Introduction

Richard Freeman, Joseph Blasi, and Douglas Kruse

Almost half of American private-sector employees participate in "shared capitalism" -- employment relations where the pay or wealth of workers is directly tied to workplace or firm performance. In many of these firms employees also participate in employee involvement committees or workplace teams that help management make decisions regarding the economic activities of the firm. Employees in other countries have similar types of pay and work arrangements but the US is arguably the world leader in shared compensation and decision-making arrangements (Freeman, 2008).

This book presents papers from the NBER's Shared Capitalism Research Project that investigated the shared capitalist part of the US economy.[1] To determine how shared capitalist arrangements work and how they affect workplace outcomes we developed two new data sets and analyzed some existing data sets. Our main data innovation was a survey of over forty thousand employees in 14 companies and 329 worksites that have a variety of shared capitalism programs. While our sample of companies is small for a quantitative study, it is large for a qualitative case study, and while the firms are a non-representative sample of those engaged in shared capitalist activities, they mirror how shared capitalism is implemented in most mainstream U.S. corporations. About ninety percent of the workers surveyed are in five Fortune 500 multinational companies where the employee ownership accounts for a minority

[1] On the development of shared capitalism in different sectors of the U.S. economy with related research, see Blasi (1987) on ESOPs, Blasi (1988) on employee ownership in privately-held firms, Blasi and Kruse (1991) on employee ownership in publicly traded corporations, Kruse (1993) on profit sharing, and Blasi, Kruse, and Bernstein (2003) on the high technology sector with special emphasis on stock options.

stake of the firms equity, where workers elect no board representatives, and where the employee ownership is combined with cash profit sharing, gain sharing, or broad-based stock options. About 10% of the workers surveyed are in 9 medium sized ESOP firms with under 1000 workers that are in most cases 100% employee owned but where non-management employees at times have some board representatives but not a majority of any of the boards.

We asked workers about their experiences with their firms' programs and other aspects of their jobs. We also placed questions about shared capitalism on the nationally representative General Social Survey (GSS), in 2002 and 2006.[2] Since standard labor force surveys do not ask workers about shared capitalist forms of pay, the GSS provides the best available estimates of the extent of shared capitalism among US workers.

Our analyses show that shared capitalism modes of compensation are spread broadly throughout the US economy and that shared capitalism is linked to worker behavior likely to raise productivity and profits, such as reduced turnover and greater willingness to work hard. We also find that shared capitalism is linked to outcomes that benefit workers, such as better pay, job security, and perceived positive relations with the employer. Workers with more intensive shared capitalist programs report that co-workers are more interested in the firm's performance and are more cooperative than workers in firms with less intensive programs.

But while shared capitalism appears beneficial for workers and firms on average, our analyses also show that it is not a magic potion that cures all economic ills. There is considerable variation in its effects across firms. The positive effects are contingent on an array

[2] The General Social Survey is conducted by the National Opinion Research Center of the University of Chicago and supported by the National Science Foundation, among other funders. It is widely viewed as one of the most valuable surveys for research purposes in the US. The Shared Capitalism segment appears in the 2002 and 2006 survey and is being planned for the 2010 survey. All the data are publicly available.

of human resource policies and workplace practices that give workers freedom from close supervision and create good labor-management relations.

Many economists and others are uneasy about shared capitalist arrangements. One reason for their concern is the free rider problem that arises whenever someone gains only part of the reward from their activity. Why should an individual give full effort in an N person firm if he or she gains only 1/Nth of the payoff from that effort? It makes rational "prisoners' dilemma" sense to shirk and reap rewards from the effort of others. By the free rider argument, shared capitalism should not succeed in motivating workers to do better. Another reason for concern is that shared capitalism increases economic risk by linking individuals' employment and wealth/income to the performance of their employer. When Enron went belly-up its workers lost not only their jobs but their retirement and other savings held in company shares. Similarly, when United Airlines went bankrupt, the airline pilots and machinists who had bought majority ownership were losers in the capital market as well as in the labor market By inducing workers to invest in their firm, shared capitalism can run counter to the investment precept that one should not put "all the eggs in one basket", though there are ways to limit the risk through diversification of portfolios.

Our analysis offers some answers to these concerns. On the free rider issue, we examine the hypothesis that workers' co-monitoring of fellow employees in shared capitalist firms is an important deterrent to free riding. Using a novel set of questions on workers' ability to observe co-worker activity and their response to shirking, we find that the vast majority of workers have a good idea of what fellow workers are doing (a pre-requisite for co-monitoring); that workers paid shared capitalist compensation are more likely than other workers to act against "shirking" by fellow workers; and that worker co-monitoring or anti-shirking behavior is associated with

higher worker effort and better workplace performance. Shared capitalist firms seemingly create a cooperative workplace culture that combats the free rider problem inherent in any group incentive pay scheme.

With respect to risk, we found that many workers are highly risk-averse but that even highly risk-averse workers prefer to receive some of their pay through shared capitalist arrangements. Given plausible risk aversion parameters and the thickness of asset markets, we estimate that by diversifying their portfolios, workers can hold a moderate amount of wealth in their employer without suffering great losses of utility due to risk. The average amount of share ownership or profit sharing in our data is on the order of the estimated tolerable level of risk, though there are workers who hold too much of their wealth in their firm.

The findings in the book show that shared capitalism is an important part of the US economic model. Its magnitude and success merits increased attention from businesses, unions, policy-makers, and social scientists, and from economic science more broadly.

What is shared capitalism?

We use the term "shared capitalism" to refer to a diverse set of compensation practices through which worker pay or wealth depends on the performance of the firm or work group.

Employee ownership. The extent of employment ownership varies from workers having complete ownership of the firm to owning a majority stake or a non-negligible minority stake, usually through a trust or other legal entity that votes the shares as a group. In the US one major form for employee ownership is the Employee Stock Ownership Plan (ESOP), which federal legislation established to allow companies to borrow money to fund worker ownership and repay in installments from company revenues. Under this scheme workers gain an ownership stake

without investing their own money to buy the stock. Partnerships are another major form of employee ownership.

Individual employee stock ownership. This refers to situations in which workers buy shares in the firm and vote those shares privately. American workers can purchase stock through their company 401k plan, a retirement plan in which they make pre-tax contributions from their pay. Sometimes firms match employee contributions to 401k plans with company stock. Workers can also buy shares of their firm on the stock market. Sometimes firms subsidize part of employee purchases of shares outside of retirement plans through Employee Stock Purchase Plans, which typically offer stock at a 10-15% discount to market. The United Kingdom tax code privileges this form of employee ownership.

Profit-sharing pays workers specified shares of profits when the firm makes money. The payments can be cash bonuses on a yearly or more frequent basis or can take the form of placing the workers' share of profits in a retirement plan (called "deferred profit-sharing"). Some firms pay profit sharing bonuses in company stock, so what is received as a profit share becomes employee ownership.

G*ain sharing* offers workers payments based on the performance of their work units rather than of the whole enterprise. These systems often measure performance in productivity or cost saving at a particular work site. One group of workers can benefit from their effort even if the firm does poorly or if other groups of workers are not meeting their targets. Non-profit enterprises, including government agencies, can do gain sharing while they cannot readily engage in profit sharing.

Stock options are a hybrid between profit sharing and employee ownership. A stock option gives the employee the right to buy stock at a set price anytime during a specified period

following the granting of the option. The employee gets the upside gain of a rise in the share price without the downside risk of losing part of their investment. High technology companies began granting stock options to a broad base of employees in the sixties and seventies. Start-ups without the resources to match the pay packages of large firms found that they could attract young highly educated workers through granting shares or options. In the 1990s-2000s some managers abused stock options for themselves by "backdating" the option to a period when shares were lower, which runs counter to the professed intent of options – to give managers incentives to make decisions that increase the long run value of the firm and thus its share price. When stock prices fell greatly other managers rewrote options at lower stock prices, which encourages excessive risk-taking as it reduces the loss to management of poor performance.

There are substantive differences between these forms of sharing the rewards and risks of business. Employee ownership can in theory give workers the power to make decisions that shareholders have in capital-owned firms. Beginning with Benjamin Ward (1958) and Evsey Domar (1966), economists have modeled how worker-owned enterprises might operate compared with other firms. Those models predict that the employee-owned firm will hire fewer workers and respond differently to changes in prices of output than traditional firms, at least in a short or medium time period. If firms can freely enter an industry, the models predict that worker-owned and capital-owned firms will reach the same equilibrium output and employment. Individual share ownership does not have clear consequences for the way the firm operates since individual workers almost never own enough shares to influence management decisions.

None of the 14 firms in our study are "worker-owned" in the strict sense of the theoretical literature. None have non-management employees representing a majority of their boards including those that are 100% employee owned. All of them have hierarchical management

teams. Workers participate in the firm's life mostly at the level of their jobs and departments.[3] Shared capitalism as it has developed in the US and elsewhere differs greatly from the simple economic models that have made some economists uneasy about the way these businesses operate.

Profit sharing and gain sharing give workers rewards for success without the ownership authority to make management decisions. This difference underlies Martin Weitzman's (1984) model of the share economy, in which profit-sharing makes the cost of labor completely flexible and gives firms the incentive to hire as many workers as are willing to take jobs. Heuristically, a firm that pays workers a fixed share of profits views workers as comparable to salespersons paid commissions. Since employing more sales workers should increase total sales, profit-sharing firms should want to hire as many persons as will accept jobs. Sales and profits will rise even as the increased number of sales workers drives down sales per employee and the earnings of workers. Firms will also have the incentive to hang onto workers if the demand for the firm's output goes down, leading to Weitzman's prediction that an economy of profit-sharing firms will have lower levels of unemployment and greater macroeconomic stability.

What unifies ownership, profit sharing, gain sharing, and stock options as "shared capitalism" is that in each case workers' compensation depends on the performance of their firm

[3] A random sample of ESOP (Employee Stock Ownership Plan) firms that tend to have high concentrations of employee ownership, and from which nearly all majority employee-owned and 100% employee owned firms come, found that the ESOP Trustee (often a bank trustee) votes the shares, not the individual workers. In only 14% of the cases do the employee owners instruct the trustee of the Employee Stock Ownership Trust how to vote their shares in board elections (NCEO 2007: 87). Our interviews with the major national associations of these firms could not elicit one example of an ESOP firm where non-management employees made up a majority of a firm's board of directors. The corporate governance patterns of majority and 100% employee-owned firms in the United States appear to have converged with the general pattern: single slates of directors put forward by management that are ratified by shareholders or their "trustees" with virtually no examples of corporate governance insurgency on the part of worker owners.

or workgroup. It is group incentive pay rather than individual incentive pay. By defining shared capitalism in this way, we exclude another prominent form of worker ownership of capital – pension fund ownership of shares (Drucker, 1976).

Why shared capitalism is attractive

Some economists, Alfred Marshall, John Bates Clark, and James Meade among others, have looked favorably on shared capitalist arrangements. So too have many business leaders and governments.[4] The US and many other countries give tax incentives to promote worker ownership. The EU directed attention to profit sharing and employee ownership in its 1991 Promotion of Employee Ownership and Profit Sharing report (the "Pepper Report"). It called on member states to promote participation by employed persons in profits and enterprise performance. France requires that some firms pay part of wages in profit shares. What makes shared capitalism attractive to economists, business, labor, and governments is the belief that when workers have a stake in the financial performance of the firm, they will create better outcomes than if the workers were just "paid hands".

The outcome that receives the most attention is *productivity.* Tying workers' pay to workplace performance is expected to induce workers to increase effort, commitment, and willingness to share information, and to decrease turnover and absenteeism, particularly in teamwork settings where cooperation and information sharing among employees is important. The resultant growth of productivity and profits creates the potential for the proverbial "win-win" situation with workers and the firm sharing the benefits of the increased production. Most

[4] Fear of communism and unionism led John D. Rockefeller of Standard Oil and other corporate leaders to form a Special Conference Committee that later became The Conference Board, whose agenda included profit sharing and employee stock ownership, though perhaps more to gain the loyalty of workers, than in the belief that these systems would improve company performance. Princeton University's Industrial Relations Section studied this phenomenon. (see Foerster and Dietel 1926.)

quantitative studies of shared capitalism estimates its impact on productivity by matching information on company stock and profit plans to publicly available measures of performance. They find the expected positive relationship between shared capitalism and performance (Weitzman and Kruse, 1990, Kruse and Blasi, 1997). But studies show considerable variation in the effects of shared capitalist arrangements on outcomes, with many workplaces having little or no improvement in output or labor productivity. The average effect is positive because shared capitalism is rarely associated with low or declining productivity.

The use of stock options and share ownership in high tech start-ups in Silicon Valley and elsewhere directs attention at the putative impact of shared capitalism on another key aspect of firm performance -- its *innovativeness*. Employees whose pay or wealth is tied to the firm's performance are more likely to suggest ideas for innovative products or production technologies, and to help implement these ideas.

In one of the earliest analyses of employee ownership, John Bates Clark argued that, "All the workmen with their employers constitute, collectively, a good entrepreneur" (1886: 183-184), but he had no supporting evidence for this claim.[5] Similarly, to the extent that shared capitalism distributes decision-making and the rewards from good performance among a larger group of employees than conventional firms, shared capitalist firms could be less prone to the malfeasance in corporate governance that marred corporate America in the 1990s-2000s. More workers will know how the firm is truly doing and management will have a smaller incentive to

[5] Taking the opposite side, the first President of the American Economic Association, General Francis Amasa Walker, who later became head of MIT, expected worker shares in performance would increase worker effort, but thought it failed because of the "lack of an entrepreneur" (1876). Walker was referring to companies that were mainly owned by their workers and not to established capitalist firms with significant employee ownership, of the type found in the US today. John Bates Clark saw a role for employee ownership and profit sharing in firms but did not rule out it also having outside investors.

cook the books on its behalf since it is sharing ownership with workers as well as with non-employee shareholders. To the extent that profit sharing helps stabilize employment or that employee ownership gives employees a means to resist job-destroying takeovers or downsizing, it also has the potential to ameliorate fluctuations in employment.

What about the effect of shared capitalism on workers? Many analysts and observers believe that shared capitalism improves employee well being. It gives worker greater participation on their jobs, is associated with increased skills, and improves labor-management cooperation, and job satisfaction. By giving workers across the economic spectrum a share of profits and company stock, moreover, shared capitalism could mitigate the rising inequality in income and wealth that has characterized the US since the 1970s and 1980s. The reason is that capital income has risen more than wages, with labor's share of national income falling in the 2000s, so that those with a share of business profits or appreciation in the value of equities or real estate have done better than wage earners.[6] If the boards of directors of employee owned companies see a business purpose for sharing profits and ownership more widely, employee ownership may also help control runaway CEO pay.

Finally, many advocates of shared capitalism view it as a logical extension of political democracy. Albert Gallatin, Jefferson's Secretary of Treasury and one of the signers of the Declaration of Independence, promoted profit sharing for that reason.[7] Senator Russell Long favored incentives for ESOPs in federal law to broaden the wealth distribution and to give more Americans direct stakes in the economic system. Political scientists argue that democratic

---

[6] The overall return to capital, reflecting profits and company stock values, has risen since the 1970s while inflation-adjusted wages for middle- and low-income workers have stagnated Mishel et al., 2007: 81, 85, 119, 121.

[7] Gallatin wrote 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).

workplace structures produce skills that workers can carry to social and political activities outside the workplace.[8]

But, there are weaknesses to shared capitalist arrangements. The skills needed to manage a firm with significant employee ownership and profit sharing are likely to differ from the skills needed to manage a standard firm, which may limit the ability of those enterprises to recruit top managers, although this issue has not been studied. Firms that choose shared capitalist structures to gain the tax breaks associated with forms such as ESOPs may fail to get the economic gains that accrue to firms that introduced it for business reasons. Some on the left have criticized shared capitalism as simply a management trick to speed up work and effort.

A balanced assessment of shared capitalism must take account of its drawbacks as well as its virtues. To be helpful to participants, moreover, any analysis should also consider possible ways to limit the drawbacks and strengthen the virtues.

The NBER Project

At the heart of this book are the two new surveys of workers referenced earlier. The *NBER company survey* administered 80-100 questions to workers in 14 firms who had some shared capitalism modes of compensation.[9] We used web-based surveys, and where necessary,

---

[8] Pateman (1970), Mason (1982), and Dahl (1985). See Dow (2003: 23-44) for a review and discussion of these and other perspectives.

[9] We included special questions of concern to each participating company and provided them analysis of those questions gratis. Our measures of shared capitalism included: for employee ownership, ESOPs, direct stock ownership (worker purchases directly from a stock exchange), company stock in 401k plans and deferred profit sharing plans, Employee Stock Purchase Plans, and grants of stock; for stock options, stock option plans; for profit sharing, cash and deferred plans; and gain-sharing. This dataset comprehensively measures every identifiable form of profit, equity, and bonus sharing.

paper and pencil surveys as well to reach these workers.[10] Our survey garnered 41,206 employee responses, which makes this the largest single data set on workers in shared capitalist firms. Most of the workers (31, 994) were based in the United States. The other countries are represented because three U.S. multinationals participated in the study and encouraged their workers around the world to take the survey. The companies vary in industry group and size. Eight are manufacturers, seven with a workforce ranging from 250 to 5000, and one large multinational manufacturer with approximately 40,000-75,000 employees.[11] There are two high technology firms, one with a workforce on the order of 25,000-50,000 and one with a workforce of close to 1000 employees. There is one large national financial services firm with a workforce of 10,000-20,000. There are three service firms with workforces of approximately 500, 2000, and 11,000 employees. Three of the firms are in the Fortune 500.

Initially, we sought to survey paired comparison competitor companies for each company in our data set, but we found that this was a fruitless endeavor. Many firms similar to those in our sample have some shared capitalist compensation programs as well – profit-sharing instead of employee ownership or gain sharing instead of profit sharing. Managers in firms that had no programs did not find attractive the idea of being controls for a competitor. In any case, the shared capitalist arrangements differed enough among our 14 firms and among workers and establishments within those firms to allow us to analyze the effects of these modes of compensation and other management labor practices on outcomes.

---

[10] The web surveys were on our server, not on the company server, so that workers knew this was not a company activity. When we administered surveys in person, to protect confidentiality the surveys were gathered by either members of our team or a committee of non-management employees, who sent them to the NBER research team for analysis. The response rate among employees averaged 53% across the 14 firms.

[11] We give ranges so as not to risk someone identifying the firms.

The principle drawback of the NBER firm survey is that it is a self-selected nonrandom sample of US establishments. To the extent that our questions relate to issues that face all firms and reflect basic human nature, there are reasons to expect any findings to generalize to a broader population. The empirical study of management and firm behavior and much of psychology is replete with in-depth and useful analysis of nonrandom samples, often of just a single firm or person. Still, we sought a way to address the selectivity problem. Our solution was to place a special module on shared capitalism on the nationally representative General Social Survey (GSS) in 2002 and 2006. We placed questions on the GSS about the incidence of shared capitalism and replicated the questions from the NBER company survey on whether workers observed how fellow employees performed and how they reacted to someone not working as hard as they should. Thus, the GSS provides a validation check on some results in the company survey. It also provides information on the "control" group of workers without shared capitalist arrangements that we could not obtain from our firm surveys.

The Main Findings

As an introduction to what the reader will find in the remaining chapters of this book, we summarize below the main findings in the form of six cross cutting "take away messages". Exhibit 1 lists each of the messages and gives some related information on the underlying findings. To see how the researchers obtained the findings and to assess the strengths and weaknesses of the analyses that developed them, we direct the reader to the chapters themselves.

There is, however, one difficulty that runs through many of the analyses of the NBER company data sets that we flag here. The difficulty is that correlations obtained at the level of individuals in our data set may not hold at the level of worksites where shared capitalist and other labor policies are implemented. For example, one worker could report lots of shared

capitalist pay and work effort at his firm while a co-worker could report little shared capitalism and little effort. The result would be a strong positive correlation between shared capitalism and reported effort among individuals in the data set but no correlation at the possibly more appropriate establishment level of analysis. Readers familiar with the ecological correlation bias (in which correlations among aggregate units may not carry over for individuals within the units) can view this disaggregation correlation bias as a parallel problem in the opposite direction. To deal with it, we aggregated individual worker reports into worksite level averages and examined the link between the establishment level variables. To the extent that some of the individual variation within an establishment reflects real variation in conditions – e.g., one part of the establishment has gain sharing or a stock option plan and another part does not – the results from the establishment level analysis may understate the true effects of shared capitalism while the results from analysis of individuals may overstate it. Where appropriate, the chapters test the link between shared capitalist pay and outcomes at both the individual and establishment levels.

1. Shared Capitalism is a significant part of the US economic model

For many years most economists viewed shared capitalism as a niche part of the capitalist system. Worker-owned firms, firms with significant minority employee ownership stakes, or profit-sharing might attract the interest of a small band of aficionados but most of the profession viewed the topic as too narrow and small to be worth broad scholarly attention. Many expressed suspicion about the seeming positive effects of shared capitalism on economic performance. One comment we often received was “If this stuff is as good as some of the research indicates how come all firms don’t choose employee ownership/profit-sharing or grant stock options to all workers?” Another line of critical commentary argued that shared capitalism missed the boat because what really matters in most businesses is top management: “If you want to know why

firms succeed, study the superstar CEOs not regular employees. The CEOs are paid huge sums because they are the key to enterprise performance."[12]

The evidence on the extent and impacts of shared capitalist arrangements presented in this volume refutes such dismissive views. As noted in the opening paragraph almost half of US employees participate in some form of shared capitalism. The 2006 GSS estimates that 47% of workers covered by at least one such form, with 38% having profit sharing, 27% having gain sharing, 18% owning their company's stock, 9% holding company stock options, and 5% receiving company stock options in any year. Based on these figures shared capitalism covered 53.4 million American workers.

There is also a substantial amount of overlap among shared capitalism plans. Over three-fourths of workers who own company stock also have profit sharing or stock options, and workers with profit sharing often have other programs as well. These patterns suggests that some firms combine the longer-term incentives associated with ownership or deferred profit-sharing in pension accounts with shorter-term incentives of profit or gain sharing bonuses, presumably to maximize worker commitment and effort over different time horizons.

The data also show that shared capitalist arrangements cover much of the economy, though they are more prevalent in some sectors than others. For example, employee ownership ranges from 10% of employees in non-computer services to 43% of employees in computer services. It is more common in larger establishments, in jobs where it is easier to see how other workers perform, and in jobs with teamwork, low levels of supervision, employee involvement,

---

[12] Identifying superstar business leaders is difficult and finding out what they do and whether the huge amounts they make reflect their marginal product is even more difficult. One effort to identify the stars on the basis of business awards and to examine their activities finds that after the CEO gets fame as a superstar, performance falls and shareholders lose. See Malmendier and Tate (2008).

employer-sponsored training, and job security. Except for workers making below $30,000 per year, shared capitalist compensation is broadly distributed among workers by income and demographic group. Union members are less likely than non-union members to be part of profit-sharing and gain-sharing plans but are more likely to hold company stock and stock options (Kruse, Blasi, and Park, chapter 1).

Shared capitalism was not always such a large part of the US economic system. In 1886 John Bates Clark wrote that the test of the economic efficacy of what was then called cooperation was how the firms grew relative to other types of enterprises. For decades shared capitalist modes of compensation and work did not expand their share of the market, justifying the dismissal of these institutions as interesting but unimportant aberrations. But from the 1970s to the present, shared capitalist modes of compensation have grown rapidly. Data from diverse administrative sources shows that shared capitalism increased its reach in the economy in the latter part of the 20th century (Dube and Freeman, chapter 5, figure 1). While some of this growth – of ESOPs, in particular[13] – depends on tax advantages given to that form, firms introduced other modes of shared capitalism without any such support. Shared capitalism has also increased its importance in the United Kingdom (Bryson and Freeman, chapter 6) and in many other advanced countries, though it seems most successful in the US. Shared capitalism has met Clark's market test.

2. Worker co-monitoring helps overcome free riding

The notion that workers will co-monitor themselves when their pay depends on the performance of the work group and act to reduce free riding behavior has long been in the air in

[13] Between 1975 and 2005 the number of workers covered by just ESOP plans alone increased from 250,000 to 10,150,000. This does not include the many other types of employee ownership, profit and gain sharing, and broad-based stock options which have also grown.

discussion of employee ownership and profit sharing.[14] If worker A's pay depends on how worker B performs, then A might be expected to intervene when B is not working up to speed. What was missing was evidence that co-monitoring is extensive and that it helps overcome free-riding and in so doing contributes to the performance of shared capitalist enterprises.

The co-monitoring modules in the NBER 14 firm survey and in the GSS survey fill some of this lacuna in knowledge (Freeman, Kruse, Blasi, chapter 2). Asked how well they could observe what co-workers were doing at their workplace, most workers reported that they had good knowledge of how co-workers performed. About two-thirds rated observability above 7 on a scale from 0 to 10. Asked what they would do if they saw a fellow employee not working up to speed, about one-third of workers reported that they would speak to the shirker or report the behavior to a supervisor. Many said that they had done that in the past. Critical to our analysis, proportionately more workers paid by some form of shared capitalism said they would act against a shirker than did other workers. Workers with larger profit-sharing or gain-sharing bonuses and those who recently received a stock option grant were the most likely to so act.

Looking at self-proclaimed motivation, workers paid under shared capitalist compensation were more likely than other workers to explain their intervention on the grounds that the shirking behavior was costing them money. In establishments where workers as a group reported more anti-shirking behavior, they also reported that co-workers worked harder and were more encouraging to each other, which produced a more effective facility, than did workers in

---

[14] See Bonin and Putterman (1987) and Nalbantian (1987: 26). Tracing the idea back further, Columella, the most important historian of Roman agriculture in the first century A.D., described how free tenant farmers who had access to the full profits of their labor were more productive than other forms of labor when the owner of the lands was not available to monitor the work on the lands directly. Columella also stressed the importance of the owner treating the worker courteously and with good will while being flexible and respectful of their rights, and having a long-term relationship with the free tenant farmers. (See Columella 2001: Book I: VI, pps. 79-83.)

other establishments. Finally, our data show that anti-shirking behavior and the effect of shared capitalism on that behavior depend in important ways on other workplace labor practices and policies – a point we develop as take-away message 6 below, as it runs through virtually every analysis in the book.

As we were conducting our survey of the workers of one company, serendipity provided a natural experiment which gives us an independent "before/after" test of conclusions based on cross-section comparisons of workers with more/less shared capitalist pay. One firm announced that it was going to introduce a new profit-sharing plan shortly after its workers took our survey. We asked if we could conduct a follow-up survey after the firm put in the new scheme. The firm agreed, which gave us exciting and unanticipated natural experiment. There were two outstanding differences between the before and after surveys: first, the proportion of employees who said they would talk to shirking co-workers went up; second, the proportion who said that they would do so because shirking affected their bonus went up also. There was no difference in the other relevant responses.

Our analysis illuminates only part of the co-monitoring story. It does not explore in depth the factors that lead one person to act against a shirker instead of seeking to free ride off of someone else's intervening. It does not measure free riding behavior before and after co-monitoring becomes important. What it does do is demonstrate that co-monitoring is real, measurable, and responds to the incentives of shared capitalist compensation

3. The extra risk of shared capitalism is manageable.

Some analysts view risk as the Achilles Heel of shared capitalism. Workers in shared capitalist firms invest too much of their wealth in the firm, contrary to the principle of diversification, and thus take on too much risk for their own good. Evidence that a sizable

number of workers in the US place large fractions of their wealth in company stock shows that this is a real problem. In a survey of 401(k) plan participants Hewitt and Associates found that more than 27% of the nearly 1.5 million employees surveyed who could invest in company stock had 50% or more of their 401(k) plan assets invested in those shares (Sammer, 2006). In the NBER firm sample, a large proportion of workers held too much of their wealth in their firm to meet any plausible diversification strategy. The reason workers invest heavily in their own firm is not because they are risk-lovers. Most workers in the NBER survey are risk averse, and the more risk averse are less likely to participate in shared capitalist modes of compensation than other workers. Workers seem to find the notion of being in an ownership or shared capitalist position at their workplace exceedingly attractive. Two-thirds of the most risk-averse employees want shared capitalism as part of their pay package (Kruse, Blasi, Park, chapter 1).

Blasi, Kruse, and Markowitz (chapter 3) ask whether the risk in shared capitalism makes shared capitalism unwise for most workers or whether the risk can be managed to limit much of the loss of utility from holding the extra risk. They create an index of financial security based on how much each worker's wealth represents relative to their annual salary and whether the worker has reason to believe that the firm substitutes shared capitalist compensation with the associated risk for normal fixed wages. Workers who feel financially insecure exhibit less of the positive outcomes associated with shared capitalism and are less interested in receiving more profit sharing or employee ownership in their workplaces than other workers.

Portfolio theory suggests that any risky investment – including stock in one's company – can be part of an efficient portfolio as long as the overall portfolio is properly diversified. Someone with considerable assets in their firm should invest other parts of their portfolio in assets negatively correlated with the firm's share prices. The loss of utility from the diversified

portfolio should be balanced against the gains from shared capitalism to determine the "optimal" investment strategy. In the case of 401ks, in 2006 sixteen percent of firms that offer company shares in 401k plans chose to limit the amount of investment in their shares or eliminate it as an option altogether (Sammer, 2006). Blasi, Kruse, and Markowitz stress that a better strategy for the firm would be to personalize individual portfolios on the basis of worker characteristics and preferences. Financial advisors with information on the worker's entire investment portfolio could develop investment strategies that would diversify the portfolio in ways consistent with individual risk preferences. Given estimates of risk aversion parameters, workers could prudently hold up to 10% to 15% of their assets in ownership or related financial linkage to their firm with only a modest loss in utility due to risk. Finally, insecurity about shared capitalist risk and its effect on behavior seems to depend on other workplace labor practices and policies.

4. Shared capitalism improves the performance of firms

The sine qua non in most economics and business discussions of shared capitalism is that it improves the performance of firms. Four chapters in Shared Capitalism at Work examine the relation between shared capitalist modes of pay and the economic outcomes of firms. Chapters 4 and 7 use the NBER firm survey and the GSS survey. Chapter 5 uses two other data sets for the US and chapter 6 uses a data set for the United Kingdom to estimate the impact of shared capitalism on firm outcomes. By estimating similar models with different data sets and in the UK as well as in the US we test the generality and robustness of our findings. Results consistent across data sets and economies presumably reflect the most fundamental aspects of economic behavior. Results that vary across data sets/countries suggest more subtle relations, in which unobservable factors may be influencing the observed patterns.

Blasi, Freeman, Mackin, and Kruse (chapter 4) find that measures of shared capitalist pay are associated with a host of workplace outcomes beneficial to firms in the NBER firm and GSS surveys. More workers report that they are "not likely to search for a new job", "would turn down another job for more pay", have "loyalty to the company", are "proud to be working for the employer" when they are paid with shared capitalist compensation than otherwise. The workers with shared capitalism are also more likely to report that "co-workers work hard", that they personally "are willing to work harder to help the company", that "co-workers have enough interest in company issues to get involved" and are more likely to make suggestions to improve the business. The only outcome that is adversely linked with shared capitalism is number of days absent, which is higher with shared capitalist compensation than otherwise, but not when shared capitalism is accompanied by complementary workplace practices. The impacts of shared capitalism are largest with employee ownership. The impacts increase with the size of profit sharing and gain-sharing bonuses.

To illuminate the motivation behind the positive worker responses to shared capitalism, we asked workers on the NBER survey how their desire to improve the business success of their employer would be affected by various forms of shared capitalist incentives. Employees said that cash incentives and stock options would motivate them the most, followed by shares in the ESOP. Respondents said that they would be motivated less if the shared capitalist policy involved buying shares with company discounts and said they would be motivated the least by buying shares in the open market. The implication is that the context or form in which the firm makes its shared capitalist compensation greatly influences how shared capitalist pay affects behavior. Consistent with this Blasi, Freeman, Mackin, and Kruse show that the effects of

shared capitalism on the diverse outcomes given above vary depending on other labor policies and practices.

Dube and Freeman (chapter 5) examine the links between modes of shared compensation in pay and employee involvement and other forms of shared decision making with various measures of productivity in the 1994-95 Workplace Representation and Participation Survey (WRPS) that asked workers about their workplace activities and modes of compensation, and in the 2003 California Establishment survey that asked firms about compensation and decision-making practices. They find weaker links between shared capitalist modes of pay and worker behavior likely to benefit firms than are found in the NBER and GSS surveys. Shared capitalist pay has positive but generally statistically insignificant effects on behavior likely to raise firm output. The labor practice that has a big effect on behavior is an employee involvement committee, which increases employee participation in decision-making. Shared capitalist forms have their impact on outcomes by augmenting the effect of involvement committees. For instance, in the WRPS worker survey an employee involvement committee by itself increases the probability that a worker will likely stay with the firm by 0.10 percentage points, whereas combined with profit sharing and employee ownership, the effect is increased to 0.18 percentage points (chapter 5, table 4). Similarly, in the establishment-based data set, having an employee involvement committee by itself increases productivity by 0.12 percentage points, whereas combined with profit sharing and employee ownership, the productivity effect nearly doubles to a 0.23 percentage point gain.

In the late 1990s the United Kingdom enacted tax laws that privileged employee share ownership at the expense of profit-related pay, which it had previously tax-advantaged. One reason for the change was the belief that firms were exploiting the profit-related pay system by

claiming the tax break when in fact they were not truly creating pay that varied with profits. Most studies of shared capitalism linked the mode of wage payment to management perceptions of the productivity of their workplace and found modestly positive effects, which however differed over time and among studies. Bryson and Freeman (chapter 6) supplement management reports on labor productivity with data on sales per employee and value added per employee data for establishments in the 2004 British Workplace Employment Relations Survey (WERS) in the period following the change in tax laws. They find that stock ownership plans are positively correlated with productivity while other forms of shared capitalism have modest and generally not significant effects. But, as in analyses of US data, the biggest effects occur when shared capitalist forms of pay are combined with policies that increase worker decision-making. They reference a UK Treasury study of a much larger sample of firms that yields consistent results.

As information and knowledge work have moved to the fore of economic activity in advanced economies, it is important to determine how well, if at all, shared capitalism fits in the this "new economy". The NBER survey contained a module of questions focused on innovative activity by workers. It asked workers, for instance, whether they "would be willing to be more involved in efforts to develop innovative products and services" and whether in their firm "Innovative ideas are carefully considered and fairly evaluated." Using the largest company in the NBER dataset, with over 27,000 employee respondents and 280 different work sites in 22 countries, Harden, Kruse, and Blasi (chapter 7) examine the relation between workers engagement in innovative behavior and shared capitalist rewards. Workers with shares in the firm perceive a more innovative culture and have a greater willingness to engage in innovative activity. The combination of shared capitalism and high performance workplace policies had the strongest impact on innovation culture and willingness to innovate. This is true for both a

measure of coverage by different policies, and a measure of the effectiveness of high performance policies in one's immediate work group or team.

In sum, differences in the source and type of data notwithstanding, these chapters tell a consistent story that supports and enriches the earlier production function analyses of the relation between shared capitalism and company performance of firms, and show that its effects vary with other aspects of the firm's policies and practices.

5. Shared capitalism benefits workers

The four chapters of the book that examine the relation between shared capitalism and worker well-being show that shared capitalism benefits workers along a host of dimensions. Shared capitalism is associated with better working lives and greater wealth relative to otherwise comparable workers paid by conventional means. Most workers appear to have sufficiently accurate information about shared capitalist compensation to motivate the various behavioral responses found throughout the book. At the same time, because shared capitalism does not cover many of the lowest paid workers it does little to reduce earnings inequality.

To begin with, workers with shared capitalist modes of pay report better outcomes on both the NBER firm survey and the GSS in such areas as participation in decisions, management treatment of employees and supervision, formal and informal training opportunities, pay and benefits, co-worker relations, job security and labor management-relations broadly (Kruse, Freeman, Blasi, chapter 8). Profit sharing is most consistently linked to such positive outcomes though gain sharing, stock options, and employee ownership also affect outcomes positively. For some outcomes the positive effect is related to the workers' being covered by a policy (e.g., being eligible for profit sharing, or being an employee-owner) but for other outcomes the effect is tied to the size of the financial stake involved (e.g. size of the most recent bonus, or value of

employer stock or potential profit on stock options). Workers report higher job satisfaction when shared capitalism is combined with high performance work practices and low supervision; and report high participation in decisions and satisfaction with participation under similar circumstances. By contrast, the combination of close supervision with shared capitalism has negative effects on almost every outcome. And the impacts of shared capitalism are diluted for workers who believe that they are paid below the market rate for their job. This presumably reflects worker concern that shared capitalism has reduced fixed pay with less desirable variable pay. In the WRPS employee involvement has a greater impact than shared capitalist forms on worker satisfaction related outcomes, as it did on productivity, with shared capitalism substantially augmenting the effect of involvement on such outcomes as satisfaction with influence at the workplace, job satisfaction, trust in the firm, and assessment of management (Dube and Freeman, chapter 6). Overall the results in the various studies support the idea that workers gain by sharing, but that the effect depends on other workplace policies as well.

Workers' knowledge of the benefits their firm offers them (Gustman and Steinmeier, 2001, Chan and Stevens, 2003) and of labor protections more broadly (Freeman and Rogers, 2006) is often sparse and in some cases inaccurate. In the case of pension rights, Chan and Stevens have found that inaccurate understanding of pension systems leads some workers to choose their retirement in ways against their self-interest: they choose optimally on the basis of their inaccurate knowledge of the plans. Given this finding, Budd (chapter 9) examined whether employees in the NBER firm survey had accurate information about the shared capitalist forms of compensation at their firm by comparing their reports to company information about the plans. This comparison found that 18-25% of employees reported involvement in company plans that differed from company reports on whether they should or should not participate on the

basis of the characteristics of the plans. At first, this seemed consistent with the pension results as reflecting employee ignorance about the participation, which should dampen the effects of company plans on firms and workers. But at our research conference, company representatives said they were unsure about who is covered by their own plans, particularly at the establishment level. Thus, the differences between what workers said and what we garnered from the firms appears to reflect both inaccurate worker information and management uncertainty about the implementation of plans.

Stories about ordinary workers who became millionaires through shares in a small start-up or a growing firm that prospered abound in Silicon Valley and related places. Almost surely most workers in shared capitalist enterprises are not so lucky, but employees with ownership stakes do develop on average greater wealth as a result of their ownership than do employees in other types of enterprises. In the NBER firm survey employee-owners have an average stake of nearly $62,000; in the GSS employer owners report nearly $48,000 in wealth from their firm. Stock option holders have an average $283,000 in potential stock option profits if their options could be sold. While in some cases these stakes substitute for other wealth, Buchele, Kruse, Rodgers and Scharf (chapter 11) indicate that employee ownership does not generally come at the expense of pay and other benefits and appears to add to employees' wealth on average. Comparisons of the distribution of stock between the NBER company data and national data show that broad-based employee ownership plans expand stock ownership for worker in the middle of the distribution. Employee ownership constitutes about 5% of the median employee's wealth in the NBER companies, which means that it has a limited impact on the overall wealth distribution, but at the same time does not give the median worker an unduly risky portfolio.

If all workers were equally covered by shared capitalist modes of pay and if firms with shared capitalist compensation had lower inequality among their employees than other firms, then shared capitalist pay would likely be associated with lower overall inequality. In fact, shared capitalist arrangements are disproportionately distributed in the economy. While there is little difference by gender in participation in these plans, African Americans and men with disabilities are less likely to be paid by shared capitalism than other workers. The financial values of capital income accounts are also lower for some of these groups. The primary reason for this stratification is the different distribution of persons among occupations. At the same time, shared capitalism and the employee involvement that often accompanies it appear to affect similarly the behavior and attitudes of workers with different demographic characteristics, as found by Carberry (chapter 11). Thus, firms can expect reductions in turnover, increased loyalty to the firm, increased willingness to work hard and related behaviors to improve if shared capitalist pay arrangements were extended to groups underrepresented in current plans.

6. Shared capitalism complements other labor policies and practices

The single overriding empirical result in this volume, which shows up in virtually all outcomes and data sets, is that combinations of policies – shared capitalism, employee involvement, and other positive labor practices – are complementary. There are some independent effects of shared capitalism but it is the combination of compensation and labor policies that seem to be the key feature of shared capitalism's success.

The evidence for complementary is two fold. First, we find that firms with shared capitalist pay are more likely than other firms to have employee involvement committees and to devolve decisions to workers and other policies associated with high performance workplaces (Kruse, Blasi, and Park, chapter 1, Dube and Freeman, chapter 5; Bryson and Freeman, chapter

6). Second, as noted in preceding summary points, we find that the combination of shared capitalist pay and other policies has a greater impact on outcomes than policies taken separately. Workers are more likely to undertake anti-shirking behavior when shared capitalism is combined with higher trust in management, low levels of supervision, high performance work policies, and wages at or above market levels (chapter 2). Workers in workplaces with poor employee relations and a lack of high performance work policies view their economic position as inherently more risky and are less positively inclined toward shared capitalist modes of pay (chapter 3). Workers with shared capitalist practices and high performance work policies, low levels of supervision, and fixed wages that are at or above the market level had lower expected turnover, and higher loyalty, higher willingness to work hard, and a greater frequency of suggestions (chapters 4, 7). In the UK and US establishment production function data, the combinations produce higher productivity (chapters 5, 6). Similarly, workers in firms that combine shared capitalism with other practices report greater participation in decisions, management treatment of employees and supervision, formal and informal training opportunities, pay and benefits, co-worker relations, job security, and job satisfaction (chapter 5, 8).

The interaction of the effects of shared capitalism with other corporate policies suggests that the various shared capitalist and other policies may operate through a latent variable, "corporate culture".

Conclusion

The findings summarized above give a favorable picture of shared capitalism. Firms have managed to overcome the incentive to free ride that threatens to undermine any form of group pay to increase the shared capitalist modes of pay to nearly half of the US work force at the turn of the 21st century. While some workers hold too much wealth in their firm, the median worker

who receives shared capitalist pay does not do so. Diversification can reduce the potentially excessive risk of linking labor market and capital market outcomes in the same firm. The chapters on workplace performance show substantial and statistically significant positive relations between shared capitalism and almost all outcomes. In most cases, the biggest effects come when shared capitalism is accompanied by other identifiable policies. The chapters on worker outcomes tell a similar story about the benefits that accrue to workers. Overall, the volume shows that shared capitalism works best when it combines monetary incentives with employee decision-making and personnel and labor policies that empower and encourage employees.

The shared capitalism vision of the US economy differs in important ways from the vision of capitalism as dependent primarily on super-star entrepreneurs and CEOs. Our analysis differs in important ways from the economic theories that stress the behavior of the super-star manager over that of workers more broadly or from theories of the firm that hold that profits should go to a central owner for optimal incentives to monitor work.[15] But to the extent that workers monitor workers better than do managers, and that shareholders cannot write contracts that align management interests with their interests, much less with the interests of workers, shared capitalist modes of pay may offer better solutions to principal/agent problems and to the division of the rewards of joint activity than traditional capital vs labor divisions. Giving employees with significant discretion or residual control over how they do their jobs may be more efficient than lodging such control in management or shareholders as residual claimants, at least in some sectors.

[15] This theory is stated most prominently in Alchian and Demsetz (1970).

As this summary and ensuing chapters make clear, our research has answered some questions about shared capitalist enterprises and highlights other important questions that require additional data and research. We direct attention in particular to two issues. First, the way shared capitalist pay and organization of work that empowers workers complement each other. This seems to reflect the elusive concept of corporate culture, which we view as potentially the latent variable behind the interactions between shared capitalism and other policies found throughout the volume. Second, on how co-monitoring helps shared capitalist enterprises overcome free-riding tendencies. Our analysis has just scratched the surface of this phenomenon, which can potentially illuminate the deep social science problem of the seemingly inordinate success of cooperative solutions in economic life. From the perspective of economic theory, the success of shared capitalism engages several fundamental mainstream issues pertaining to risk aversion and portfolio theory, game theory and the free rider problem, and theories of compensation, such as efficiency wage theories. From the perspective of policy, we hope the volume provides some guidance to business and labor leaders, as well as analysts and policy-makers about ways to think about shared capitalist firms and to devise policies to help them contribute to economic well-being.

References

Alchian, Armen A., and Harold Demsetz. 1972. "Production, Information Costs, and Economic Organization," American Economic Review, 62, pp. 777-795.

Blasi, Joseph. 1987. Employee Ownership Through ESOPs: Implications For The Public Corporation. Work in America Institute Studies in Productivity. New York: Pergamon Books.

-----. 1988. Employee Ownership: Revolution or Ripoff? New York and Cambridge: Harper and Row, Ballinger Books

-----, and Douglas Kruse. 1991. The New Owners: Employee Ownership in Public Companies. New York: HarperCollins.

-----, Douglas Kruse, and Aaron Bernstein. 2003. In the Company of Owners: The Truth About Stock Options and Why Every Employee Should Have Them. New York: Basic Books.

Bonin, John, and Louis Putterman. 1987. Economics of Cooperation and Labor Managed Economies. New York: Cambridge University Press.

Chan, Sewin and Ann Huff Stevens. 2003. "What You Don't Know Can't Help You: Pension Knowledge and Retirement Decision Making," NBER Working Paper No. 10185, December.

Clark, John Bates. 1886. The philosophy of wealth : economic principles newly formulated. Boston : Ginn & Company.

Dahl, Robert. 1985. A Preface to Economic Democracy. Berkeley: University of California Press.

Domar, Evsey. 1966. "The Soviet Collective Farm as a Producer Cooperative," American Economic Review, September, pp. 743-57.

Dow, Gregory. 2003. Governing the Firm: Workers' Control in Theory and Practice. Cambridge, England: Cambridge University Press.

Drucker, Peter. 1976. The Unseen Revolution: How Pension Fund Socialism Came to America New York: Harper-Collins.

Freeman, Richard and Joel Rogers. 2006. What Workers Want, 2nd edition. Ithaca, NY: ILR Press Books.

Freeman, Richard. 2008. "When Workers Share in Profits: Effort and Responses to Shirking," Revista de Politica Economia

Gustman, Alan L., and Thomas L. Steinmeier (2001) "What People Don't Know about their Pensions and Social Security" in William G. Gale, John B. Shoven and Mark J. Warshawsky, editors, *Public Policies and Private Pensions*, Washington D.C.: Brookings Institution. (NBER Working Paper 7368.)

Kruse, Douglas. 1993. Profit Sharing: Does It Make A Difference? Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

-----, and Joseph Blasi. 1997. "Employee Ownership, Employee Attitudes, and Firm Performance: A Review of the Evidence," in Daniel J.B. Mitchell, David Lewin, and Mahmood Zaidi, eds., Handbook of Human Resource Management. Greenwich, CN: JAI Press, 1997, pp. 113-151.

Malmendier, Ulrike, and Geoffrey Tate. 2008. "Superstar CEOs," NBER Working Paper 14140, June. http://www.nber.org/papers/w14140

Mason, Ronald. 1982. Participatory and Workplace Democracy: A Theoretical Development in Critique of Liberalism. Carbondale and Edwardsville, IL: Southern Illinois University Press.

Nalbantian, Haig. 1987. "Incentive Compensation in Perspective," in Haig Nalbantian, ed., Incentives, Cooperation, and Risk Sharing. Totowa, N.J.: Rowman and Littlefield, pp. 3-46.

Pateman, Carole. 1970. Participation and Democratic Theory. New York: Cambridge University Press.

Putterman, Louis, and Gil Skillman, Jr. 1988. "The Incentive Effects of Monitoring Under Alternative Compensation Schemes," International Journal of Industrial Organization, 6, pp. 109-119.

Sammer, Joanne. 2006. "Too much of a good thing," Journal of Online Accountancy, April, www.aicpa.org/jofa/apr2006/sammer.htm

U.S. Senate, Subcommittee of the Committee on Finance. 1939. "Survey of Experiences in Profit Sharing and Possibilities of Incentive Taxation." Washington, D.C.: Government Printing Office.

Walker, Francis Amasa. 1876. The Wages Question: A Treatise on Wages and the Wages Class. New York: MacMillan and Company.

Ward, Benjamin. 1958. "The Firm in Illyria: Market Syndicalism," The American Economic Review, Vol. 48, No. 4, pp. 566-589 .

Weitzman Martin. 1984. The Share Economy. Cambridge, MA: Harvard University Press.

-----, and Douglas Kruse. 1990. "Profit Sharing and Productivity," in Alan Blinder, ed., Paying For Productivity: A Look at the Evidence. Washington, D.C.: Brookings Institution.

Exhibit 1: Six "Take-Away" Findings on Shared Capitalism

1. Shared capitalism is a significant part of the US economic model Almost half of workers have some form of shared capitalist pay. It has grown rapidly in the 1980s -2000s. Shared capitalism is also significant in the UK and is growing in other advanced countries.
2. Worker co-monitoring helps shared capitalist firms overcome incentives to free ride Most workers can observe work activity of co-workers. Many take action against shirkers. Shared capitalist compensation increases the likelihood of acting against shirkers. Combining shared compensation and advanced personnel and labor policies has an even larger effect on worker efforts to discourage shirking.
3. The risk of shared capitalist investments in one's employer is manageable Portfolio theory suggests employee ownership can be part of an efficient portfolio as long as the overall portfolio is properly diversified. Some workers have invested excessively in shares of their own firm, contrary to the precepts of diversification, but most workers have modest amounts of employee ownership within the ranges suggested by portfolio theory.
4. Shared capitalism improves the performance of firms It is associated with greater attachment, loyalty, and willingness to work hard; lower chances of turnover; worker reports that co-workers work hard and are involved in company issues; and worker suggestions for innovations. Shared capitalism is most effective when combined with employee involvement and decision-making and with other advanced personnel and labor policies.
5. Shared capitalism improves worker well-being It is associated with greater participation in decision-making; higher pay, benefits, and wealth; greater job security, satisfaction with influence at the workplace, trust in the firm, and assessment of management; and better labor management relations practices. Shared capitalism is most effective when combined with employee involvement and decision-making and with other advanced personnel and labor policies.
6. Shared capitalism complements other labor policies and practices Firms with shared capitalist compensation are more likely to have other worker-friendly labor policies and practices Combinations of shared capitalist pay and other policies, such as devolving decision-making to employees, wages at or above the market rate, and lower supervisory monitoring, produce the largest benefits for workers and firms.

APPENDIX A: Variable definitions and descriptive statistics (all chapters)

SHARED CAPITALISM

Shared capitalism index (GSS): 8-point index with one point each for profit sharing eligibility, gain sharing eligibility, owning any company stock, holding any stock options, receiving a profit sharing bonus in the past year, receiving a gain sharing bonus in the past year, having an above-median profit- and gain sharing bonus as a percent of pay, and having an above-median company stock holding as a percent of pay. Mean=1.48, s.d.=2.14, n=1919

Shared capitalism index (NBER): 10-point index with all items in GS index, plus one point each for receiving a stock option grant in the past year, and having above-median stock option holdings as a percent of pay. Mean=3.60, s.d.=2.65, n=40522. Chapter 11's mean for company with innovation data=2.59, s.d.=1.85, n=27507.

Profit sharing (GSS and NBER): "In your job are you eligible for any type of performance-based pay, such as individual or group bonuses, or any type of profit-sharing? What does the size of these performance-based payments depend on? Company profits or performance" (0=no, 1=yes), GSS mean=.372, n=2184, NBER mean=.713, n=41018

Profit sharing as % of pay (GSS and NBER): If "yes" to profit sharing, answer to "What was the approximate total dollar value of the payment(s) you received [in the most recent year of bonuses]?" divided by basepay+overtime, otherwise 0. GSS mean=.024, s.d.=.066, n=1944, NBER mean=.068, s.d.=.124, n=40485

Gainsharing (GSS and NBER): "In your job are you eligible for any type of performance-based pay, such as individual or group bonuses, or any type of profit-sharing? What does the size of these performance-based payments depend on? Workgroup or department performance" (0=no, 1=yes), GSS mean=.257, n=2184, NBER mean=.207, n=41023

Gainsharing as % of pay (GSS and NBER): If "yes" to gainsharing, answer to "What was the approximate total dollar value of the payment(s) you received [in the most recent year of bonuses]?" divided by basepay+overtime, otherwise 0. GSS mean=.017, s.d.=.061, n=2013, NBER mean=.033, s.d.=.106, n=40767

Profit/gainsharing (NBER company with innovation data in Chapter 11): If "yes" to receives profits based on "company profits or performance" and/or "Workgroup or department performance" (0=no, 1=yes). Mean=.74, s.d.=.441, n=27676.

Profit/gainsharing as % of base pay (NBER company with innovation data in Chapter 11): If "yes" to receive profits based on "company profits or performance" and/or "Workgroup or department performance", divided by basepay+overtime, otherwise 0. Mean=.043, s.d.=.090, n=27420

Individual bonus (GSS and NBER): "In your job are you eligible for any type of performance-based pay, such as individual or group bonuses, or any type of profit-sharing? What does the size of these performance-based payments depend on? Individual performance" (0=no, 1=yes). GSS mean=.290, n=2184, NBER mean=.290, n=41019. Chapter 11's mean for company with innovation data=.140, s.d.=.343, n=27676

Individual bonus as % of pay (NBER): If "yes" to individual bonus, answer to "What was the approximate total dollar value of the payment(s) you received [in the most recent year of bonuses]?" divided by basepay+overtime, otherwise 0. Mean=.050, s.d.=.125, n=40547. Chapter 11's mean for company with innovation data=.013, s.d.=.064, n=27609

Hold employer stock (GSS): "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?" (0=no, 1=yes), mean=.212, n=2202

Employer stock as % of pay (GSS): If "yes" to "hold employer stock," answer to "Please give a general estimate of how much cash you would get if all this stock were sold today?" divided by annual earnings, otherwise 0, mean=.111, s.d.=.977, n=2186

Hold employer stock (NBER): Any employer stock held through ESOP, Employee Stock Purchase Plan, 401(k), exercised stock options, or open market purchases (0=no, 1=yes), mean=.640, n=41206. Chapter 11's mean for company with innovation data=.53, s.d.=.499, n=27825.

Employer stock as % of pay (NBER): If "yes" to "Hold employer stock," the sum of answers to questions about value of stock held in different plans, divided by basepay+overtime, otherwise 0. NBER mean=.398, s.d.=.808, n=40367. Chapter 11's mean for company with innovation data=.227, s.d.=.476, n=27469

Hold stock options (GSS and NBER): "Do you currently hold any stock options in your company (vested or unvested)?" (0=no, 1=yes), GSS mean=.123, n=2188, NBER mean=.219, n=41166. Chapter 11's mean for company with innovation data=.03, s.d.=.179, n=27816

Stock options as % of pay (NBER): If "yes" to "Hold stock options," the sum of answers to questions about value of vested and unvested stock, divided by basepay+overtime, otherwise 0. NBER mean=.395, s.d.=1.490, n=40922. Chapter 11's mean for company with innovation data=.018, s.d.=.225, n=27716.

ESOP (NBER): Participant in ESOP (0=no, 1=yes), mean=.081, n=41109

ESOP stock as % of pay (NBER): Employer stock held in ESOP, divided by basepay+overtime, otherwise 0, mean=.067, s.d.=.417, n=41002

ESPP (NBER): Hold stock purchased through Employee Stock Purchase Plan (0=no, 1=yes), mean=.176, n=41169

ESPP stock as % of pay (NBER): Employer stock held in Employee Stock Purchase Plan, divided by basepay+overtime, otherwise 0, mean=.078, s.d.=.304, n=41168

401(k) stock (NBER): Hold employer stock in 401(k) plan (0=no, 1=yes), mean=.335, n=40885

401(k) stock as % of pay (NBER): Employer stock held in 401(k) plan, divided by basepay+overtime, otherwise 0, mean=.189, s.d.=.525, n=40730

Stock from exercised options as % of pay (NBER): Employer stock held from exercised options, divided by basepay+overtime, otherwise 0, mean=.052, s.d.=.396, n=40956

Stock from exercised options (NBER): Hold employer stock from exercised options (0=no, 1=yes), mean=.050, n=41032

Open mkt. stock as % of pay (NBER): Employer stock purchased on open market, divided by basepay+overtime, otherwise 0, mean=.019, s.d.=.165, n=41144

Open mkt. stock (NBER): Hold stock purchased on open market (0=no, 1=yes), mean=.073, n=41145

EMPLOYEE PARTICIPATION IN DECISIONS

Lot of say on job (GSS): "I have a lot of say about what happens on my job" (1-4 scale, 1=strongly disagree, 4=strongly agree), mean=2.83, s.d.=.88, n=2204. (In Chapter 1, **Lot of say on job** is coded 1 for "strongly agree" and 0 otherwise.)

Make decisions with others (GSS): "In your job, how often do you take part with others in making decisions that affect you?" (1-4 scale, 1=never, 4=often), mean=3.08, s.d.=.93, n=2211. (In Chapter 1, **Often make decisions with others** is coded 1 for "often" and 0 otherwise.)

Help set way things done on job (GSS): "How often do you participate with others in helping set the way things are done on your job?" (1-4 scale, 1=never, 4=often), mean=3.14, s.d.=.92, n=2210. (In Chapter 1, **Often help set way things done on job** is coded 1 for "often" and 0 otherwise.)

High participation in decisions (GSS): This measure has a score of 1 if the sum of scales of the above two items is 7 or 8, and 0 otherwise. Mean=.466, n=2226.

Participation index (GSS): Average of “Often help set way things done on job,” “Often make decisions with others,” and binary measure of “Lot of say on job” (alpha=.737)

Freedom in doing work (GSS): "I am given a lot of freedom to decide how to do my own work" (1-4 scale, 1=not at all true, 4=very true), mean=3.31, s.d.=.85, n=2208

In EI team (NBER): " Some companies have organized workplace decision-making in ways to get more employee input and involvement. Are you personally involved in any team, committee or task force that addresses issues such as product quality, cost cutting, productivity, health and safety, or other workplace issues?" (0=no, 1=yes), mean=.35, n=40122

Involved in job decisions (NBER): "How much involvement and direct influence do YOU have in: Deciding HOW to do your job and organize the work" (1-4 scale, 1=none, 4=a lot), mean=3.27, s.d.=.87, n=40750. (In Chapter 1, **Lot of involvement in job decisions** is coded 1 for "a lot" and 0 otherwise.)

Involved in department goals (NBER): "How much involvement and direct influence do YOU have in: Setting GOALS for your work group or department" (1-4 scale, 1=none, 4=a lot), mean=2.59, s.d.=1.04, n=40594. (In Chapter 1, **Lot of involvement in setting department goals** is coded 1 for "a lot" and 0 otherwise.)

Involved in company decisions (NBER): "How much involvement and direct influence do YOU have in: Overall company decisions" (1-4 scale, 1=none, 4=a lot), mean=1.71, s.d.=.86, n=40520. (In Chapter 1, **Lot of involvement in company decisions** is coded 1 for "a lot" 0 otherwise.)

Satisfied with participation (NBER): "Overall, how satisfied are you with the influence you have in company decisions that affect your job and work life?" (1-4 scale, 1=not at all satisfied, 4=very satisfied), mean=2.61, s.d.=.85, n=40545

TRAINING

Training opportunities (GSS): "I have the training opportunities I need to perform my job safely and competently" (1-4 scale, 1=not at all true, 4=very true), mean=3.48, s.d.=.74, n=2204

Formal training (NBER): "In the last 12 months have you received any formal training from your current employer, such as in classes or seminars sponsored by the employer?" (0=no, 1=yes), mean=.564, n=40460

Training hours (NBER): If "yes" to formal training, answer to "About how many hours of formal training have you received in the last 12 months? If "no" to formal training, coded as 0. Mean=17.80, s.d.=40.38, n=39426

Informal training (NBER): "To what extent have fellow employees taught you job skills, problem solving, short cuts, or other ways to improve your work, on an informal basis?" (1-4 scale, 1=not at all, 4=to a great extent), mean=2.89, s.d.=.85, n=40651

SUPERVISION

Supervisor helpful (GSS): "My supervisor is helpful to me in getting the job done" (1-4 scale, 1=not at all true, 4=very true), mean=3.26, s.d.=.88, n=2197

Supervisor cares (GSS): "My supervisor is concerned about the welfare of those under him or her" (1-4 scale, 1=not at all true, 4=very true), mean=3.26, s.d.=.88, n=2185

Closeness of supervision (NBER): "Are you closely supervised, or do you work fairly independently of close supervision?" (0-10 scale, 0=independent of close supervision, 10= closely supervised), mean=3.35, s.d.=2.63, n=40845 (reverse-scored for Chapter 1 measure **Free from supervision**)

HIGH PERFORMANCE WORK PRACTICES

High performance policy index (NBER)(index mean=1.77, s.d.=.86, n=37125**):**
Additive index of:

a) Employee involvement team: "Some companies have organized workplace decision-making in ways to get more employee input and involvement. Are you personally involved in any team, committee or task force that addresses issues such as product quality, cost cutting, productivity, health and safety, or other workplace issues?" (0=no, 1=yes), mean=.347, n=40122
b) Formal training: "In the last 12 months have you received any formal training from your current employer, such as in classes or seminars sponsored by the employer?" (0=no, 1=yes), mean=.564, n=40460
c) Job security: "Thinking about the next twelve months, how likely do you think it is that you will lose your job or be laid off?" (coded for scale as 0=very likely or fairly likely, 1=not too likely or not at all likely), mean=.843, n=38510

High performance work system (NBER company with innovation data, Chapter 11)**:**
Mean of following 6 binary items:

a) "Are you personally involved in any team, committee or task force that addresses issues such as product quality, cost cutting, productivity, health and safety, or other workplace issues?" (0=no, 1=yes)
b) In the last 12 months have you received any formal training from your current employer, such as in classes or seminars sponsored by the employer?" (0=no, 1=yes)
c) "How frequently do you participate in a job rotation or cross-training program where you work or are trained on a job with different duties than your regular job?" (0=never or occasionally, 1=frequently)

d) "How effective is your work area of team at selecting the very best people to be part of our team/area?" (based on 1-7 scale, item coded as 0=ineffective or neutral (1 to 4), 1=effective (5 to 7))
e) "Thinking about the next twelve months, how likely do you think it is that you will lose your job or be laid off?" (0=very or somewhat likely, 1=not very or not at all likely)
f) "How effective is your work area of team at sharing information and ideas with each other?" (based on 1-7 scale, item coded as 0=ineffective or neutral (1 to 4), 1=effective (5 to 7))

Index mean=.46, s.d.=.240, n=27801, alpha=.46.

High performance work system team (NBER company with innovation data, Chapter 11): Mean of following items, all measured on a 1-7 scale (1=very ineffective, 4=neutral, 7=very ineffective)

a) "How effective is your work area or team at selecting the very best people to be part of our team/area?"
b) "How effective is your work area or team at setting clear performance goals ?"
c) "How effective is your work area or team at getting training on skills we need to solve customer problems?"
d) "How effective is your work area or team at sharing information and ideas with each other?"
e) "How effective is your work area or team at meeting our customers either in our facilities or theirs?"
f) "How effective is your work area or team at rewarding members of the group for excellent work?"

Index mean=4.36, s.d.=1.32, n=27251, alpha=.88

OTHER WORK ORGANIZATION MEASURES

Work as part of team (GSS and NBER): "In your job, do you normally work as part of a team or group, or do you work mostly on your own?" (coded 1 if part of team, 0 otherwise), GSS mean=.58, n=2206, n=, NBER mean=.59, n=32301.

Ease of observing co-worker performance (GSS and NBER): "In your job how easy is it for you to see whether your co-workers are working well or poorly? Please rate on a scale of 0 to 10" (0=not at all easy, 10=very easy), GSS mean=7.71, s.d.=3.18, n=2394; NBER mean=6.81, s.d.=2.73, n=40791

Frequently participate in job rotation (NBER): "How frequently do you participate in a job rotation or cross-training program where you work or are trained on a job with different duties than your regular job?" (coded 1 if worker responded "frequently", and 0 otherwise), NBER mean=.112, n=30262.

PAY AND BENEFITS

Yearly earnings (GSS): Total yearly earnings from main job (natural log) , mean=10.12, s.d.=1.05, n=1888

Paid what you deserve (GSS): "How fair is what you earn on your job in comparison to others doing the same type of work you do?" (1-5 scale, 1=much less than what you deserve, 5=much more than you deserve), mean=3.43, s.d.=.86, n=2171

Fringe benefits good (GSS): "My fringe benefits are good" (1-4 scale, 1=not at all true, 4=very true), mean=2.87, s.d.=1.09, n=2198

Fixed pay (NBER): Yearly base pay+overtime (natural log), mean=10.710, s.d.=.783, n=31162

Fixed pay difference from mkt. (NBER): "Do you believe your fixed annual wages are higher or lower than those of employees with similar experience and job descriptions in other companies in your region? By what percent is it higher or lower?" mean=-4.76, s.d.=17.10, n=31793

Fixed pay at or above market (NBER): "Do you believe your fixed annual wages are higher or lower than those of employees with similar experience and job descriptions in other companies in your region?" (rated on scale of 1=lower to 5=higher, recoded for this variable as 0=less than 3, 1=3 or greater), mean=594, n=35860

Total comp. difference from mkt. (NBER): "Do you believe your total compensation is higher or lower than those of employees with similar experience and job descriptions in other companies in your region? By what percent is it higher or lower?" mean=-2.07, s.d.=18.81, n=30440

Grade of co. on wages (NBER): "If you were to rate how well this company takes care of workers on a scale similar to school grades, what grade would you give in these areas? Paying good wages" (0-4 scale, 0=F, 4=A), mean=2.54, s.d.=1.06, n=40679

Grade of co. on benefits (NBER): "If you were to rate how well this company takes care of workers on a scale similar to school grades, what grade would you give in these areas? Giving fair benefits to workers" (0-4 scale, 0=F, 4=A), mean=2.64, s.d.=1.08, n=40611

JOB SATISFACTION AND COMPANY TREATMENT OF EMPLOYEES

Job satisfaction (GSS): "All in all, how satisfied would you say you are with your job?" (1-4 scale, 1=not at all satisfied, 4=very satisfied), mean=3.27, s.d.=.80, n=1656

Job satisfaction (NBER): "How satisfied are you in your job?" (1-7 scale, 1=completely dissatisfied, 7=completely satisfied), mean=5.04, s.d.=1.29, n=40842

Treated with respect (GSS): "At the place where I work, I am treated with respect" (1-4 scale, 1=strongly disagree, 4=strongly agree), mean=3.27, s.d.=.68, n=2209

Mgt.-ee relations (GSS): "In general, how would you describe relations in your work place between management and employees?" (1-5 scale, 1=very bad, 5=very good), mean=3.95, s.d.=.99, n=2205

Mgt. is trustworthy (GSS): "I trust the management at the place where I work." (1-4 scale, 1=strongly disagree, 4=strongly agree), mean=2.97, s.d.=0.85, n=2201

Promotions handled fairly (GSS): "Promotions are handled fairly" (1-4 scale, 1=not at all true, 4=very true), mean=2.84, s.d.=.98, n=2083

Worker safety is high priority (GSS): "The safety of workers is a high priority with management where I work" (1-4 scale, 1=not at all true, 4=very true), mean=3.31, s.d.=.70, n=2194

Stress (GSS): "How often do you find your work stressful?" (1-5 scale, 1=always, 5=never), mean=3.08, s.d.=1.03, n=2209

Employees share when co. does well (NBER): "When the company does well, employees share the benefits" (1-7 scale, 1=strongly disagree, 7=strongly agree), mean=5.00, s.d.=1.78, n=40676

Company fair to employees (NBER): "Overall, this company is fair to its employees" (1-7 scale, 1=strongly disagree, 7=strongly agree), mean=4.75, s.d.=1.71, n=40632

Co. grade on ee. relations (NBER): "If you were to rate how well this company takes care of workers on a scale similar to school grades, what grade would you give in these areas? Overall relations with employees" (0-4 scale, 0=F, 4=A), mean=2.45, s.d.=1.07, n=40464

Co. grade on sharing info (NBER): "If you were to rate how well this company takes care of workers on a scale similar to school grades, what grade would you give in these areas? Sharing information with employees" (0-4 scale, 0=F, 4=A), mean=2.44, s.d.=1.11, n=40523

Co. grade on trustworthy (NBER): "If you were to rate how well this company takes care of workers on a scale similar to school grades, what grade would you give in these areas? Trustworthiness in keeping its promises" (0-4 scale, 0=F, 4=A), mean=2.33, s.d.=1.15, n=40385

CO-WORKER RELATIONS

Co-workers can be relied on for help (GSS): "The people I work with can be relied on when I need help." (1-4 scale, 1=not at all true, 4=very true), mean=3.37, s.d.=.75, n=2207

Co-workers take personal interest in me (GSS): "The people I work with take a personal interest in me" (1-4 scale, 1=not at all true, 4=very true), mean=3.21, s.d.=.82, n=2197

JOB SECURITYAND EXPECTATIONS

Job security (GSS and NBER): "Thinking about the next twelve months, how likely do you think it is that you will lose your job or be laid off?" (1-4 scale, 1=not at all likely, 4=very likely), GSS mean=3.27, s.d.=.87, n=2198, NBER mean=3.09, s.d.=.76, n=38510

High job security (GSS and NBER): "Thinking about the next twelve months, how likely do you think it is that you will lose your job or be laid off?" (coded 1 if "not at all likely" or "not very likely", and 0 otherwise), GSS mean=.883, n=1190; NBER mean=.843, n=38510.

Not laid off in past year (GSS): "Were you laid off your main job at any time in the last year?" (0=yes, 1=no), mean=.920, n=2212.

See myself working here a long time (NBER): "Which ONE of the following statements best describes how you think of your current employer? 1=I see myself working here for the foreseeable future (a long time), 0=I do not see myself working here very long." Mean=.817, n=40589.

Current job is part of long-time career (NBER): "Thinking about your current job (rather than your employer), do you look upon it as part of your long term career, or a position that is not part of your long term career?" (1=yes, 0=no) Mean=.762, n=40575.

WORKPLACE PERFORMANCE

Not likely to search for new job (GSS): "How likely is it that you will decide to look hard for a job with another organization within the next twelve months?" (1-3 scale, Very likely/Somewhat likely/ Not at all likely), mean=2.37, s.d.=.79, n=2400.

Not likely to search for new job (NBER): "How likely is it that you will decide to look hard for a job with another organization within the next twelve months?" (1-4 scale, Already looking/Very likely/Somewhat likely/ Not at all likely), mean=3.42, s.d.=.83, n=40722

Would turn down another job for more pay to stay with this company (NBER): "To what extent do you agree or disagree with this statement? 'I would turn down another job for more pay in order to stay with this company.'" (1-5 scale, 1=strongly disagree, 5=strongly agree), mean=1.75, s.d.=1.14, n=1175.

Absenteeism (NBER): "About how many days have you been absent from work in the last 6 months (not counting vacation)?" mean=1.77, s.d.=7.66, n=39582

Co-worker effort (GSS and NBER): "At your workplace, how hard would you say that people work?" (0-10 scale, 0=not at all hard, 10=very hard), GSS mean=6.93, s.d.=2.42, n=2386, NBER mean=7.07, s.d.=2.10, n=40738.

Proud to be working for employer (GSS): "I am proud to be working for my employer." (1-4 scale, 1=strongly disagree, 4=strongly agree), mean=3.19, s.d.=.69, n=2401.

Co-workers have enough interest in company issues to get involved (NBER): "People at [company] have too little interest in company-wide issues to get involved in them." (1-7 scale, 1=strongly agree, 7=strongly disagree), mean=4.22, s.d.=1.60, n=40563.

Co-workers generally encourage each other to make extra effort (NBER): "At your workplace, would you say employees generally ENCOURAGE each other to make an extra effort on the job, DISCOURAGE each other from making an extra effort, or would you say they DON'T CARE how hard other employees work? (-1=discourage, 0=don't care, 1=encourage), mean=.74, s.d.=.48, n=13314.

Loyalty to company (NBER): "How much loyalty would you say you feel toward the company you work for as a whole?" (1-4 scale, No loyalty at all/ Only a little/Some/ A lot), mean=3.34, s.d.=.80, n=40091

Willing to work harder to help company (NBER): "To what extent do you agree or disagree with this statement? 'I am willing to work harder than I have to in order to help the company I work for succeed?'" (1-5 scale, 1=strongly disagree, 5=strongly agree), mean=4.02, s.d.=.90, n=40712

Frequency of suggestions (NBER): "How often have you taken such ideas [for making your department or company more effective] to someone in the company in the past?" (1=never, 2=occasionally, 3=monthly, 4=weekly, 5=daily), mean=2.21, s.d.=.83, n=31141

Summative outcomes variable (NBER): Additive index of "not likely to search for new job," "loyalty to company," "willing to work harder to help company," "see myself working here a long time," and **"**current job is part of long-time career," minus 3 so scale=0-12 (used in Chapter 3 on risk). Mean = 9.49, s.d. = 2.26, n= 33,467.

RESPONDING TO SHIRKING

Potential employee actions against shirkers (GSS and NBER): "If you were to see a fellow employee not working as hard or well as he or she should, how likely would you

be to:

a) Talk directly to the employee
b) Speak to your supervisor or manager
c) Talk about it in a work group or team
d) Do nothing"
See distribution of answers in Chapter 2, Table 1.

Anti-shirking index: Answers to above questions were coded on a 1-4 scale (1=not at all likely, 4=very likely), and scales were added for "talk directly to the employee," "speak to your supervisor or manager," and "do nothing"(reverse-scored)(3-12 scale). GSS alpha=.795, mean=7.81, s.d.=2.94, n=2115, NBER alpha=.69, mean=7.57, s.d.=2.49, n=35869.

Past employee actions against shirkers (NBER):
"Have you ever seen one of your fellow employees not working as hard or well as he or she should over an extended time period?" (0=no, 1=yes), Mean=.586, n=32010.
If responded "yes", then "What action, if any, did you take?

a) Talk directly to the employee,
b) Speak to your supervisor or manager,
c) Talk about it in a work group or team,
d) Do nothing"
See distribution of answers in Chapter 10, Table 2.

"What was the outcome of your actions?

Employee not working well resented it
Other employees appreciated it
Supervisor appreciated it
Employee not working well improved
Other"
See distribution of answers in Chapter 2, Table 9.

Why people do or do not act against shirkers (NBER):
"Why might you be *likely to do something* when a fellow employee is not working as hard or well as he or she should? (Mark all that apply)

I like helping others
Employee might help me in the future
Poor performance will cost me and other employees in bonus or stock value
Other employees appreciate it when someone steps forward
Want to keep work standards high
Employees poor performance could affect my own job
Other (What?)

Why might you be *likely to do nothing* when a fellow employee is not working as hard or well as he or she should? (Mark all that apply)

Employee not working well would resent it
Other employees would react poorly
It's the supervisor's job, not mine
Some other employee will probably take action

Some other employee could take care of it
There's no financial benefit for me
Nothing in it for me personally
Other (What?)"

See distribution of answers in Chapter 10, Table 8.

RISK AVERSION AND PREFERENCES OVER PAY

Risk loving (NBER): "Some people like to take risks and others dislike taking risks. Where would you place yourself on a scale of how much you like or dislike taking risks, where 0 is hating to take any kind of risk and 10 is loving to take risks?" (In Chapter 1, High risk aversion=0 to 3 on this scale, medium risk aversion=4 to 6, and low risk aversion=7 to 10.) Mean=5.62, s.d.=2.43, n=40326.

Highest price paid for a bet (NBER): "You are offered a bet. You have a 10% chance of winning $1000. Would you take the bet if it cost you: (mark highest price you would pay: $0, $1, $10, $20, $50, $100, $150) Mean = $23.37, s.d. = 32.40, n= 34,751.

Type of pay preferred (NBER): "If it was your choice and yours alone, would you prefer that you be paid: 0=All fixed wage or salary, with no profit-sharing, company stock, or stock options; 1=Paid in part with a variable amount dependent on company performance, through profit-sharing, company stock, or stock options" Mean=.784, n=13199.

Preference for new bonus plan (NBER): If your employer announced a new compensation plan that would give up to 10% of pay in the form of bonuses, would you like this pay to be based on (mark all that apply): Your individual performance (mean=.769, n=13379), Your workgroup performance (mean=.371, n=13379), Company profits or performance" (mean=.585, n=13379).

Would vote to sell company (NBER): "If you owned stock in a company where you worked and an outside investor offered to buy the company for 50% more than the market value of the stock, would you vote to sell the company?" Mean=.409, n=13188.

Lower pay accepted for company-based bonus (NBER): "Imagine that you work for a company that offers you the opportunity to participate in a bonus program. Over time, the bonus will pay you on average 10% of your regular pay, but it could be higher or lower in any given year depending on the company's performance that year. How much less regular pay would you be willing to accept in order to get the possible performance bonus?" Mean=3.31, s.d.=3.56, n=29246.

Preference for next pay increase (NBER): "For your next pay increase, would you prefer that it come in the form of: 1=All fixed wages, with no profit sharing, company stock, or stock options, 2=Split between fixed wages and profit sharing, company stock, or stock options, 3=All in the form of profit sharing, company stock, or stock options" Mean=1.86, s.d.=.62, n=25869.

ALIGNMENT

Alignment: Mean of following items, all measured on a 1-4 scale (1=not at all, 2=very little, 3=to some extent, 4=to a great extent):

a) "To what extent do you understand your company's overall plan for being successful?"
b) "To what extent do you personally agree with this plan?"
c) "To what extent do you feel that the company is providing you with the information, training, and resources necessary to help achieve the goals of this plan"
d) "To what extent do you feel that your company's culture encourages you to share your ideas about how to achieve the goals of this plan?"

Index mean=2.87, s.d.=.686, n=27492, alpha=.83

INNOVATION OUTCOMES

Culture for Innovation: Mean of following items, all measured on a 1-4 scale (1=never or almost never, 2=sometimes, 3=often, 4=always or almost always)

"How often do the following things occur in your facility?"

a) "Ideas for developing innovative products and services are put forward"
b) "Meaningful time is invested in testing good ideas for innovative products and services"
c) "Innovative ideas are carefully considered and fairly evaluated"
d) "Resources are made available to support and develop a good idea that could lead to an innovative product or service"
e) "People who have an innovative idea receive recognition for it"
f) "People who have an innovative idea receive financial rewards for it"
g) "My ideas for innovative products and services have been taken seriously"

Index mean=2.87, s.d.=.626, n=27067, alpha=.86

Innovative Ideas: Mean of following items, all measured on a 1-4 scale (1=not at all, 2=very little, 3=to some extent, 4=to a great extent)

a) "I would be willing to be more involved in efforts to develop innovative products and services"
b) "I have good ideas for innovative products or services"
c) "I have good ideas for improvements in existing products and services"

Index mean=2.74, s.d.=.731, n=26939, alpha=.83

APPENDIX B: The shared capitalist thermometer index

As a first step in assessing the relation of shared capitalism to employee outcomes, we constructed a thermometer-style index of shared capitalism. This index assigns one point each when the worker was covered by any of the shared capitalist forms of compensation about which the survey asked, with additional points for recent bonuses or grants, and for large bonuses or stock holdings. For questions with a continuous numeric answer, we gave the item a value of 1 if the respondent had a value greater than the median value. Because there is no natural ordering of shared capitalist systems in the sense that a firm first introduces profit-sharing, then adds employee ownership, and then gain-sharing, the index is not a Guttman scale. It is a simple summated rating (Bartholomew et al, 2002; Bartholomew, 1996), using dichotomous scoring.

In the GSS, there are eight variables in the index: profit sharing eligibility, gain sharing eligibility, owning any company stock, holding stock options, receiving a profit sharing bonus in the past year, receiving a gain sharing bonus in the past year, having an above-median profit- and gain sharing bonus as a percent of pay, and having an above-median company stock holding as a percent of pay. In the NBER data there are ten variables in the index: all of the above items plus one point each for receiving a stock option grant in the past year, and having above-median stock option holdings (including unvested options if they could be exercised today) as a percent of pay.

Indices of this style have both advantages and disadvantages. On the plus side, they provide a quick and ready measure of the extent of shared capitalist arrangements that makes it easy to compare results across surveys and to summarize the broad thrust of findings. Since our firm surveys covered only firms with some shared capitalist arrangements, the index allows us to differentiate workers with differing degrees of incentive to their firm's programs. On the negative side, the index treats different programs the same even though they potentially have

different effects on particular outcomes. It postulates a single scale with equal weights rather than using factor analysis or other statistical modelling to obtain weights for given factors. To deal with these problems, we also estimate the relationship of the outcomes to the different types of shared capitalism, introduced as dummy or continuous variables in regressions.[1] By comparing the results using the shared capitalism index to the results using the disaggregated measures, we can assess the loss of information due to the amalgamation of the measures into a single index.

Figure B1 shows the distribution of our shared capitalism index in the GSS. This survey estimates that 40% of US workers have some form of shared capitalist program. This estimate is close to that obtained by Dube and Freeman in the WRPS. The mean score of the index is 1.48 – a figure greatly affected by the substantial number of workers without shared capitalism systems. Conditional on having a program, most workers report scores in the range of 2 to 5, with 6% reporting scores of 6 or greater. Figure B2 gives the distribution of the index in the NBER survey data. It also shows a non-normal distribution, with the most common scores as 2 to 4 but a sizeable number of workers scoring 7 or above. There is sufficient variation in the index to differentiate the extent of the shared capitalist "treatment" on workers.

1 There are statistical techniques to deal with the formation of latent variable indices from questions of the sort that we are amalgamating into a single summated rating. See Bartholomew et al. (2002) and Spector (1992).

Figure B1: Distribution of Shared Capitalism Index in GSS

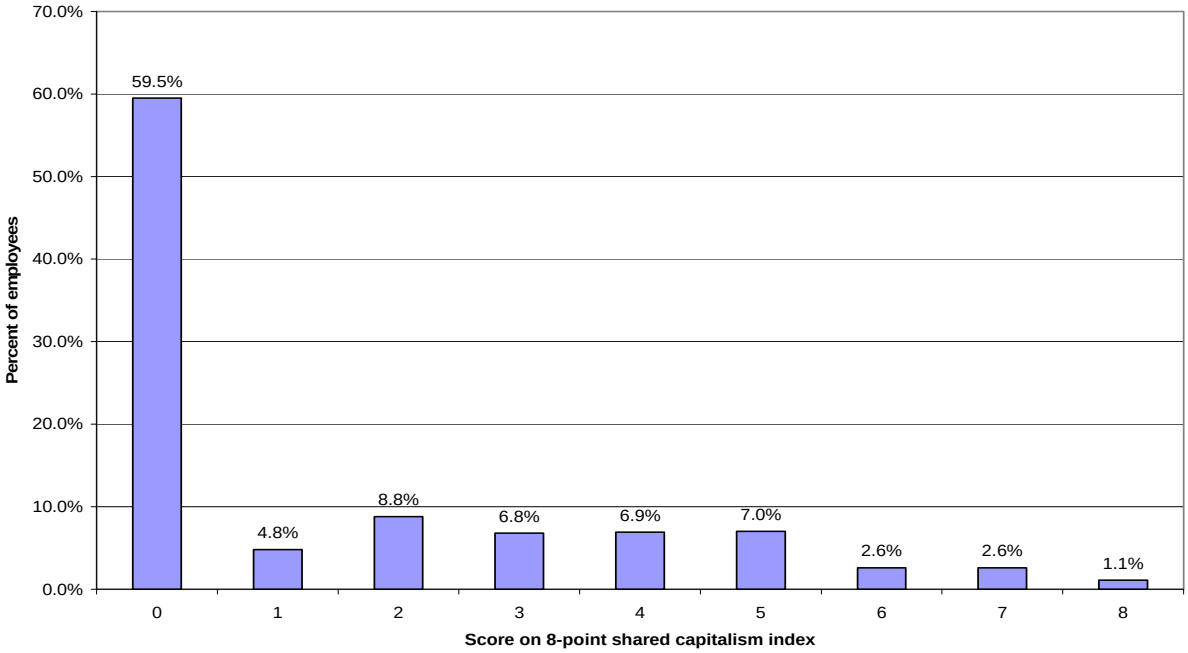

Figure B2: Distribution of Shared Capitalism Index in NBER Companies