plan (e.g., see Kruse [2002]), and indeed, all but one of the fourteen companies (including nine ESOPs) in the NBER study also have regular diversified 401(k) retirement plans. One plan in a large publicly-traded corporation, which is based mainly on broad-based stock options and profit sharing, actually prohibits its employees from holding its company stock in their diversified 401(k) plan. Among the subset of nine ESOPs, surveyed employees at three companies had less than half of their pension assets in the employer's stock, while employees at three other companies had between half and three-quarters, and employees at another three companies had over three-quarters of pension assets invested in their employer's stock. Clearly, many of these plans should be more diversified, but we need to bear in mind that employee-owners inevitably face greater ownership risk. To the extent that employee ownership increases wealth as well as risk, the question becomes whether this wealth-risk trade-off leaves employee-owners better off or not.[7]

It should also be kept in mind that there are millions of small business owners and farmers who have their wealth and livelihood tied up in their business, and it is commonly thought that such an undiversified concentration of wealth can provide very high incentives that motivate high levels of effort and productivity (as told in many rags-to-riches stories). High concentrations of employee-owned stock in some employees' portfolios may similarly promote strong incentives and economic success in some cases,

7. We thank Jeff Keefe for this point and for pointing out that the US system of employment-based health insurance, life insurance, savings plans, and so forth, exposes American workers in general to high levels of firm-specific risk. Employee-ownership further increases this risk. The better these benefits (including ownership) are, the greater the firm-specific risks are. But this does not mean that employees would be better off without them.

even if such employees are violating norms of diversification in the same way as many small business owners and farmers.

11.2 Profile of the NBER Companies

The NBER and GSS data sets used in this chapter are described in the "Studying Shared Capitalism" section of the introduction. Table 11.1 provides more detail on the stock sharing programs that the fourteen NBER companies have in place, which include nine ESOP-type plans (eight ESOPs and one KSOP), three 401(k) plans that invest in the employer's stock as well as other assets, five employee stock purchase plans (ESPPs), and six stock option plans (SOPs). Nine of these companies (identified with bold company numbers in table 11.1) are majority employee-owned ESOP-type

Table 11.1 NBER company plans and disposition of company stock

Company[a]	Plans	Stock is Publicly Traded/ Privately Held	Percent of Stock Held by Employees	Participation Rate (% holding co. stock)[d]	Value per Employee-Owner[d,e]
1	ESOP	Private	100%	88.5%	$239,139
2	ESOP	Private	100	81.9	23,827
3	ESPP, SOP	Public	n.a.	97.1	138,430
4	ESOP	Private	77	64.1	26,155
5	ESOP	Private	33[b]	39.1	7,877
6	401(k), ESPP, SOP	Private	100	88.5	36,623
7	ESOP, ESPP, SOP	Public	5[c]	88.1	15,865
8	KSOP	Private	100	77.5	166,713
9	ESOP	Private	100	69.3	38,411
10	ESOP	Private	75	52.0	40,407
11	401(k), ESPP, SOP	Public	n.a.	82.0	39,547
12	ESOP	Private	100	87.1	99,000
13	ESPP, SOP	Public	n.a.	60.3	175,687
14	401(k), SOP	Public	n.a.	67.7	27,952

Notes: ESOP = Employee Stock Ownership Plan; KSOP = A 401(k) plan with matching contributions of company stock to a companion ESOP. 401(k) = A 401(k) plan that holds company stock, as well as other assets. (All but one of these companies has a regular 401(k) plan.) ESPP = Employee Stock Purchase Plan; SOP = Company grants stock options (broad based in all but one case). n.a. = not available.

[a]Bold numbers indicate a subset of nine ESOPs (or near-ESOPs) that are broken out in some subsequent analyses.

[b]33 percent at the time of the survey, soon after increased to 67 percent.

[c]15 percent, including unexercised stock options.

[d]Includes only US-based, full-time employees (thirty-five or more hours per week), age 18 and over, with at least one year of service. Employees who did not know if they owned their employer's stock (about 15 percent of this subsample) are assumed not to. In the case of stock option plans, employees who have ever received stock options are counted, even if they do not currently hold company stock.

[e]Average value of employer stock for employees owning company stock.

plans (including one KSOP and one set up as a 401(k)).[8] In some of the following tables, we report results for this subset of majority-owned ESOP companies.

All of the privately held ESOP companies in the NBER study are majority owned; most are 100 percent employee owned. Overall participation rates of eligible employees (the percent of employees participating in at least one plan) are high, especially in the ESOPs.[9] The average value of company stock holdings (for employees with any stock) varies widely across companies—from just under $8,000 to over $239,000.

11.3 Ownership Stakes

In this section we examine the extent of participation in employee stock ownership, the size of employees' ownership stakes, the importance of ownership relative to base pay, and the value of company stock in relation to employees' total wealth. These measures are reported for all fourteen companies in the NBER study, a subsample of the nine ESOP companies in the NBER study, and for the combined 2002 and 2006 General Social Surveys (GSS). The measures are also broken down by position: management versus nonmanagement.

Table 11.2 presents various measures of employee stock ownership in the NBER shared capitalism companies and the GSS national samples.[10] Panel A confirms a very high participation rate, for managers and nonmanagers alike, in the NBER companies, with nearly 87 percent of surveyed employees in these firms reporting that they own employer stock—far higher than the 29 percent incidence of employee ownership in the national sample of private-sector employees.[11]

8. One of the companies included in this group holds its company stock in a 401(k) rather than an ESOP. One became majority owned shortly after its employee survey was conducted.

9. As noted in table 11.1, overall about 15 percent of the employees surveyed responded that they did not know if they held any employer stock. Here these employees are counted as nonparticipants (rather than dropped from the sample), significantly reducing reported participation rates for some companies. In the remaining tables they are excluded from the calculation of participation rates and company stock values.

10. All stock ownership and pay estimates presented here and following are reported in 2006 dollars.

11. The GSS asked respondents: "Do you own any shares of stock in the company where you now work, either directly or through some type of retirement or stock plan?" Those who answered affirmatively were asked for "a general estimate of how much cash you would get if all this stock were sold today." They were not asked how they acquired their company stock, but it is likely that the majority of the GSS employee-owners did so through an employer-sponsored program (rather than simply through open market purchases). Freeman (2007, 2) indicates that the great majority of private sector employees who own shares in their company do so via either ESOPs or 401(k) plans.

The incidence of company stock ownership among GSS respondents may itself seem surprisingly high. Note that this estimate is based on a sample of permanent, full-time, private sector employees, who are eighteen or over and have been in their current job for at least one year, and excludes respondents who did not know if they owned company stock—all conditions favoring a high participation rate.

Table 11.2 Employee stock ownership by employee position

	NBER Full Data set	NBER ESOP companies[a]	GSS national sample 2002 and 06
A. Percent owning employer stock			
All employees	86.8%	88.6%	29.3%
Managers	96.5	97.1	33.9
Others	85.6	87.4	28.5
(Sample size)	(24,918)	(3,889)	(1370)
B. Value per employee[b]			
All employees	$52,759	$76,041	$10,590
Managers	126,948	202,078	17,814
Others	41,745	55,756	9,576
(Sample size)	(24,202)	(4,314)	(1,245)
C. Value per employee-owner[c]			
All employees	$61,059	$85,926	$47,961
Managers	131,654	208,190	63,281
Others	49,030	63,874	45,109
All employees (median)	15,484	22,767	15,000
Managers (median)	46,452	70,560	28,016
Others (median)	13,340	20,645	11,206
(Sample size)	(20,912)	(3,423)	(276)
D. Value of employer stock as a percentage of annual base pay (NBER) or earnings (GSS)[c]			
All employees	65.4%	118.5%	75.8%
Managers	95.5	179.8	62.0
Others	60.0	107.3	78.3
(Sample size)	(18,796)	(2,527)	(269)
E. Value of employer stock as a percentage of total wealth[c]			
All employees	19.5%	28.0%	
Managers	21.9	34.1	
Others	19.0	26.7	
(Sample size)	(18,789)	(2,419)	

Notes: All measures are based on a sample of US-based, full-time (thirty-five or more hours per week) employees of for-profit companies, who are age 18 and over and have at least one year of service. Employees who reported that they did not know if they owned their employer's stock are dropped from these calculations.

[a]This is a subset of nine majority-owned, privately-held ESOP companies identified in table 11.1

[b]Includes employees who own no employer stock.

[c]Includes only employees who own employer stock.

The two most important sources of company stock ownership in the NBER study are (a) ESOPs (including KSOPs and 401(k) plans that hold company stock), in which stock accumulates in employees' retirement accounts; and (b) stock option plans, where employees are free to (and usually do) sell their shares immediately upon exercising their options. Consequently, we expect company stock ownership to be higher for employees in the subset of nine ESOP companies than for employees of all of the

companies in the NBER study, and indeed this is the case (see panel B of table 11.2). Company stock holdings per employee (including those with no stock) are about $52,800 in the NBER full data set, and $76,000 for the nine NBER ESOPs. Based on the General Social Surveys, employees nationwide own on average $10,600 worth of their employers' stock.

We see in panel C that the average stake of *employee-owners* (i.e., employees who own some company stock) is $61,000 for all NBER companies and $85,900 for the NBER ESOPs. The average ownership stake of employee-owners in the GSS national sample is $48,000. For the NBER shared capitalist firms, nonmanagers ("Others") own roughly one-third as much company stock as managers, and the median holdings of the employee-owners is only about a quarter of the mean.[12] Although skewed toward the top, the distribution of employee-owned stock is considerably less skewed than is the distribution of wealth in general.

Company stock contributions to ESOP accounts are governed by ERISA and generally vary in proportion to participants' taxable earnings (with a cap of $220,000 in 2006). But the longer an employee has been in the plan, the more stock he or she can potentially accrue, so differences in ownership stakes among employees can be due to differences in length of service as well as differences in pay levels. In the case of the NBER ESOPs, controlling for job tenure reduces the manager versus nonmanager gap in average company stock holdings in panel C by just 9 percent, because in fact, there is little difference between managers and others in average job tenure.[13] But it reduces the mean-median gap for all employees by 50 percent.[14] The ESOP account balances increase, on average, by about $8,400 per year of service. As a result, a large part of the variation in account balances among ESOP participants at any point in time is not due to unequal stock allocations to ESOP accounts, but simply to differences in each employee's time-in-plan.

Panel D shows the value of employer stock holdings relative to base pay. In all cases employee-owners own stock worth two-thirds or more of their annual base pay, with a higher ratio for managers than for others in the NBER companies but a higher ratio for others than for managers in the GSS. This reversal—with stock being more important (relative to pay) for nonmanagement employees than for managers—is due more to their relatively low pay than to large company stock holdings.

12. The ratio of mean to the median employer stock holdings is a rough measure of the degree to which the distribution of company stock ownership is skewed to the right, with a relatively small number of employee-owners holding much more stock than the bulk of more typical owners. For perspective, Wolff (2004, table 1) reports a 13:1 ratio of mean to median household financial net worth in 2001 ($298,500 versus $23,200).

13. Tenure-adjusted stock values for nonmanagerial employees are obtained by regressing stock value on job tenure for these employees and using this regression equation to find the expected stock value for nonmanagerial employees who have the mean job tenure of managerial employees.

14. Tenure-adjusted stock values are obtained by adjusting each employee's stock value by the expected difference in value for someone with that employee's job tenure versus the mean job tenure for the sample.

Finally, panel E reports employees' estimates of the value of their company stock relative to their total wealth. While company stock represents somewhat over half of pension assets, on average, for the full sample of NBER employees (not shown in tables), it represents only about 20 percent, on average, of their total wealth.

Table 11.3 (panel A) reports the value of stock options held by employees in the NBER and the 2006 GSS data sets. Just 22 percent of employees in

Table 11.3 Stock options by employee position

	NBER full data set	NBER broad-based stock option cos.a	GSS national sample 2002 and 06
A. Percent holding stock options			
All employees	22.1%	93.2%	17.1%
Managers	44.1	97.1	18.4
Others	19.4	92.4	16.9
(Sample size)	(27,952)	(5,896)	(1,359)
B. Value per employee[b]			
All employees	$55,592	$262,931	
Managers	183,935	566,146	
Others	38,730	196,498	
(Sample size)	(27,711)	(5,711)	
C. Value per stock option holder[c]			
All employees	$259,740	$282,841	
Managers	428,614	583,424	
Others	205,995	213,264	
All employees (median)	80,042	93,383	
Managers (median)	112,805	213,446	
Others (median)	80,042	80,042	
(Sample size)	(5,931)	(5,309)	
D. Value of stock options as a percentage of annual base pay[c]			
All employees	175.6%	189.6%	
Managers	219.7	287.7	
Others	161.9	167.2	
(Sample size)	(5,769)	(5,185)	
E. Value of stock options as a percentage of total wealth[c]			
All employees	54.5%	58.9%	
Managers	45.2	57.5	
Others	57.4	59.3	
(Sample size)	(5,617)	(5,102)	

Notes: All measures are based on a sample of US-based, full-time (35 or more hours per week) employees of for-profit companies, who are age 18 and over and have at least one year of service. Employees who reported that they did not know if they hold stock options are dropped from these calculations.

[a]This is a subset of five SOP companies (excluding company fourteen which is not broad-based) identified in table 11.1.

[b]Total value of vested and unvested options. Includes employees who hold no stock options.

[c]Total value of vested and unvested options. Includes only employees who hold stock options.

the NBER companies and 17 percent of employees in the GSS hold stock options, but among the five broad-based stock option companies in the NBER study, 93 percent hold options to purchase their employers' stock. The average value of these options if exercised on the day the employee took the survey was $262,000 per employee (panel B) or $283,000 per option holder (panel C).[15]

Focusing on the broad-based stock options companies, we see that on average management holds options worth about 2.5 times more than other employees' options ($583,400 versus $213,300). On average, employees in these companies hold options worth almost two years' pay (panel D), and in the case of managers, almost three years' pay. On average, over half of their wealth is held in these stock options (panel E).

11.4 Do Employee-Owners Pay with Lower Wages?

Skeptics of employee ownership suggest that (for equivalent workers and working conditions) whatever value ownership confers on employees must be offset by correspondingly lower wages, since the market insures that total (risk-adjusted) compensation must be the same everywhere. And there are reasons, besides competitive theory, to suppose that employees receiving company stock might pay for it with lower wages. Unionized workers in airlines and trucking—industries under pressure of deregulation in the late 1970s and 1980s—made large wage concessions in return for ownership shares to save their companies and their jobs, usually through concessionary employee ownership plans. But these concessionary plans represent a very small percentage of all plans (Blasi 1988, 94; Russell 1985, 200). Some high-tech startups, such as Amazon, acknowledged a compensation strategy of luring talent on the cheap with stock options and below-market pay.[16]

The preponderance of empirical evidence, however, goes the other way. In a pre/post study of ESOPs adopted by public companies between 1980 and 2004, Kim and Ouimet (2008) find significant increases in employee compensation following the adoption of ESOPs, particularly for ESOPs owning more than 5 percent of a company where the long-term increase in compensation is 4.5 percent.[17] A study of 490 firms with broad-based stock options found that these companies paid their employees 8 percent

15. The values reported here are the net gain the employee would realize if his/her stock options were exercised and the stock sold.

16. Statistical evidence for wage substitution is harder to come by than anecdotal evidence. One tangentially related study of Italian producer co-ops by Pencavel, Pistaferri, and Schivardi (2006) finds that "a worker in a co-op earned 15–16% less than a worker in a capitalist enterprise," controlling for age, gender, region, establishment size, industry, and occupation.

17. A similar method used on German firms adopting profit-sharing plans also concluded that profit sharing supplemented rather than substituted for standard compensation (Ugarkovi 2007).

more than all other public companies when most of them introduced their stock-option plans in the mid-1980s, and continued to pay 8 percent more a decade later (Sesil et al. 2007). Blasi, Conte, and Kruse (1996) found that compensation per employee was 23 percent higher in publicly-traded companies with more than 5 percent of their stock held in broad-based employee stock ownership plans than it was in other firms. Kardas, Scharf, and Keogh (1998) found mean and median wages of ESOP companies in Washington State to be higher than a matched set of control companies. And Kruse and Blasi (2001), matching 1,176 pairs of ESOP and non-ESOP companies, found that the ESOP companies were over four times more likely to have traditional defined benefit plans and over five times more likely to have 401(k) plans—in addition to their ESOPs.

What do our data say on this issue? Employees in the NBER companies receive higher pay than employees in the GSS, but this simple comparison does not account for the select nature of the NBER firms. For a more finely tuned examination of the relationship between employee ownership and pay levels, we compare wages (and perceptions about them) of employee-owners and nonowners *within* data sets. First we consider employees' views about their base pay relative to the base pay of similarly qualified employees in similar jobs at other companies. Responses to this question are reported in table 11.4. Differences in the pattern of responses between owners and nonowners in the NBER data are consistent with the substitution hypothesis, and they are statistically significant. However, they are very small. In particular, the percentage of employee-owners who felt that they were paid below market was only one percentage point more than the percentage of nonowners who felt that they were paid below market (39.5 percent versus 38.5 percent). Responses of GSS employee-owners and nonowners do not

Table 11.4 **Perceptions of base pay relative to market for employee-owners and nonowners**

	NBER full data set		GSS 2006 national sample	
	Employee-owners	Nonowners	Employee-owners	Nonowners
1 Below market	14.2%	17.8%	15.5%	18.5%
2	25.3	20.7	14.3	11.0
3 At market	42.5	41.8	41.1	49.1
4	15.1	15.0	15.5	10.6
5 Above market	2.9	4.7	13.7	10.8
	$\chi^2 = 72.9$ ($p = .000$)		$\chi^2 = 6.90$ ($p = .141$)	
Sample size	19,093	2,836	168	464

Notes: All subsamples are restricted to US-based employees of for-profit, private sector companies, who are 18 or over, usually work at least 35 hours per week, and have at least one year of service with their employer. Respondents were asked "Do you believe your fixed annual wages last year were higher or lower than those of employees with similar experience and job descriptions in other companies in your region?"

differ significantly (due in part to the much smaller sample size) and are not consistent with substitution. In fact, a substantially higher percentage of employee-owners felt that they were paid *above* market (29.2 percent versus 21.4 percent).

Next we consider the relationship between employees' pay and their ownership stakes (more specifically, the annual *increase* in their ownership stake). The key independent variable in this analysis is the ratio of the value of the employee's accrued company stock *per year of service* (indicating the annual growth of his/her ownership stake) to his or her annual base pay. A negative relationship between this variable and pay suggests that the more important ownership growth is relative to pay, the lower pay will be—in other words, ownership substitutes for pay. A positive relationship is inconsistent with the substitution hypothesis.[18]

In table 11.5, panel A, seven different measures of pay are regressed on this independent variable (i.e., the annual increase in stock ownership relative to annual pay), controlling for an extensive list of personal and job-related determinants of pay. The first two dependent variables in panel A are the log of base pay and of total pay. The next four are employees' assessments of their pay (fixed and total) relative to the pay of employees in similar jobs at other companies in their region. The last dependent variable indicates respondents' assessment of how hard would it be to find another job with pay and benefits comparable to what they now have. In twelve of the fourteen regressions, the coefficient of the key ownership share variable is positive; in six of these it is statistically significant (at better than a 5 percent level of significance), and in every case where the relationship is statistically significant, it is positive. These results suggest that if there is any relationship between company stock ownership and pay, it is a complementary one.

Panel B of table 11.5 presents similar regressions based on the GSS data. Here the five dependent variables are log earnings, perceptions of pay relative to market, assessments of pay and fringe benefits, and the difficulty of finding another job with comparable pay and benefits. In four of these five regressions the signs of the key coefficient are positive, and in two the statistically significant estimates the coefficients are positive.

The main finding here is that there is no evidence that employee ownership substitutes for wages or benefits. On the contrary, it appears on average to be an add-on, with employees' ownership stake growing without sacrificing pay.[19]

18. We use the average annual increase in ownership stake since the level of stock ownership depends heavily on years of service, which obscures the relationship between pay and ownership.

19. These relationships were also estimated for samples restricted to nonmanagers and for the five NBER companies with the lowest pay, all with similar results. In no case was there statistically significant evidence of substitution of ownership for pay or benefits.

Table 11.5 Does employer stock substitute for pay?

A NBER data set		
	Ratio of annual ownership stake to base pay	
Dependent variable	Full data set	Nine ESOPs
1. Log base pay	.006	.000
	(.012)	(.042)
2. Log total pay	.114***	.068
	(.013)	(.043)
3. Base pay relative to market	.073**	.016
(5 point scale: 1. below, . . . 5. above)	(.040)	(.175)
4. Base pay percent of market	.765	–.294
(percent below/above market)	(.585)	(3.05)
5. Total pay relative to market	.218***	.431***
(5 point scale: 1. below, . . . 5. above)	(.041)	(.159)
6. Total pay percent of market	3.313***	7.155***
(percent below/above market)	(.690)	(2.925)
7. Difficulty replacing pay and benefits	–.002	.088
(3 point scale: 1. easy, . . . 3. not at all easy)	(.024)	(.090)

B GSS national sample 2002 and 06	
	Ratio of annual ownership stake to earnings
1. Log earnings	.238
	(.109)
2. Base pay relative to market	.682
(5 point scale: 1. below, . . . 5. above)	(1.017)
3. Paid what you deserve	–.107
(5 point scale: 1. much less, . . . 5. much more)	(.173)
4. Fringe benefits are good	.798**
(4 point scale: 1. not true, . . . 4. very true)	(.378)
5. Difficulty replacing pay and benefits	1.657**
(3 point scale: 1. easy, . . . 3. not at all easy)	(.694)

Notes: Each entry involves a separate regression. The key independent variable is the ratio of the value of employer stock (divided by years of tenure) to annual earnings. All regressions include controls for sex, age, education, job tenure, hours worked, management, hourly, union membership, and company fixed effects. Equations A. 3, 5, and 7 and B. 2, 3, 4, and 5 are ordered probits; others are OLS. Samples are restricted as indicated in table 11.4. Standard errors are in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

11.5 Does Employee Ownership Build Wealth?

Here we turn to the question of whether employee ownership actually adds to wealth or just changes the composition of wealth, substituting company stock for other forms of wealth (e.g., assets in a 401(k) account or an IRA). Do employees, for example, buy company stock through an employee

stock purchase plan *instead* of buying other stock or *in addition to* other stock? In the former case, employee ownership would just be a substitute for other forms of wealth, rather than an addition to them.

Of course, we cannot know what the wealth levels of employee-owners would have been in the absence of employee ownership, but we can see whether employee ownership is associated with higher levels of overall wealth or not. If it is, that is prima facie evidence that employee ownership does not fully substitute for other forms of wealth and thus increases total wealth.[20]

Table 11.6 presents some evidence on this question. Two regressions are reported for the NBER full data set and two for the nine NBER ESOP companies. In each regression the dependent variable is the employee's wealth. Because wealth is a categorical variable in this data set, interval regressions are used to assess the relationship of employee ownership to overall wealth.[21] The key independent variable in the first regression on each data set is the value of company stock held in *all* plans. In the second regression this variable is replaced by the value of company stock in *each* plan. All regressions also include a set of controls for other potential determinants of wealth that might be correlated with the level of company stock holdings (see table notes).

The first and most general result is the coefficient of 0.942 on company stock in all plans in the first regression, which implies that each additional dollar of employer stock is associated with 94.2 cents of higher wealth. That is, there appears to be very little reduction in other wealth associated with increasing employee ownership (only about 6 cents less other wealth as employee ownership increases by one dollar). For nine NBER ESOPs the corresponding coefficient is 0.801, which indicates that wealth rises 80.1 cents as employee ownership increases by one dollar, so other wealth is decreasing by only 20 cents. While we cannot know what the wealth of employees would have been in the absence of employee ownership, these results cast doubt on a simple story of dollar-for-dollar substitution.

The regressions that include all plan types indicate the effect on total wealth of increases in the value of company stock in each of the various methods of stock ownership—ESOPs, 401(k)s, Employee stock purchase plans (ESPPs), exercised stock options, and open market purchases. In these regressions, all of the coefficients are positive and statistically signifi-

20. Moreover, as Joseph Blasi has pointed out to us, even if employee ownership is substituting for other wealth dollar for dollar, that does not mean there is no net gain for the employee. It still allows for a higher level of consumption at the same level of wealth. This is especially relevant for stock options, where options are usually exercised and the stock immediately sold. The proceeds can be reinvested (increasing wealth) or spent (increasing consumption), but in either case there is a welfare gain.

21. The NBER surveys asked employees to put their wealth into one of between nine and sixteen categories (depending on the survey). The regressions were run using Stata's intreg command, with dollar values adjusted for inflation to represent 2006 values.

Table 11.6 Does employer stock displace other wealth?

	Dependent variable: Wealth			
	NBER full data set		Nine NBER ESOPs	
Independent variables	(1)	(2)	(3)	(4)
Value of employer stock from				
All plans	0.942***		0.801***	
	(.023)		(.034)	
ESOP		1.007***		0.880***
		(.098)		(.045)
401(k)		1.280***		0.661***
		(.100)		(.051)
ESPP		3.590***		3.062***
		(.106)		(0.725)
Open market purchases		2.179***		
		(.148)		
Exercised stock options		0.646***		
		(.020)		

Notes: All regressions run as interval regressions due to categorical coding of wealth. Controls include earnings, sex, age, marital status, family size, number of children, education, job tenure, hours worked, management, paid hourly, union membership, and company fixed effects. Samples are restricted as indicated in table 11.4. Standard errors in parentheses.

***Significant at the 1 percent level.

cant, indicating that employee ownership is associated with higher wealth. The ESOP coefficient in the full data set is not significantly different from one, inconsistent with no substitution of ESOP stock with other wealth, while the coefficient of 0.880 in the ESOP-only regression indicates only minimal substitution for other wealth. The coefficients on open market purchases and stock purchased through ESPPs are much larger than one, which probably indicates that increases in (other) wealth lead to increased investment in the employer's stock.[22] Exercised stock options have a coefficient of 0.646, suggesting that an extra dollar of stock from stock options is associated with 64.6 cents of greater wealth, and the remainder of the extra dollar (35.4 cents) may be substituting for other wealth as employees save less as this form of wealth increases. A similar story may apply to the 401(k) coefficient in the ESOP-only regression. While these estimates are necessarily rough, they are generally inconsistent with the idea that employee ownership is substituting for other wealth, and more consistent with the idea that

22. The large ESPP coefficient might also be partly due to the fact that company stock in ESPPs is typically bought at a 20 percent discount, so every dollar of stock purchased automatically raises wealth by $1.25. Also, employees are most likely to buy company stock when its price is rising, and if the price does rise the value of their wealth will rise more than their dollar investment.

increasing employee stock ownership by a dollar tends to raise employee wealth by almost a dollar.

Another way to examine the wealth impact of employee ownership across the economic spectrum is to compare the distribution of wealth classes with and without employee ownership. Figures 11.1 and 11.2 provide such a comparison for the full NBER sample and ESOP sample. Within each sample, the distribution of employees by wealth class was predicted using

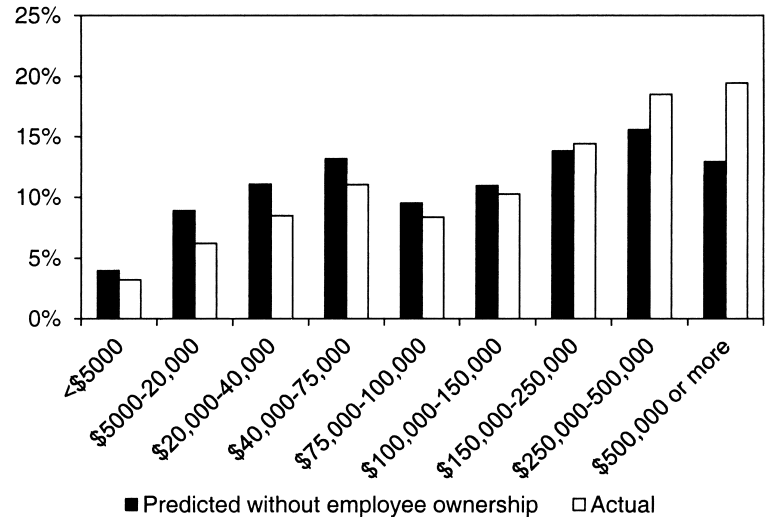

Fig. 11.1 Wealth class distribution for employees in shared capitalism companies

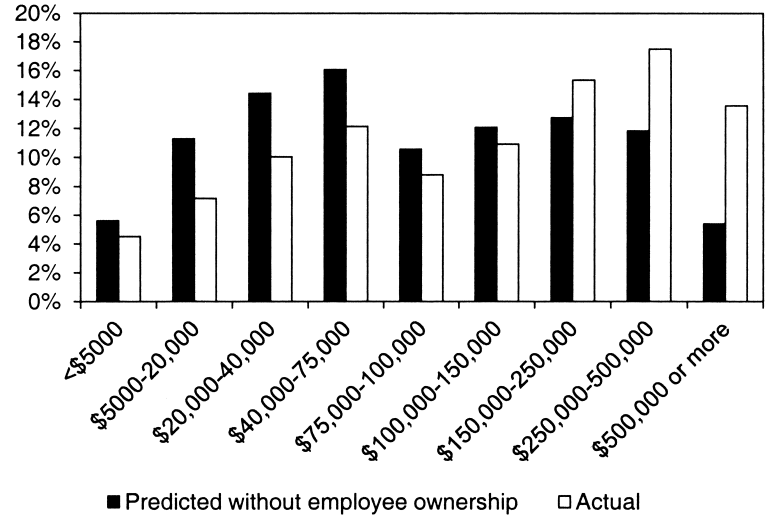

Fig. 11.2 Wealth class distribution for ESOP employees

multinomial logits, and the probabilities of membership in each class were then predicted with the value of employer stock set to zero.[23] If employee ownership makes no difference in the levels or distribution of wealth (that is, if it fully substitutes for other wealth), then these predicted and actual distributions will be identical.

As seen in figure 11.1, employee ownership among the NBER shared capitalism employees appears to decrease membership in the six lowest wealth classes (< $150,000) and increase membership in the classes above that, particularly in the > $500,000 class. Figure 11.2 finds the same pattern among employees in ESOP companies, but with more dramatic differences. Combined membership in the four lowest wealth categories (< $75,000) is 47 percent without employee ownership, and 34 percent with employee ownership. These figures are consistent with the idea that employee ownership is enhancing wealth, not substituting for other forms of wealth.

11.6 The Distribution of Employee Stock Ownership and the Distribution of Wealth

Finally, we assess the distribution of company stock ownership and of all wealth (net worth). Table 11.7, panel A, shows the distribution of employer stock across employees (for the NBER companies and GSS employees) and compares it with Edward Wolff's estimates of the distribution of all stock across households. In both the NBER full sample and the ESOP subsample the top 10 percent of employees hold 64 percent of employer stock and the next 50 percent hold almost all the rest. In the GSS the top 10 percent hold an estimated 73 percent of the company stock (which is likely to be a lower bound estimate[24]), and the next 50 percent hold the remaining 27 percent. By way of a rough comparison, Wolff (2004) finds that the top 10 percent

23. The predictors used in the multinomial logits were gender, age, married, BA degree, graduate degree, black, Hispanic, household size, number of children, tenure, natural logarithm of annual earnings, and dollar value of employer stock held. The predicted likelihoods were averaged within each wealth class for an estimate of the percent of employees who would be in each wealth class.

24. A problem with estimating the distribution of company stock ownership in the GSS sample is that 30 percent of the respondents who reported that they owned company stock did not report the value of that stock (usually because they did not know, rather than refused to say). Omitting these respondents from the calculation lends an upward bias to the distribution, resulting in an estimate that 91 percent of the company stock is held by the top 10 percent. We have no way of knowing the actual stock holdings of those who did not respond to the question. The GSS estimates in table 11.7 are based on imputing stock values for employees who said they owned company stock but did not report how much. This imputation was done by regressing stock value on pay, sex, age, education, tenure, and position (management versus other) for the portion of the sample of employees who report stock value and using the resulting equation to estimate stock values for those who did not report. This procedure relies on the assumption that employee-owners who are statistically alike in their personal characteristics will have similar company stock holdings. Since it is likely that employee-owners who do not know the value of their company stock do not hold as much of it as their statistically similar counterparts who do know, we take 73.3 percent as a rough "lower bound" estimate of the share of company stock held by the top 10 percent of GSS employees.

Table 11.7 Distribution of stock ownership and wealth

Wealth class	NBER employees full sample	NBER employees ESOPs	GSS employees national sample 2002 and 2006	Wolff 2001 (households)
		A. Share of stock[a]		
Top 10%	64.0%	64.0%	73.3%[b]	76.9%[c]
Next 50%	34.9	34.5	26.7	22.4
Bottom 40%	1.1	1.6	0.0	0.7
		B. Share of all wealth (net worth)		
Top 10%	56.3%	58.5%		71.5%[d]
Next 50%	39.5	37.4		28.2
Bottom 40%	4.2	4.0		0.3
		C. Share of all wealth excluding employer stock		
Top 10%	57.0%	61.0%		
Next 50%	39.2	36.0		
Bottom 40%	3.8	3.0		

Notes: NBER and GSS samples are restricted as indicated in table 11.4. NBER sample employees who reported that they did not know if they owned employer stock are excluded.

[a]NBER and GSS samples show share of employer stock. Wolff 2001 includes all stock.

[b]Imputes the value of employer's stock for employee-owners who did not report it (see footnote 24).

[c]Wolff (2004, table 13a).

[d]Wolff (2004, table 2).

of households hold 77 percent of all stock.[25] It is not surprising to find a more equal distribution of company stock among employees of the shared capitalism companies in the NBER study (with over a third of company stock held by those between the fortieth and ninetieth percentile). Many fewer GSS respondents are employee-owners and even fewer of them are likely to be employed in companies with a broad-based employee ownership plan.

Turning to panel B of table 11.7, we find that in the NBER full sample, the top 10 percent of employees' households hold 56.3 percent of all wealth, compared to 58.5 percent for the ESOP sample.[26] The nationally-representative

25. Comparisons in panel A of this table are confounded by inconsistencies in the unit of observation between the NBER/GSS data (company stock value per employee) and Wolff's data (stock value per household). This observation does not apply to panel B, where the unit of observation is the household in the NBER/GSS data, as well as Wolff's data.

26. Because the NBER wealth data are based on categorical variables rather than exact dollar values, the figures in table 11.7, panel B, are approximations. The calculation of the wealth distribution is based on assigning mean dollar values to each category using data from the 2004 Survey of Consumer Finances (SCF). When the ninetieth and fortieth percentiles fell within a wealth category, the distribution of wealth within that category in the SCF was used in order to estimate the total wealth of those above and below those percentiles. For example, if those in the $500,000 to 1,000,000 wealth category covered the eighty-fifth to ninety-fifth percentiles

Survey of Consumer Finances (SCF) data analyzed by Wolff show 71.5 percent of wealth held by the top 10 percent of households, pointing toward a more equal distribution of wealth among the NBER employees. While this is consistent with the idea that employee ownership can broaden the wealth distribution, it must be noted that wealth was measured in different ways in the two data sets, which muddies the comparison.[27] In addition, comparison between these samples may be affected by demographic differences (e.g., age, marital status, and household size) that are related to wealth levels. A straightforward way to examine the influence of employee ownership on wealth distribution while controlling for demographic differences is to calculate the distribution for employees both with and without employer stock (assuming that employer stock is not substituting for other forms of wealth, as is strongly suggested by the earlier results). Panel C of table 11.7 shows that when employee ownership is subtracted from estimated wealth holdings, the share of wealth held by the top 10 percent is 57.0 percent among NBER employees, just slightly higher than the 56.3 percent figure that includes employer stock (panel B). Both the middle and lower groups see slightly increased shares of wealth from adding employee ownership. The difference is larger in the ESOP sample, where 61.0 percent of the wealth excluding employer stock is held by the top 10 percent, and adding employer stock decreases that share to 58.5 percent, with increases in the shares of both the middle and bottom wealth holders. This indicates that ESOPs may play a stronger role than other forms of employee ownership in broadening ownership of wealth.

Examination of employee ownership by wealth class can also shed light on how employee ownership affects the wealth distribution. Table 11.8 shows

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of the NBER distribution, the median of the $500,000 to 1,000,000 category was identified in the SCF distribution, and the mean wealth was calculated above that median and multiplied by the number of NBER employees in the ninetieth to ninety-fifth percentiles for an estimate of total wealth among employees in that part of the distribution. That figure was then added to an estimate of total wealth for those in the ninety-fifth to one-hundredth percentiles, using mean SCF wealth for each category multiplied by the number of employees in that category, to determine the total held by the top 10 percent. This procedure assumes that wealth is distributed similarly within each category for the NBER and SCF samples. While only an approximation, it is unlikely to lead to any systematic bias.

27. The SCF includes detailed measures of many forms of wealth, with exact dollar values, which are added to arrive at a total wealth figure. The NBER surveys, in contrast, included a single question asking employees to put their total wealth in one of nine to thirteen categories. The question was: "People have various assets that constitute their wealth. These include the value of their house minus the mortgage, plus their vehicles, stocks and mutual funds, cash, checking accounts, retirement accounts including 401(k) and pension assets, and so forth. Taking account of all of these things would you say that the WEALTH of you and your spouse is. . . ." As described in the previous note, the NBER figures are based on assigning mean dollar values to each response category using data from the 2004 SCF, in order to make the NBER and Wolff/SCF measures as comparable as possible. An earlier version of this study used a wealth measure from the 2006 GSS that was based on the NBER measure, but subsequently the National Opinion Research Corporation determined that there were problems in the administration of this GSS question so we have not included those data here.

Table 11.8 Employee ownership distribution by wealth class

	Percent of employee's wealth in			
	Employee ownership		All stocks	
Wealth class	NBER full sample	NBER ESOPs	SCF[a]	NBER
< $5,000	16.3	26.8	1.4	19.6
$5,000–20,000	16.7	18.7	8.9	23.0
$20,000–40,000	16.4	19.1	13.7	23.3
$40,000–75,000	17.7	22.4	12.9	26.2
$75,000–100,000	18.0	24.8	13.6	28.2
$100,000–150,000	17.2	24.7	14.4	29.0
$150,000–250,000	17.8	26.6	16.9	31.9
$250,000–500,000	17.3	27.9	19.4	34.3
$500,000 or more	19.5	35.3	26.8	39.4

[a]Survey of Consumer Finances.

that average employee ownership, as a percent of wealth, is very similar across the wealth categories for the NBER sample, with only a slightly higher figure (19.5 percent) for the richest class compared to the poorest class (16.3 percent). There is a similar pattern for ESOPs, with fairly uniform percentages across the wealth classes, although a higher percentage in the richest class. This indicates that while employee ownership may increase wealth, it appears unlikely to have much effect on the shape of the distribution among employee-owners since everyone's wealth is going up by a similar percentage (assuming a similar rate of substitution of employee ownership for other wealth across the categories). The NBER-SCF comparison in table 11.8 clearly shows that employee ownership increases stock ownership as a percentage of wealth across all of the wealth categories. This reinforces the finding at the top of table 11.7 that stock ownership is greater amid middle and lower employees in the NBER companies than in the national samples.

The data in tables 11.6 to 11.8 point toward a wealth-enhancing effect of employee ownership but suggest that the shape of the wealth distribution (reflecting the relative amounts held by those at the top, middle, and bottom) within the group of employee-owners may not be greatly affected by employee ownership. This is not surprising when one considers that employee ownership plans often distribute company stock in proportion to salary, and salary is also distributed unequally. Some simple calculations illustrate this point. If each person in the NBER data set were simply given an amount of company stock equal to 10 percent of their yearly pay, we estimate that the percent of wealth held by the top 10 percent would fall from 56.3 percent (table 11.7) to 55.7 percent. If a similar total were distributed in equal dollar amounts ($5,989) to each employee, that figure would fall only to 55.5 percent. The fact that employee ownership is only a small portion of most

Table 11.9 Pension wealth: NBER employees and all households

	All NBER companies assets in all pensions[a]		NBER ESOPs assets in all pensions[a]		Wolff 2001 estimates of household pension wealth[b]	
	Mean	Median	Mean	Median	Mean	Median
Age 18 and over	$67,035	$34,006	$102,589	$31,738	$94,800	$10,900
Percent in employer stock	31.2%		71.5%			
Sample size	22,558		3,076			
Ages 47–64	$100,802	$49,875	$165,469	$54,409	$170,800	$50,000
Percent in employer stock	33.9%		73.7%			
Sample size	7,709		925			

Note: Sample is restricted as indicated in table 11.7.

[a]There are nine companies with majority-owned ESOPs. Assets include employer and other stock in ESOPs and 401(k) plans. Dollar values have been adjusted to 2001 levels for comparison with Wolff's figures.

[b]Value of employees' Defined Benefit and Defined Contribution pension plans. Wolff (2005, table 11).

workers' wealth, and is often distributed in proportion to pay that is itself unequal, indicates that employee ownership as currently practiced is likely to make only a modest difference in the distribution of wealth.

Finally, table 11.9 compares the mean and median pension wealth of employees in the NBER (full and ESOP sample) with Wolff's estimates of mean and median household pension wealth. Here again we run into the problem of inconsistent units of observation, and the comparison likely favors Wolff's measure because households may have more than one member with a pension plan and therefore more pension assets.

We expect pension values to be higher for the NBER ESOP companies than for all NBER companies because ESOPs operate as retirement plans, with stock accumulating in them until the employee retires (or otherwise leaves the company). The mean pension wealth for the ESOPs is just a little higher than the mean in Wolff's Survey of Consumer Finances data, but the *median* is almost three times higher ($32,000 versus $11,000), suggesting that companies with broad-based employee ownership do benefit mid-level or median employees in their effect on the distribution of pension assets. Turning to the "pre-retirement," forty-seven to sixty-four age group, however, we find no practical difference between the median pension assets of employees of these ESOPs versus Wolff's households.

11.7 Conclusion

These results indicate that shared ownership builds wealth for employees. The average value of company stock held by employee owners in the nine majority-owned ESOP companies is almost $86,000, and the average value

of stock options held by option holders (if exercised on the day of their survey) in the five broad-based stock option companies is almost $283,000. Median holdings are considerably lower ($22,800 and $93,400, respectively), and nonmanagers' holdings are only about one-third those of managers, on average. Nonetheless, comparison of the NBER and GSS data sets shows that if all employees worked for companies with broad-based employee-ownership plans like the NBER firms, a lot more employees would own a lot more company stock.

There is no evidence that employees' ownership gains are offset by lower wages or benefits. While increases in company stock ownership appear to be partially offset by decreases in other wealth, there is a substantial net gain in total wealth resulting from increases in employee ownership—with a one dollar increase in ownership associated with almost a one dollar increase in total wealth. We find some evidence here that the general pattern of capital ownership and income going almost exclusively to the top 10 percent is partly reversed by employee ownership, with expanded stock ownership among those at the middle and bottom of the wealth distribution.

While employee-ownership inevitably increases employees' firm specific risks in proportion to the value of company stock owned, the risk-reward trade-off appears to be manageable (chapter 3, this volume). Since employee ownership does not cause a substantial decrease in ownership of other assets, this increased risk applies only to assets that employees would not have if they worked at a non-employee-ownership company. In addition, employee ownership is only a small portion of wealth for most employee owners, consistent with the bounds suggested by portfolio theory (assuming other assets are properly diversified). These results indicate that broad-based employee ownership may be raising wealth for many workers without unduly increasing worker risk.

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