

Testimony of Professor Douglas L. Kruse
School of Management and Labor Relations
Rutgers University
New Brunswick, New Jersey 08903

before the
U.S. House of Representatives
Committee on House Financial Services Subcommittee on Capital Markets,
Insurance and Government Sponsored Enterprises
2129 Rayburn House Office Building.

April 21, 2004

Chairman Baker, Ranking Member Kanjorski, and Members of the Subcommittee, thank you for the opportunity to testify. I am a professor at the School of Management and Labor Relations at Rutgers University, New Brunswick, New Jersey. I have specialized in the economic analysis of broad-based employee ownership, stock options, and profit sharing in the U.S. economy for thirty years. I have a Ph.D in Economics from Harvard University and serve as a Research Associate at the National Bureau of Economic Research (NBER) in Cambridge, Massachusetts. At the NBER I am co-principal investigator of a multi-year research project on shared capitalism with Harvard professor Richard Freeman and my Rutgers colleague Joseph Blasi, which is funded by the Russell Sage and Rockefeller Foundations. I am also co-author with Prof. Blasi and Aaron Bernstein of Business Week of the recent book, In The Company of Owners,¹ which contrasts the broad-based stock options of high technology companies to the concentrated options and ownership—mainly in the hands of top executives—in traditional corporations. I want to summarize my main points briefly and refer to material and charts which I am respectfully submitting to have added to the public record.

In 2000, together with the scholars who are part of the NBER project, I began a collaboration with the National Opinion Research Center at the University of Chicago to add questions on these important issues to the U.S. General Social Survey which is mainly funded by the National Science Foundation. This survey, completed in 2002, interviewed a random sample of the entire U.S. working population. The data are public property, and are the basis for my initial evidence.

This national survey found that the vast number of stock option holders are members of the middle and working class, have moderate incomes, and are non-managers. Stock options and Employee Stock Purchase Plans in our country are a broad-based phenomenon despite the fact that there has been so much attention paid to how some top executives have clearly abused them very badly. Fourteen million citizens or 13% of all private sector employees and 25% of all employees of joint stock corporations hold stock options. Twenty three million citizens own company stock, representing 21% of private sector employees and 39% of joint stock company employees. An estimated 15 million of them own stock through Employee Stock Purchase Plans

¹ Joseph Blasi, Douglas Kruse, and Aaron Bernstein. In The Company of Owners: The Truth About Stock Options and Why Every Employee Should Have Them (New York: Basic Books, 2003).

which are the most democratic form of U.S. shared capitalism.² I would like to call your attention to the chart in Appendix I of my testimony, showing the incomes of all holders of stock options in the United States. As you can see, 79% of all stock option holders make less than \$75,000 per year. Tables 2-9 in Appendix II at the end of my testimony indicate how employees holding stock options are distributed in the U.S. population. They are

- Heavily concentrated in high tech but also very common – representing about 20% of employees -- in other industries
- Mostly concentrated in the middle class and working class – only 6% are in the upper class
- Mostly held by non-managers
- Spread among different regions and political groups
- Equally accessible to union and non-union workplaces

Appendix III also indicates how workers owning company stock – many of them through Employee Stock Purchase Plans (ESPPs)– are broadly distributed among all categories of employees, and across the political and social spectrum.

I have strong reservations about expensing unless the interests of regular workers are addressed, because expensing could change the incentives for companies to include regular workers in options and ESPPs on which our nascent economic democratic system of shared capitalism is built. Policymakers and economists widely observe that behavior follows incentives. That is the basis of Congress' entire approach to employee benefits. The effect of expensing on net income will create an incentive for some companies to reduce the expense by decreasing both the size of the benefit and the number of employees participating in the plans.

One might argue that companies who believe in employee ownership will continue to do it anyway. However, this is not persuasive. As an example, companies believe in retirement savings but the system would clearly fall apart without government incentives. When companies were required to account for defined benefit plan obligations, post-retiree health benefits, and Employee Stock Ownership Plans (ESOPs), there were significant reductions in public companies offering these to regular workers (although other factors were also involved).

² See the Wall Street Journal, September 4, 2003, page D1

There is evidence that, in anticipation of expensing, companies have been cutting regular workers from stock option and ESPPs, and concentrating employee ownership in the hands of top executives. Four studies in 2003 that analyzed hundreds of corporations documented that the companies were already cutting back on the participation and size of benefits for middle and lower level managers and employees in broader stock option plans and ESPPs.³ The companies intend further cutbacks and are largely protecting the access to options of top executives. One-third to one-half are making large cuts in stock option plans and half to two-thirds plan cuts in ESPPs. This may represent a substantial threat to broad-based employee ownership. I must tell the committee that I have personally attended corporate seminars on labor relations where I have heard company after company executive privately admit to doing just this.

In the last few days we attempted to independently confirm some of this evidence with a preliminary investigation. The first ten of the largest Fortune 20 public companies that recently filed their proxies for 2003 with the SEC were examined to see if there is any evidence of concentration of stock options in the hands of the top five executives between 2002 and 2003 when option expensing became widely anticipated. Six of the ten had said earlier that they will expense stock options.⁴ Five of the six have already increased the percent of stock options going to their top five executives while reducing the portion of the pie going to other employees. All six of the expensing companies have increased the percent of the stock option pie going to their CEO from 2002 to 2003. Four of the six also increased the raw number of options going to the CEO, while two increased the raw number of options going to the top five executives.

Out of all ten companies, six increased the percent of the stock option pie going to top executives from 2002 to 2003, and the increase was 50% on average and 25% at the median. Seven out of the ten increased the percent of the stock option pie going to the CEO from 2002 to 2003 and the increase was 83% on average and 32% at the median. If this trend continues this will be deeply troubling. The public has been repeatedly told that executive excess and abuse of

³ See Issue Brief: The Future of Broad-based Options, by Corey Rosen, January 2002, National Center for Employee Ownership, www.nceo.org The studies cited are by Sibson Consulting/WorldatWork, Mellon Financial, Mercer Human Resource Consulting, and Deloitte & Touche.

⁴ The identification of who announced expensing or not was based on "More Companies Voluntarily Adopt Expensing Fair Value of Stock Options" by Bear Stearns from September 2003. We used Lexis-Nexis to attempt update the list where applicable. It is available at <http://216.239.39.104/search?q=cache:x6I56xzDn1gJ:www.thecorporatelibrary.com/special/exp-options/ExpensingStockOptions09-4-03.pdf+list+of+companies+that+expense+stock+options&hl=en&ie=UTF-8>

stock options was one motivation for expensing. If expensing results in a further concentration of stock options in the hands of top executives, and cutbacks of broad-based plans as an unintended consequence, it will be nothing short of “supposed executive comp reform on the backs of the working middle class.”

If this is the result, it will also possibly involve bad news for shareholders. In chapters 1 and 2 of the book which I have entered into the record, we show how broad-based employee ownership contributed to building up some of the leading technology firms that have served investors well over the long-term. In Table 7, the General Social Survey demonstrates that 16% of work sites of publicly-traded companies actually granted stock options to a majority of employees in 2002. Appendix IV shows how this plays out in the biotechnology industry with most stock options and stock option profits going to non-executive employees, the exact same pattern the book documents in 100 High Tech companies. Chapter 7 of our book reviews twenty years of evidence on the improved productivity and total shareholder return of companies that use broad employee ownership and stock options and profit sharing effectively.⁵

Ironically, I have just completed a new study -- which I also request to be entered into the record --with my colleague Joseph Blasi that looks at the entire universe of data on the two thousand largest corporations in the country for the last 11 years, covering over 16,000 boards of directors decisions. This study shows that marginal increases in many forms of executive compensation, including various measures of stock option increases, do not predict future total

⁵ Unlike the research on executive compensation, there is a growing record of evidence on broad-based options. See James Sesil, Maya Kroumova, and Douglas Kruse, and Joseph Blasi, “Broad-based Employee Stock Options in the U.S.: Company Performance and Characteristics,” Academy of Management National Conference, Toronto, Canada, 2000.; James Sesil, Maya Kroumova, and Joseph Blasi, and Douglas Kruse, “Broad-based Employee Stock Options in U.S. New Economy Firms,” *British Journal of Industrial Relations*, Volume 4, Number 2, June 2002, pps. 273-294; Joseph R. Blasi, Douglas Kruse, and James Sesil, Maya Kroumova, and Ed Carberry, [Stock Options, Corporate Performance and Organizational Change](#) (Oakland, Ca.: National Center for Employee Ownership, 2000) (The full research report is available at www.nceo.org/library/optionreport.html); Christopher Ittner, Richard Lambert, and David Larcker, “The Structure and Performance Consequences Of Equity Grants To Employees Of New Economy Companies,” Philadelphia, Pa. : University of Pennsylvania, Wharton School of Business, January 2001. A recent related study by Richard Freeman, Douglas Kruse, and Joseph Blasi demonstrates using General Social Survey data that workers to get stock option grants in 2002 were more careful about monitoring the work behavior of co-workers. See “Monitoring Colleagues at Work: Profit Sharing, Employee Ownership, and Broad-Based Stock Options.” Presented at the 2004 Association for Comparative Economic Studies conference, San Diego, CA. This paper is part of the National Bureau of Economic Research’s Shared Capitalism. This will also be entered into the record.

shareholder return for 1, 3, and 5 years.⁶ Why then does it make sense to adopt policies like expensing that appear to encourage concentration of stock options?

Here is my conclusion. If there is to be expensing of stock options and certain contributions from Employee Stock Purchase Plans, then I believe that it makes sense for Congress to make sure that the decent working Americans who did not abuse employee ownership or stock options do not pay the price while top executives continue to protect their privileges. One possibility is to have options expensed for the top five executives as a current Senate and House bill proposes. Another possibility is to create parallel tax credits at some level that would allow only companies with truly broad-based option programs to offset their option expense. Companies would have the choice of using this new incentive or using the old existing incentive that allows them to deduct option profits from corporate income before taxes when options are exercised. The result of both ideas would be the same: expensing would not weaken shared capitalism and end up being paid for by workers. The vast number of stock option holders are members of the middle and working class, have moderate incomes, and are non-managers. Finally, I would like to call your attention to a bill in the House to create a Presidential Commission on Employee Ownership which I think deserves your support in light of these questions. That would be the right thing for the President to do. Thank you.

⁶ This article contains tables showing the entire descriptive statistical history of executive stock options for the last eleven years. See "Corporate Governance, Executive Compensation, and Strategic Human Resource Management From 1992-2002 A Portrait Of What Took Place," Joseph R. Blasi and Douglas L. Kruse, School of Management and Labor Relations, Rutgers University, New Brunswick, N.J., April 2004. Cited in the New York Times in "Option Pie: Overeating Is a Health Hazard," by Gretchen Morgenson, April 4, 2004.

APPENDICES

Appendix I. The Incomes of U.S. Employees Holding Stock Options.

79% of workers holding stock options have salaries less than \$75,000 per year

	% of employees holding stock options with this salary
<\$15,000.	6.7%
\$15-30,000.	20.6%
\$30-50,000.	29.0%
\$50-75,000.	23.2%
>\$75,000.	20.6%

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the General Social Survey for 2002 based on a random sample of all U.S. employees. The General Social Survey was conducted by the National Opinion Research Center at the University of Chicago, with support from the U.S. National Science Foundation. The data are public information and available for all researchers.

Appendix II. Tables on Broad Use of Stock Options.

Table 1. Americans Holding Stock Options.

Table 2. Percent of Workers Holding Stock Options in Different Industries.

Table 3. Economic Class of Workers Holding Stock Options.

Table 4. Workers Holding Stock Options By Occupation.

Table 5. Workers Holding Stock Options by Salary Category

Table 6. Stock Options: Union and Non-union Workers.

Table 7. Company Locations That Grant Stock Options To Most Employees.

Table 8. Small Businesses Granting Stock Options To Broad Groups of Workers.

Table 9. Workers Holding Stock Options And The Presidential Election.

Table 1. Americans Holding Stock Options

Total number of citizens holding stock options: 14 million

	% of workers
All private sector Company workers	13%
Only corporations with stock	25%

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the General Social Survey for 2002 based on a random sample of all U.S. employees.

Table 2. Percent of Workers Holding Stock Options in Different Industries.

	% of workers in this industry holding stock options
Computer Services	57%
Communications	43%
Finance	27%
Durable Manufacturing	23%
Non-durable Manufacturing	17%
Transportation	13%
Wholesale Services	11%
Retail Services	11%

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the General Social Survey for 2002 based on a random sample of all U.S. employees.

Table 3. Economic Class of Workers Holding Stock Options.

	% of workers with stock options in this class
Upper class	6%
Middle class	48%
Working class	45%
Lower class	2%

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the General Social Survey for 2002 based on a random sample of all U.S. employees. Workers reported their own economic class.

Table 4. Workers Holding Stock Options By Occupation.

	% of workers holding stock options in this occupation
Service workers	4%
Blue collar workers	10%
White collar workers	17%
Professional workers	17%
Management support^	23%
Management	15%

^Management support includes accountants, underwriters, financial and other analysts, HR staff, purchasing, buyers, business and promotion employees, construction inspectors, compliance officers and other inspectors.

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the General Social Survey for 2002 based on a random sample of all U.S. employees.

Table 5. Workers Holding Stock Options by Salary Category

Annual Salary	% of workers in each salary group holding stock options
<\$15,000.	4%
\$15-30,000.	10%
\$30-50,000.	15%
\$50-75,000.	24%
>\$75,000.	41%

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the General Social Survey for 2002 based on a random sample of all U.S. employees.

Table 6. Stock Options: Union and Non-union Workers.

	% of workers holding stock options in each group
Union workers	15%
Non-union workers	14%

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the General Social Survey for 2002 based on a random sample of all U.S. employees.

Table 7. Company Locations That Grant Stock Options To Most Employees.

	% of company locations that granted stock options to more than half of their employees in 2002
All workplaces in the private sector	5%
All workplaces in closely- held companies*	4%
All workplaces in stock market companies	16%

*These include pre-IPO companies.

Note: This survey looked at a random sample of physical locations of companies around the entire nation. The results indicate what percent of workplaces visited at random would have broad-based stock options: 5 in 100 of all private sector workplaces, 4 in 100 of all potentially pre-IPO closely-held companies, and 16 in 100 of all workplaces connected to public stock market companies.

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the National Organizations Survey for 2002 based on a random sample of all U.S. employees.

Table 8. Small Businesses Granting Stock Options To Broad Groups of Workers.

Small business = a business with less than 100 workers in a single location

Percent of all small businesses
in the U.S. which:

Granted stock options in 2002 to half or more of the company's workers	3%
--	----

Granted stock options in 2002 to 10-49% of the company's workers	2%
--	----

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the National Organizations Survey for 2002 based on a random sample of all U.S. employees.

Table 9. Swing Voters Holding Stock Options And The Presidential Election.

Workers holding stock options and their concentration among swing voters who are Independents, who vote in Presidential elections, who consider themselves moderate or conservative, and who live in the South or the Midwest.

	Percent of Workers Holding Stock Options Who Are:
Democrats	33.5%
Independents	34.2%
Republicans	32.3%
Voted in the 2000 Presidential election	
Liberal	22%
Moderate	40%
Conservative	38%
Residing in the East	
Residing in the Midwest	15%
Residing in the South	24%
Residing in the West	41%
	20%

Source: Analysis by Profs. Douglas Kruse and Joseph Blasi of Rutgers University and Prof. Richard Freeman of Harvard University of the National Organizations Survey for 2002 based on a random sample of all U.S. employees.

*This information is based on a surveys taken of a national random sample of all working adults and all workplaces in the United States. The General Social Survey of individuals was conducted in 2002 by the National Opinion Research Center at the University of Chicago and receives major support from the National Science Foundation of the U.S. Government. The National Organizations Survey of individuals was conducted in 2003 by the National Opinion Research Center at the University of Chicago. Professors Joseph Blasi and Douglas Kruse of Rutgers University's School of Management and Labor Relations and Professor Richard Freeman of Harvard University's Department of Economics designed a segment of the surveys on employee ownership and profit sharing that was supported principally by the Rockefeller Foundation, the Russell Sage Foundation, the Beyster Institute of Entrepreneurial Employee Ownership, the Employee Ownership Foundation, the National Center for Employee Ownership and the Profit Sharing Council of America. Numbers have been rounded to the nearest percent.

Appendix III. Results of the General Social Survey on Shared Capitalism Programs in the U.S.

Note: Four tables follow in this section.

Table 10: Participation in Shared Capitalism Programs, by Job Characteristics

Figures represent percentages of all private-sector employees in category at left who are covered by program at top of column. Based on 2002 General Social Survey.

	Percent covered by:		Percent who hold:		Sample size (5)
	Profit sharing	Gainsharing	Company stock	Stock options	
	(1)	(2)	(3)	(4)	
Overall	33.5%	23.2%	21.2%	13.1%	1242
Industry					
Ag./mining/constr.	21.1%	13.7%	13.8%	5.3%	95
Durable mfg.	53.2%	39.4%	33.7%	23.4%	94
Non-durable mfg.	49.1%	26.8%	29.6%	16.7%	112
Transportation	33.3%	21.2%	29.2%	12.5%	66
Comms./utilities	46.8%	38.3%	55.3%	42.6%	47
Wholesale	32.7%	21.8%	23.2%	10.7%	55
Retail	27.9%	22.7%	15.8%	10.5%	229
Finance/insurance	51.1%	39.8%	39.8%	27.1%	88
Computer services	54.2%	37.5%	58.3%	56.5%	24
Other services	24.8%	15.3%	9.4%	4.8%	412
Occupation					
Management	49.2%	33.9%	28.8%	14.8%	124
Mgt.-related	60.4%	45.3%	39.6%	22.6%	53
Professional	30.0%	20.6%	21.6%	17.3%	160
Other white-collar	38.2%	27.5%	23.4%	16.7%	382
Service	12.5%	8.0%	7.4%	4.0%	176
Blue-collar	31.6%	20.5%	20.1%	10.0%	332
Hours of work					
Full-time	37.4%	26.4%	24.5%	15.3%	994
Part-time	16.9%	10.6%	5.8%	2.4%	207
Union member			^	^	
Yes	11.4%	6.8%	27.6%	14.9%	88
No	34.9%	22.9%	21.8%	13.6%	733
Employer tenure		^	^		
0-2 years	31.1%	23.1%	12.9%	7.8%	537
2-4 years	33.5%	22.7%	25.0%	16.7%	203
5-9 years	39.3%	23.1%	30.2%	21.0%	234
10+ years	33.5%	23.8%	27.5%	14.6%	260
Yearly work earnings					
<\$15,000	18.3%	14.7%	5.5%	4.0%	251

\$15-30,000	28.1%	18.4%	18.0%	9.7%	320
\$30-50,000	37.5%	27.0%	28.4%	14.9%	293
\$50-75,000	59.0%	36.8%	36.6%	24.3%	144
\$75,000+	64.0%	45.3%	50.7%	41.3%	75
Size of establishment					
1-9 employees	21.3%	15.0%	10.3%	5.6%	253
10-49 employees	30.7%	20.4%	13.3%	6.2%	323
50-99 employees	39.5%	31.4%	21.4%	14.5%	172
100-400 employees	40.9%	26.4%	27.6%	20.2%	254
500-999 employees	44.3%	25.3%	30.8%	23.1%	79
1000-1999 employees	42.2%	37.5%	38.8%	16.9%	64
2000+ employees	34.2%	21.5%	46.8%	29.5%	79

Profit sharing is defined as eligibility for bonuses based on overall organizational performance.

Gainsharing is defined as eligibility for bonuses based on department or plant performance.

^ Differences among categories are not statistically significant at the 95% level for the union member variable in columns 3 and 4, and the tenure variable in columns 1 and 2. Differences among categories are statistically significant at the 99.9% level for all other breakdowns.

SOURCE: Analysis of the General Social Survey and the National Organizations Study by Douglas Kruse of Rutgers University, Joseph Blasi of Rutgers University and Richard Freeman of Harvard University, December 2002, for the Shared Capitalism Project of the National Bureau of Economic Research in Cambridge, Massachusetts.

Note: The General Social Survey was administered to a national random sample of working adults by the National Opinion Research Center of the University of Chicago in 2002. The National Organizations Study was administered by the same group to employers of respondents of the General Social Survey.

Table 11: Participation in Shared Capitalism Programs, from Survey of Individuals

Based on analysis of 2002 General Social Survey

		All private sector (1)	For-profit companies (2)	Not-for-profit orgs. (3)	Companies with stock (4)^^^
Percent of employees covered					
Profit sharing					
	In profit-sharing plan	33.5%	34.8%	20.0%	40.1%
	Received profit share last year	23.8%	24.7%	14.5%	27.4%
Gainsharing					
	In gainsharing plan	23.2%	23.7%	17.3%	27.7%
	Received gainsharing bonus last year	17.1%	17.5%	12.7%	19.8%
	Own company stock	21.2%	23.3%	0.0%	39.3%
	Hold stock options	13.1%	14.4%	0.0%	24.5%
Number of employees covered (millions)					
Total employees in economy^					
		108.8	99.0	9.8	58.7
Profit sharing					
	In profit-sharing plan	36.5	34.5	2.0	23.5
	Received profit share last year	25.9	24.5	1.4	16.1
Gainsharing					
	In gainsharing plan	25.2	23.5	1.7	16.2
	Received gainsharing bonus last year	18.6	17.3	1.2	11.6
	Own company stock	23.0	23.0	0.0	23.0
	Hold stock options^^	14.3	14.3	0.0	14.3
Size of financial stakes					
Bonus size if received profit sharing					
Dollar value	Mean	\$7,135	\$7,368	\$2,751	\$7,795
	Median	\$1,500	\$1,700	\$1,000	\$1,300
Percent of salary	Mean	8.5%	8.7%	4.1%	8.4%
	Median	4.5%	4.6%	2.1%	3.8%
Bonus size if received gainsharing					
Dollar value	Mean	\$7,797	\$8,160	\$2,552	\$9,363
	Median	\$1,500	\$1,500	\$760	\$1,500
Percent of salary	Mean	8.9%	9.3%	4.2%	10.0%
	Median	3.8%	4.0%	2.1%	3.5%
Company stock value if own stock					
Dollar value	Mean	\$84,409	\$84,409	---	\$84,409

	Median	\$10,000	\$10,000	---	\$10,000
Percent of salary	Mean	99.6%	99.6%	---	99.6%
	Median	21.2%	21.2%	---	21.2%
Sample size		1242	1130	112	670

Profit sharing is defined as eligibility for bonuses based on overall organizational performance.

Gainsharing is defined as eligibility for bonuses based on department or plant performance.

[^] The figure for total private sector employees comes from Bureau of Labor Statistics establishment data for July 2002. The BLS does not provide employee counts for not-for-profit organizations and companies with stock, so columns 2-4 are estimates based on the distribution of respondents in the General Social Survey sample.

^{^^} The percent of employees reporting that they hold stock options could be slightly lower because employees may have confused stock options with Employee Stock Purchase Plans, however the researchers made every effort to avoid this confusion by careful wording of the questions and explanation of each question to the respondents. Data in Table 2 showing a substantial increase in employees who were granted stock options between 1999 and 2002 suggests that there has been a substantial increase in the number of employees holding stock options.

^{^^^} "Companies with stock" refers to companies whose employees reported that they had stock in the General Social Survey . It is possible that this underestimates the number of companies with stock.

Table 12: Political Views and Selected Other Characteristics of Shared Capitalism Employees

Figures are the percent of workers in each column heading (e.g. holding stock options) having the characteristic at the left of the table.

		Hold employer stock		Hold stock options		Profit sharing	
		Yes (5)	No (6)	Yes (7)	No (8)	Yes (3)	No (4)
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<u>Political identification and participation</u>							
Political party							
	Democrat	31.3%	31.9%	33.5%	31.5%	34.3%	30.3%
	Independent	36.6%	38.9%	34.2%	39.2%	32.6% *	41.5%
	Republican	32.1%	29.3%	32.3%	29.3%	33.1%	28.2%
Strength of affiliation							
	Strong Democrat	14.9%	12.2%	17.4%	12.3%	13.8%	12.4%
	Not strong Democrat	16.4%	19.7%	16.2%	19.3%	20.5%	18.0%
	Independent, near Democrat	11.5%	9.7%	11.8%	9.8%	8.5%	10.9%
	Independent	14.9% *	22.9%	11.8% *	22.7%	17.6% *	23.1%
	Independent, near Republican	10.3% *	6.3%	10.6%	6.6%	6.5%	7.4%
	Not strong Republican	20.2%	16.8%	20.5%	16.8%	20.5% *	16.0%
	Strong Republican	10.3%	11.3%	9.9%	11.3%	11.4%	10.9%
Voting							
	Voted in 2000 election	68.8% *	58.2%	71.6% *	58.6%	66.1% *	57.4%
	If voted in 2000, voted for Gore^	40.8%	42.0%	40.0%	42.2%	37.6%	44.0%
	If voted in 1996, voted for Clinton^	61.3%	59.7%	65.1%	59.3%	56.8%	62.5%
Self-rated ideology							
	Liberal	22.7%	27.0%	22.4%	26.7%	27.9%	25.4%
	Moderate	40.2%	42.2%	40.0%	41.9%	37.0%	44.5%
	Conservative	37.1%	30.8%	37.6%	31.4%	35.2%	30.1%
<u>Group affiliations</u>							
	Attend religious svcs. 1/wk or more	24.1%	25.8%	17.3%	20.3%	17.2%	21.0%
	Union member--self or spouse	17.2%	14.3%	13.3%	15.2%	7.5% *	19.1%
<u>Region</u>							
	East	15.2% *	22.8%	15.4%	22.2%	15.7% *	23.5%
	Midwest	26.6%	23.5%	23.5%	24.3%	25.9%	23.8%

South	38.0%	34.8%	40.8%	34.6%	38.2%	34.2%
West	20.2%	18.9%	20.4%	18.8%	20.3%	18.5%
<u>Social issues</u>						
Favor gun permits	85.9%	82.1%	85.5%	82.4%	81.5%	83.8%
Have gun in home	34.1%	35.5%	34.6%	35.4%	40.7%	32.2%
Favor abortion if woman wants it for any reason	48.2%	45.2%	62.3% *	43.6%	54.7% *	39.5%
Homosexual relations not wrong at all	32.5%	34.4%	30.8%	34.3%	37.8%	32.3%
<u>Economic issues</u>						
Subjective class identification						
Lower class	1.1% *	3.7%	1.9%	3.4%	1.7%	3.7%
Working class	45.3% *	56.7%	45.1% *	55.7%	46.1% *	58.6%
Middle class	50.2% *	37.5%	47.5% *	39.0%	48.5% *	35.9%
Upper class	3.4%	2.2%	5.6% *	2.0%	3.6%	1.8%
Confidence in major companies						
A great deal	17.9%	16.9%	11.9%	17.7%	19.4%	16.2%
Only some	66.3%	65.9%	67.8%	66.0%	69.1%	64.7%
Hardly any	15.8%	17.2%	20.3%	16.3%	11.5% *	19.2%
Satisfaction w/financial situation						
Satisfied	34.6% *	25.0%	36.1% *	25.4%	34.4% *	23.1%
More or less	46.6%	46.3%	44.2%	46.8%	46.2%	46.2%
Not at all	18.8% *	28.7%	19.8%	27.8%	19.5% *	30.7%
Change in financial situation in past few years						
Getting better	67.7% *	47.4%	65.1% *	49.8%	61.5% *	46.6%
Getting worse	9.8% *	17.7%	14.0%	16.4%	10.0% *	19.4%
Stayed the same	22.6% *	34.9%	20.9% *	33.8%	28.5%	34.1%
Have good chance of improving std. of living						
Strongly agree	24.2%	21.8%	20.3%	22.7%	27.1%	19.9%
Agree	54.7%	52.7%	54.2%	52.7%	54.3%	53.5%
Neither	8.4%	12.2%	10.2%	11.5%	11.4%	10.0%
Disagree	11.6%	11.2%	15.3%	10.9%	6.4% *	14.0%
Strongly disagree	1.1%	2.2%	0.0%	2.2%	0.7%	2.6%

* Significant difference between "yes" and "no" columns at the 95% level.

Table 13: Participation in Shared Capitalism Programs, from Survey of Establishments or Workplaces.

Based on analysis of 2003 National Organizations Survey

	All private sector (1)	For-profit companies (2)	Not-for-profit orgs. (3)	Privately-held companies^ (4)	Publicly-held companies (5)
Percent of employees covered^^					
Profit sharing	38.4%	50.2%	22.5%	41.3%	69.8%
Gainsharing	13.2%	21.1%	1.8%	10.6%	26.7%
Own company stock	20.6%	37.9%	0.0%	33.4%	60.8%
Granted stock options in past year	2.5%	4.8%	0.0%	0.8%	10.2%
Percent of establishments that cover any employees*					
Profit sharing	61.9%	64.5%	41.2%	64.1%	82.3%
Gainsharing	35.0%	38.7%	9.1%	39.2%	46.8%
Own company stock	32.6%	37.8%	0.0%	45.8%	75.0%
Granted stock options in past year	14.1%	16.3%	0.0%	10.0%	52.7%
Percent of establishments that cover 50% or more of employees*					
Profit sharing	46.0%	47.9%	32.4%	45.3%	64.5%
Gainsharing	22.9%	25.3%	6.1%	26.4%	27.4%
Own company stock	16.1%	18.7%	0.0%	16.1%	51.9%
Granted stock options in past year	4.8%	5.6%	0.0%	4.2%	16.4%
Sample size	315	276	36	133	67

Profit sharing is defined as eligibility for bonuses based on overall organizational performance.

Gainsharing is defined as eligibility for bonuses based on department or plant performance.

^ Column 4 includes privately-held corporations and partnerships.

^^ Weighted by establishment size to reflect economy-wide percentage of employees covered.

SOURCE: Analysis of the General Social Survey and the National Organizations Study by Douglas Kruse of Rutgers University, Joseph Blasi of Rutgers University and Richard Freeman of Harvard University, December 2003, for the Shared Capitalism Project of the National Bureau of Economic Research in Cambridge, Massachusetts.

NOTE: For a downloadable copy of the full data tables in Word or PDF on this survey of shared capitalism see:

<http://www.rci.rutgers.edu/~blasi>

Appendix IV. Employee Equity In The Biotechnology Industry's Top Ten Companies.

Non-executive employees

26,489	Total Employees in the ten companies
14%	Average total employee equity for non-exec employees
23%	Average total employee equity for all insiders*
61%	Share of average total employee equity non-exec hold
95%	Share of 2002 stock option profits going to non-exec employees
81%	Share of 2002 stock options granted to non-exec employees
77%	Share of all company stock options in hands on non-exec employees
\$156. Billion	Total market value of the ten corporations at the end of 2002
\$1.131 Billion	Total 2002 stock option profits of non-exec employees as a group
0.72%	Non-exec employees 2002 option profits as % of market value
36%	Portion of the Nasdaq Biotech Index represented by the 10 firms

Source: Analysis of SEC filings by Profs. Joseph Blasi and Douglas Kruse, Rutgers University, March 2004. *includes board members as reported.

Note: The 14% total employee equity of non-executives is 12% from broad-based stock options and 2% from ESPPs and 401ks. Stock option holding are after exercise and dilution.

Top Five Executive employees

50	Total top five execs in the ten companies
9%	Average total employee equity for top 5 execs*
5%	Share of 2002 stock option profits going to top 5 exec employees
19%	Share of 2002 stock options granted to top 5 exec employees
23%	Share of all company stock options in hands on top 5 exec employees
\$56. Million	Total 2002 stock option profits of top 5 exec employees as a group
0.04%	Exec 2002 option profits as a share of end of total market value
23%	Average employee equity for non-executive and executive employees
26%	Average institutional shareholder ownership of over 5% stakes
36%	Portion of the Nasdaq Biotech Index represented by the 10 firms

Source: Analysis of SEC filings. *includes board members as reported.

Note: The 14% total employee equity of non-executives is 12% from broad-based stock options and 2% from ESPPs and 401ks. Stock option holding are after exercise and dilution.

April, 2004

WORKING PAPER

Corporate Governance, Executive Compensation, and Strategic Human
Resource Management From 1992-2002
A Portrait Of What Took Place

Joseph R. Blasi and Douglas L. Kruse*

Rutgers University

School of Management and Labor Relations
New Brunswick, New Jersey

*The authors can be reached at jrbru@hotmail.com and
dkruse@smlr.rutgers.edu

Introduction

As the future of executive compensation and corporate governance is debated, it makes sense to do some comprehensive retrospective research on what took place over the last 11 years. This is the kind of study that was not easily doable because the Securities and Exchange Commission only required detailed reports on executive compensation in proxy statements after 1992. The database which is considered the gold standard on boards' of directors' decisions executive compensation, Standard & Poors Execucomp was created thereafter to make these data widely available to analysts, institutional investors, the media, and academic researchers. Only the passage of 11 years allows more comprehensive backward and forward examinations of the salient relationships between total shareholder return and various measures of executive compensation decided upon by corporate boards of directors. We conceive of this study as mainly a study of boards of directors decisions over the period about executive compensation and their impact on the firm.

The Study

This study examines the potentially 20,000 boards of directors' decisions that have created important executive compensation patterns in the economy for the entire population of the top 1500-2000 U.S. public companies from 1992-2002 using the entire universe of Standard & Poors Execucomp. (see Appendix I). It continues an earlier study of the relationship between boards' of directors decisions on the percent of all employee stock options granted to the top five executives as a group and

total shareholder return. (Blasi, Kruse, and Bernstein 2003: 200-202; also reported in Morgenson 2002). In this current study, we explore the extent to which percentage increases in various types and formats of executive compensation made by boards of directors top to the CEO and the top five executives as individuals relate to future total shareholder return (TSR). The analysis is provided for CEOs separately and then, in some cases, for individual members of the top five executives reported to the SEC as separate individuals (with one exception noted below). We also explore the extent to which past or current total shareholder return predicts decisions which boards of directors made about these elements of executive compensation.

The authors caution that this study does not examine whether profit sharing or stock option grants or stock option profits for executives make any sense or whether executive pay should be aligned with the profits of shareholders. Obviously, an entire body of principal-agent theory strongly suggests that it does make sense that executives do well if shareholders do well. Moreover, one of the positive developments that took place since the classic owner-manager enterprises at the beginning of the last century passed to professional management was precisely to not pay these managers as bureaucrats (to refer to the theme of the Hall and Liebman study). Executives have important leadership responsibilities and deserve significant rewards when their companies use investors' funds wisely.

This study does not attempt to comment on or set the optimal size or scope of those rewards. That is a complex question which is now receiving the attention of a lot of theoreticians and practitioners and members of boards of directors. A new societal consensus on this matter would represent an important innovation on corporate affairs. The classic article on stock

options by Hall and Liebman (1998) shows with a smaller sample several years ago (i.e. the period 1980-1994) that executives indeed do well when their company's total shareholder return performs better. They also proved that most of this reward came from stock option profits. As the authors of that study noted:

...we document a strong relationship between firm performance and CEO compensation. In addition, we show that both the level of CEO compensation and the sensitivity of compensation to firm performance have risen dramatically since 1980, largely because of increases in stock option grants (1998:653)

They also found that the level of CEO compensation and the responsiveness of CEO compensation to firm performance had also risen dramatically since an earlier study by Jensen and Murphy (1990). Murphy subsequently (1999) provided a comprehensive review of research on this and other important studies on executive compensation before 1999. Since then Core and Guay (2001) look at non-executive employee stock options in 756 firms from 1994-1997 and Mehran and Tracy (2001) have looked at the wider role of stock options in pay in the country.

This study -- while concerned to some extent with similar issues in some respects -- is focusing on a very different set of issues and one under current discussion in public policy debates about corporate governance involving corporations, shareholders, academics, politicians, and citizens in general:

a) Do increases in total shareholder return (TSR) in the current year

meaningfully predict systematic boards of director actions on increasing the percent of the entire employee stock option pie or marginal increases in total executive compensation that is awarded to the CEO or other top five executives as individuals?

b) Do marginal percentage increases in the various types of executive compensation, particularly types of stock option compensation or executive profit sharing, predict future total shareholder return?

c) How should we think of these findings in light of how the entire “incentive” pie is divided among all employees?

d) What does this imply about how boards of directors have functioned in the past?

Questions a and b can be empirically tested. Questions c and d will be addressed in light of current corporate governance discussions in our interpretation of these empirical findings. Why do we think that this particular perspective on the problem and the historical data of executive compensation has merit? On one hand, it is our view that the current public debate has been overly influenced by an anti-corporate and anti-executive bias which somehow -- because of a combination of suspicion of corporate power or class jealousy or national politics -- seriously tries to imply that captains of industry do not deserve generous rewards in proportion to corporate performance. Any worker whose job depends partly on high quality corporate leadership realizes that not rewarding them well is obviously an imprudent policy. Surely, one does not want an economic

system which, as Hall and Liebman earlier questioned, pays corporate leaders like bureaucrats, where their fate is divorced from the fate of shareholders and society, and employees, as a whole. On the other hand, the startling rise that has taken place in all forms of executive pay (Table 1 below) and stock option profits and paper wealth (Table 2 below) from 1992-2002 does lend itself to several other questions. Has the magnitude and rate of compensation increases for the executive group leading major U.S. corporations been related to sensible shareholder corporate governance? In the past, have proportional marginal increases in the percent of the incentive pie that boards allot to corporate executives properly drive future performance? Is there any evidence of some kind of “leap-frog” process taking place where the rate of the rewards are being bid up without an adequate explanation and a prudent judgement? In short, our focus is mainly on the range of issues dealing with the impact of boards of directors decisions related to marginal increases in executive compensation.

The Main Findings

Here is a brief summary of the main findings of the study relative to the key questions of inquiry:

a) Do increases in total shareholder return (TSR) in the current year meaningfully predict systematic boards of director actions on increasing the percent of the entire employee stock option pie or total compensation that is awarded to the CEO or other top five executives as individuals in the current year?

For stock options, the evidence indicates that on average boards of directors set up the executive compensation system for CEOs so that proportional increases in the percent of the entire company-wide employee stock option pie awarded to individual executives rewards increases in the current year total shareholder return. From 1992-2002 a large number of boards have used increases in the CEOs or the top five executives' share of the total employee stock option pie as a short-term perk related to improvement in TSR during that year.

For total compensation, (including salary, bonuses, Long-term Incentive Plans, the value of restricted stock, and EITHER the value of stock options granted or the value of stock option profits), it is also the case that when the company's total shareholder return goes up in any particular year that this does predict marginal increases in the percent of total compensation (with either stock option grant value included or stock option profits included). This is according to the basic idea of stock options that executives should do well when companies do well and that their interests should be aligned. This, however, is, as noted, not the main focus of this study.

b. Do marginal percentage increases in the various types of executive compensation, particularly types of stock option compensation or executive profit sharing, predict future total shareholder return?

The evidence indicates that proportional marginal increases in the percent of the annual stock option pie that goes to the CEO or top five executives as individuals do not systematically predict positive increases in total

shareholder return in the next year, or average increases in total shareholder return in the next 3 years or the next 5 years. Neither do marginal increases in the Black-Scholes value of the options granted. Also, profit sharing as a percent of salary for the CEO and the top five executives does not predict future 1,3, and 5 year total shareholder return performance. (Since profit sharing is supposed to reward for past performance, this makes sense to us.)

The same general pattern holds for marginal increases in total executive compensation when either the value of stock option grants or the value of stock option profits is included. For CEOs and top five executives, marginal increases in total compensation (including the value of option grants or profits) do not predict future 1,3, and 5 year improvements in total shareholder return.

c) How should we think of these findings in light of how the entire “incentive” pie is divided among all employees?

Cash profit sharing for top executives in American corporations appears to be pervasive and very significant to executive wealth as it has been reduced to insignificance among other employees in the society in general. (Appendix III establishes this with an examination of executive profit sharing from 1992-2002.¹) Equity compensation for top executives in American corporations, particularly in the form of stock options, is pervasive and very significant to executive wealth. This evidence suggests that profit sharing for executives is functioning as it was conceived, namely,

¹ For a comparative examination of profit sharing among workers in the entire population see the results of a 2002 survey of the entire work force by the General Social Survey that we carried out with Richard Freeman of Harvard University at <http://www.rci.rutgers.edu/~blasi>

as a short-term reward. However, marginal increases in the executives share of the total annual employee stock option pie are more often used as a perk for improved total shareholder return in that year (or even as a prod to improve performance when total shareholder return for that year has been sub-par.) Because there is no evidence that these marginal increases in the CEOs or the top five executives' share of the total employee stock option pie drive future 1, 3, and 5 year total shareholder return, this raises questions about whether boards of directors have been too focused on increases in the top executives share of the incentive pie. Since it is also true that marginal increases in total executive compensation (including the value of stock options granted or the value of stock option profits) do not appear to drive better 1,3, and 5 year total shareholder return, it would appear that this is evidence of some level of excess in executive stock options. Indeed, this phenomenon may have contributed to a "leap-frog" phenomenon in executive pay over the decade.

Not all companies this approach of concentrating options on the top. In a recent book (Blasi, Kruse, and Bernstein, 2004) and a new study (Blasi and Kruse 2004) we have examined companies that include broader ranges of non-executive employees in their stock option and profit sharing plans in the technology sector. While this study also documents evidence of some excess and corporate governance problems in this sector, it does demonstrate that an alternative approach has been used. Boards in other industries have also used broader-based stock option strategies.²

d) What does this imply about how boards of directors have functioned in the past?

The evidence presented here strongly suggests that boards of directors have been too focused on identifying and dividing up the incentive pie among the CEO and top executives when marginal grants of added incentive power to this group do not appear to drive future total shareholder returns. This study lends strong support to SEC Chairman Donaldson's push for the ability of shareholders to nominate some board members directly.³

We suggest that this can be partly a result of a bias introduced into the corporate governance process by a lack of true independence of directors, the reality that compensation consultants which they retain have had their attitudes and behaviors shaped in the past by collecting fees from just the same top managers and their staffs which they seek to consult about, and a long history of cultural attitudes which suggest that it is only or mainly people at the top who drive corporate performance.

This last view is entirely out of touch with the growing role of intellectual capital and team work in our increasingly knowledge-oriented corporation. and with academic evidence. While lack of evidence of the impact of marginal increases in certain components of executive compensation for the top five executives does not automatically imply that broadening these incentives out in any way would be better, this study does raise the issue of whether boards of directors have properly evaluated the strategic human resource management of all the firm's human capital and whether this kind of evaluation merits becoming a subject of board-level discussion. We will discuss these implications at the end of this article.

² See <http://www.rci.rutgers.edu/~blasi> for a recent survey on broad option programs in the U.S.

³ These proposals are summarized and discussed in a roundtable on Mr. Donaldson's proposals at the SEC web site, www.sec.gov, available at <http://www.sec.gov/spotlight/dir-nominations.htm>

The Context

There has been a startling increase in total executive compensation for the 7500 executives (the CEO and the next four executives making up the top five most important leaders of the firm) over the past decade. Table 1 (Executive Compensation: The Top Five Executives) below documents the rounded dollar values from Standard & Poors Execucomp. Total compensation for this group over the period according to Execucomp has been \$177. Billion. The value of stock option profits and restricted stock grants have comprised almost \$100. Billion of this \$177. Billion. It becomes immediately apparent from examining this table, as Hall and Liebman (1998) observed for a period before the mid-nineties, the profits on stock including the central role of options, play a key role. (These scholars also looked at increases in the value of direct stock ownership which we do not examine in this study.) Having said this, after the significant market correction of 2000, there has clearly been a significant drop in total executive compensation and stock option profits, but not salary and bonus and the value of restricted stock grants. (Note however, in Appendix III that profit sharing by executives spiked after the market drop of March 2000 for some years.)

Table 2 below (Option Paper Wealth and Profits For The Top Five Execs of U.S. Corporations) firmly establishes that the promise of future stock option profits -- as a result of unexercised shares of the stock option pie which the executives were still holding -- insured continuation and perpetuation of this system of shared capitalism for America's executives.

Paper wealth from stock options represents an added multiple of 4-10 (i.e. 400%-1000%) of current year stock option profits in most years. Thus, by the end of 2002 after a significant market correction, paper wealth on all unexercised stock options can be estimated at \$24.4 Billion which is a multiple of 4.6 of the \$5.3. Billion of stock option profits in that year for the top five executives. Table 3 below (The March of Stock Options in the 1500-2000 Largest Public Companies) also establishes that the number of stock options granted to all employees has increased by a multiple of ten over the period and that the annual run rates of stock options granted annually have steadily increased over the period, although there has been a slowing in the last two years. Table 4 below (The Share Of All Employee Stock Options Going To The Top Five Executives of America's Corporations) shows that over this period five individuals have on average have received about 30% of the entire stock option package to all employees. As other scholars have also noted (Tracy and Mehran 2001), the average and median has gone down. While this is true, Table 5 below (Annual Stock Option Grants To U.S. Top Executives As A Percent of Total Shares Outstanding) demonstrates that boards of directors have actually significantly increased the run rate or the percent that annual grants of stock options to the CEO and the top five executives represent of total shares outstanding over the period. This last observation is an important one because the decline in stock options as a percent of total shares outstanding might lead to a corollary notion that top five executives reduced their own draw on total shares outstanding. That does not appear to be the case. (An additional part of the context is demographic evidence on who holds stock options, their occupational positions, income levels, and the degree to which broad-based option programs are common in the economy. This is not a

focus of this paper but the authors have made recent data from collaborative research on this question available as noted above.)

Given the level, the growth, and overall societal size of these rewards, one can certainly make a case to examine their etiology far more systematically. Nevertheless, an element of skepticism must be introduced into any such analysis. During the same period the stock market expanded significantly. One must be careful yet again not to fall into the fallacy that says that executive wealth does not deserve to expand with improvements in the stock market and company performance. (Although some concerns have been raised, such as those by Hall and Liebman (1998) that executive pay might vary with an index to market-adjusted performance only.) One must also be careful to posit that there are appropriate civil, societal, and economic limits to incentives. We recently heard this second argument put succinctly for one Chairman and CEO who made \$1. Billion in total compensation over the 1992-2002 period and whose shareholders initially made handsome profits and are now on hard times. The skeptical remark was this: “Did he really need the second \$500. Million to do what he did?” Finally, if anyone was wondering whether there are special established interests that executives and current boards have a strong incentive to protect, one only has to consider what was (is) at stake for these 7500 persons as an institutional segment of American society to consider this question.

TABLE 1.
Executive Compensation: The Top Five Executives
In The 1500 Largest Corporations in the U.S. Billions of \$\$

Salary	Bonus	LTIP	Restricted Stock Grants	Stock Option Profits	Other compensation	Total
--------	-------	------	-------------------------------	----------------------------	-----------------------	-------

1992	2.2	1.3	0.3	0.5	2.4	0.3	7.0
1993	2.7	1.8	0.3	0.6	2.4	0.6	8.4
1994	3	2.1	0.4	0.6	1.9	0.6	8.6
1995	3.3	2.4	0.6	0.8	2.7	0.7	10.5
1996	3.5	3	0.8	1.1	4.3	0.9	13.6
1997	3.7	3.3	0.9	1.5	6.8	1.2	17.4
1998	4	3.4	0.8	2.8	9.6	1.2	21.8
1999	4	3.9	0.9	1.9	10.7	1.4	22.8
2000	4	4.1	0.9	2.2	17.7	1.7	30.6
2001	3.8	3.3	0.6	1.9	9.2	1.4	20.2
2002	3.5	3.2	0.6	1.9	5.3	2.3	16.8
Sum	37.7	31.8	7.1	15.8	73	12.3	177.7

SUM
1992-
2001

\$177. Billion

Source: Douglas Kruse and Joseph Blasi, analysis of Standard & Poors Execucomp, 2002-2004.

Note: Numbers are rounded. 2001 numbers are based on approximately 25% of executives reporting only.

TABLE 2.
Option Paper Wealth and Profits For The Top Five Execs of U.S. Corporations

	# of cos.	# of execs.	Paper wealth by year		Profits on stock options exercised of top 5 execs
			CEOs	All top 5 execs	
1992	1497	6193	\$1,477,460,000	\$6,710,039,000	\$2,424,487,000
1993	1631	7836	\$4,351,563,000	\$11,500,890,000	\$2,374,903,000
1994	1666	8429	\$4,793,273,000	\$10,850,253,000	\$1,898,414,000
1995	1708	8668	\$8,931,706,000	\$20,418,621,000	\$2,667,728,000
1996	1861	9274	\$12,458,694,000	\$28,953,579,000	\$4,295,531,000
1997	1916	9520	\$19,384,171,000	\$45,054,953,000	\$6,797,300,000
1998	1986	9922	\$26,049,128,000	\$57,466,666,000	\$9,597,443,000
1999	1924	9850	\$43,356,378,000	\$92,995,005,000	\$10,747,381,000
2000	1793	9454	\$38,420,784,000	\$79,208,106,000	\$17,723,900,000
2001	1482	8699	\$38,146,579,000	\$61,688,898,000	\$9,153,283,000
2002		8372	\$11,931,356,000	\$24,463,285,000	\$5,282,023,000

Source: Douglas Kruse and Joseph Blasi, analysis of Standard & Poors Execucomp, 2002-2004.

Information is from company reports to the SEC.
Covers 1700 largest US corporations that are more than 95% of the stock market.

Notes:

Paper wealth is paper profit on all unexercised options if they were exercised.*
 Profits are the reported profits on actual stock option exercises in that year to the SEC.

*This involves simply adding two values that each corporation reports to the SEC in its Proxy annually and are reported as variables in S&P Execucomp. They are: IN MONEY EXERCISABLE OPT or “the value of Exercisable In-the-Money Options. This represents the value the officer would have realized at year end if he had exercised all of his vested options that had an exercise price below the market price.” and IN MONEY UNEXERCISABLE OPT or “the value of Unexercisable In-the-Money Options. This represents the value the officer would have realized at year end if he had exercised all of his unvested options that had an exercise price below the market price.

Table 3. March of Stock Options in the 1500-2000 Largest Public Companies*

Year	Annual Grants (actual #)*	Run Rates For All Companies*	Run Rates For the 500 500 Largest Companies*	Estimated Option Profits of All Options Exercised By <u>All</u> Employees** (from Desai 2002)
1992	843,187,000	1.03%	0.77%	\$14. billion
1993	1,474,532,000	1.31%	0.94%	\$15.3 billion
1994	1,509,664,000	1.33%	1.00%	\$10.4 billion
1995	1,903,990,000	1.44%	1.22%	\$17.6 billion
1996	2,710,167,000	1.89%	1.42%	\$32.4 billion
1997	3,810,516,000	2.33%	1.59%	\$42.6 billion
1998	4,915,995,000	2.82%	1.90%	\$73.5 billion
1999	7,238,668,000	2.91%	2.74%	\$74.8 billion
2000	9,305,324,000	3.13%	2.41%	\$106.2 billion
2001	9,358,933,000	2.85%	2.43%	
2002	8,522,365,000	2.46%	1.86%	

Source: Douglas Kruse and Joseph Blasi, analysis of Standard & Poors Execucomp, 2002-2004.

*Figures computed from Execucomp by the authors.

**This is the average of the run rate for each individual company, however the figures do not exclude cancelled options, so this is typically called the annual burn rate of options.

***Computed by Desai (2002), Table 2, National Bureau of Economic Research. Note that these figures refer only to the 1500 largest public companies. Desai explains the computation of this column as follows: “Exercises for all employees are estimated by grossing up exercises of the top five executives by the average across all years of the median share of all exercises excepting that if the average is less than 1% then exercises are grossed up using 20%.

Table 4. Share of the Entire Stock Option Pie Granted To Top Five Executives.

MEDIAN MEAN

1992	23.7%	28.8%
1993	26.5%	31.4%
1994	28%	32.3%
1995	27.1%	31%
1996	26.9%	31.5%
1997	26.4%	31%
1998	24.7%	29%
1999	25.5%	29.1%
2000	23.3%	27.6%
2001	18.2%	23.4%

Average of means for all years: 29.51%

Source: Analysis of Execucomp by Douglas Kruse and Joseph Blasi, 2002-2004.

Table 5. Annual Stock Option Grants To U.S. Top Executives As A Percent of Total Shares Outstanding.

For the top 1500 corporations

	For The Chief Executive Officer		For The Top Five Executives	
	Mean	Median	Mean	Median
1992	.025%	0	.307%	0
1993	.126%	0	.404%	.091%
1994	.203%	.041%	.447%	.113%
1995	.185%	.043%	.442%	.00126%
1996	.220%	.049%	.595%	.199%
1997	.240%	.057%	.670%	.269%
1998	.279%	.077%	.779%	.360%
1999	.301%	.112%	.790%	.405%
2000	.322%	.138%	.813%	.427%
2001	.310%	.154%	.727%	.414%
2002	.283%	.143%	.656%	.389%

Note: All companies reporting are included even if they granted zero stock options.

Source: Analysis of Execucomp by Douglas Kruse and Joseph Blasi, Rutgers University, School of Management and Labor Relations, 2004

The Data

The data used for this study is the entire universe of Standard & Poors Execucomp from 1992-2002. Execucomp builds these files from company's proxy filings to the Securities and Exchange Commission and generally covers the largest 1500 companies filing with the SEC. Appendix I provides the actual number of companies that provide data for boards of directors decisions on the CEO and the top five executives. Rutgers University has a subscription to this dataset. Definitions and means and medians for the variables used in this study are shown in Tables 6 and 7 below.

Table 6. The Execucomp Data: Executive Compensation and Total Shareholder Returns.

Variable (\$ figures in 000's)	Mean	Median	Standard Deviation	Minimum/Maximum
1)Salary	522	466	330	0/5294
2)Bonus	527	233	1368	2/102015
3)Long-Term Incentive Plan	132	0	788	-2361/31325
4)Stock Option Percent to Total	10.1	6.7	12.7	0/100
5)Stock Option Value Realized	1543	0	10270	-100/706077
6)TDC1 (Total Compensation)	3761	1556	11365	0/655448
7)TDC1 Percent Change (trimmed)* (includes value of options <u>granted</u>)	39.1	10.6	111.9	-87/811
8)TDC2 Percent Change (trimmed)* (includes value of options profits from options <u>exercised</u>)	56.0	11.6	158.1	-88/1318
9)Return To Shareholder 1 Year (trimmed)*	16.7	10.1	49.5	-79/299
10)Return To Shareholder 3 Year (trimmed)*	13.7	11.7	25.4	-53.0/111.5

11)Return To Shareholder 5 Year 13.4 12.6 17.7 -36.8/76.3
(trimmed)*

12) Black-Scholes Value of
Stock Options Issued

Definition Variables:**

- e) The salary is the dollar value of the base salary (cash and non-cash earned by the named executive officer during the fiscal year
- f) The bonus is the dollar value of a bonus (cash and non-cash) earned by the named executive officer during the fiscal year
- g) The Long Term Incentive Plan is the amount paid out to the executive under the company's long-term incentive plan. These plans measure company performance over a period of more than one year (generally three years).
- h) The Stock Option Percent to Total is the percentage of the grant this' executive received relative to the total stock option pie granted to all employees in the fiscal year
- i) The Stock Option Value Realized is the net value realized from exercising options, namely, the difference between the exercise price of the options and the market price of the company's stock on the date of exercise.
- j) Total Compensation (TDC1) is comprised of Salary, Bonus, Other Annual Compensation, the Total Value of Restricted Stock Granted, the Total Value of Stock Options Granted (using Black-Scholes), Long-Term Incentive Payouts, and All Other Total.
- k) TDC1 Percent Change is the year to year percentage change in TDC 1 which is comprised of Salary, Bonus, Other Annual Compensation, the Total Value of Restricted Stock Granted, the Total Value of Stock Options Granted (using Black-Scholes), Long-Term Incentive Payouts, and All Other Total.
- l) The TDC2 Percent Change is the year to year percent change comprised of Salary, Bonus, Other Annual Compensation, the Total Value of Restricted Stock Granted, the Total Value of Stock Options Exercised (i.e. option profits net of exercise price), Long-Term Incentive Payouts, and All Other Total.
- m) The Return To Shareholder 1 Year is the Total Shareholder Return including monthly reinvestment of dividends as computed by Standard & Poors and made available in the database for each corporation.
- n) The Return To Shareholder 3 Year is the average Total Shareholder Return including monthly reinvestment of dividends as computed by Standard & Poors and made available in the database for each corporation.
- o) The Return To Shareholder 5 Year is the average Total Shareholder Return including monthly reinvestment of dividends as computed by Standard & Poors and made available in the database for each corporation.

p) Black-Scholes Value of Stock Options Issued is the value of the option grant using the modified Black-Scholes method as computed by Standard & Poors and made available in the database for each corporation.

*Trimmed means that the top 1% and bottom 1% of values was trimmed in computing this in order to control for the effect of outliers.

**These descriptions are edited and expanded definitions of the variables made available by Standard & Poors Execucomp with the dataset.

In addition to these Execucomp variables we have derived a number of measures of executive compensation for the purpose of our analysis. They are listed in Table 7.

Table 7. Derived Variables On Executive Incentives.

	Mean	Median	Standard Deviation	Minimum/Maximum
1) The Annual Stock Option Share That The Top Five Executives As A Group Receive Of All Employee Stock Options Issued That Year	24.0	19.8	21.9	0/100
2)The Average Share That The Each Of The Top Five Executives Received Of All Employee Stock Options Issued In Any One Year				
CEO	10.1	6.7	12.7	0/100
Top Five as Individuals	4.794	3.96	4.38	0/100
3)Profit Sharing As A Percent of Salary for CEO (only bonus)	78.0	61.1	82.1	0/576.5

4)Profit Sharing As A Percent of Salary for CEO (bonus plus Long-Term Incentive Plan)	93.9	67.1	105.9	-145/715
5)Profit Sharing As A Percent of Salary for top 5 executives (only bonus)	63.4	50.2	63.3	0/574.6
6)Profit Sharing As A Percent of Salary for top 5 executives (bonus plus Long-Term Incentive Plan)	76.0	54.3	95.1	-38/3022

Definition of Variables

1) The Annual Stock Option Share That The Top Five Executives As A Group Receive Of All Employee Stock Options Issued That Year is the total percent of the entire employee stock option pie that the top five executives receive as a group.

2)The Average Annual Stock Option Share of the Top Five Executives is the percent of the total employee stock option pie granted to the top five executives as individuals, namely the average of the actual percents of the pie granted to each executive. For example, if in Corporation X five executives received 3%, 5%, 4%, 3%, and 5%, the average percent of the pie received would be 20%/5 or 5%.

3)Profit Sharing As A Percent of Salary (only bonus) is the bonus of the executive as a percent of the CEO's salary.

4)Profit Sharing As A Percent of Salary (bonus plus Long-Term Incentive Plan) is the bonus and Long-Term Incentive Plan payout of the executive as a percent of the CEO's salary.

5) Profit Sharing As A Percent of Salary (only bonus) is the bonus of the executive as a percent of the executive's salary for top five executives as individuals.

6) Profit Sharing As A Percent of Salary (bonus plus Long-Term Incentive Plan) is the bonus and Long-Term Incentive Plan payout of the executive as a percent of the executive's salary for top five executives as individuals.

Methodology

This analysis examines the within-firm change in total shareholder return as it relates to the within-firm change in marginal increases in a variety of executive compensation measures, such as the percent of the entire employee stock option pie granted by the board of directors to the CEO or a top five executive in any year or profit sharing as a proportion of salary for a top executive. This analysis is used for several additional measures of executive compensation. This analysis is based on fixed effects regressions with an AR1 correction for autocorrelation, with year dummy variables to control for general stock market movements in total shareholder return in any particular year. Both the upper and lower one percent of total shareholder return values have been trimmed to remove the undue influence of outlying values. By examining within-firm changes, this approach controls for any factors that remain constant in the firm over this period such as management quality, firm technology, product-market conditions and other influences upon firm performance. This approach does not control for a particular upward or downward movement in one year in an entire industry. In addition, in some specifications a no fixed effects OLS regression and a no fixed effects median regression is employed. All the regression results are provided in Appendix II (or the attached Excel file if this paper was available electronically). The analysis was conducted using STATA.

Total Shareholder Return and The CEOs & Top Five Executives Piece of The Stock Option Pie

Does the total shareholder return in the current year predict the percent of the entire employee stock option pie that boards of directors allotted to CEOs during that year?

Corporations have said that they introduced executive stock options to reward long-term shareholder return. One approach to studying this philosophy over the last eleven years is to analyze how short-term total shareholder return has influenced board of director decisions about marginal increases in the CEO's portion of the entire employee stock option pie. Specifically, what kinds of decisions have boards of directors made about their CEO's piece of the stock option pie during any particular year when total shareholder return went up during that year? The analysis begins by regressing the change in percent of all employee stock options awarded to the CEO during each year on the change in total shareholder return during that year. (This is adjusted for the change in Total Shareholder Return in the entire market as noted above.)

This analysis examines the stock option allocation in every year for every company in the entire universe of Standard & Poors Execucomp for the 1992-2002 period. In effect, we are analyzing potentially 16,500 boards of directors decisions (i.e., 11 years times about 1500 companies each with one CEO decision per year) In fact, over the period some corporations did not grant stock options to executives in a particular year or did not use stock options in their executive compensation systems at all. Thus, this analysis actually looks at 13,334 instances where stock options were used in the executive compensation system and where the board made a decision about changing the percent of the stock option pie that went to the CEO from one

year to the next. The result of the analysis is that a one percent increase on this year's market-adjusted total shareholder return predicts a 0.011% increase in the percent of the total employee stock option pie awarded to the CEO in the current year. The finding is highly statistically significant.⁴

One question which a journalist or a stock market analyst or a compensation consultant might raise is: "How practically meaningful is this finding? Are you simply averaging the results of thousands of cases so that many companies do not actually behave in this manner? Are your results practically irrelevant or do the boards of directors of a lot of firms in the stock market actually behave like this?" This is a fair question. To answer it we explored precisely how many boards of directors actually did increase the percent of stock options awarded to the CEO in a particular year when the total shareholder return went up in that year, how many did not do that, and how many did nothing. We also looked at what the boards did when total shareholder return went down. The result of this exploration is that boards are clearly more likely to increase the CEO portion of the entire employee stock option pie when total shareholder return goes up than when it went down. Let's look at these findings in more detail.

As noted we looked at 13,334 board of director decisions. In 6,876 cases, the market-adjusted total shareholder return of the corporations went up in any particular year. We found that for all years, 42.9% of these boards did in fact take the step to increase the CEO's share of the stock option pie at some time during that year, 16.9% kept it the same, and 40.2% decreased it. Obviously, diverse behavior does exist in what boards of directors did, but more boards increased the CEO's share than did not and quite a large

⁴ This is at the .001 level.

number did. So, it appears that the finding does have some practical significance and really does describe something that many real boards have actually done in the past. Our interpretation of this finding is that boards of directors quite commonly used an increase in the portion of the entire employee stock option pie to the CEO apparently as a reward for short-term total shareholder return in that year. This does not appear to be consistent with the stated purpose of executive stock options to reward long-term total shareholder return.

Next we focus only on the group of firms that had increases in market-adjusted total shareholder return in any particular year and dividing them into quartiles in order to see how each quartile actually dealt with the increases in the CEO's stock option slice of the pie during that year. This will provide more insight into the actual behavior of these companies and respond to any concern that we are reporting one average effect that has no practical implications. There were 2,947 instances where the market-adjusted total shareholder return went up in a particular year and the board of directors increased the portion of the total employee stock option pie that it awarded to the CEO. Table 8 below provides some descriptive statistics about the average and median increases in the CEO's share of the stock option pie that boards awarded in companies with various market-adjusted total shareholder returns.

Table 8 below illustrates that a significant number of boards of directors over the period chose to increase the CEO's portion of the entire employee stock option pie in the same year that total shareholder return went up. The fact that roughly the same phenomenon is observable in each quartile of market-adjusted total shareholder return performance with similar

means and medians indicates that the general regression described above is not some statistical artifact but a reflection of actual behaviors.

Table 8. Corporations Where Market-Adjusted Total Shareholder Return Went Up and Boards Of Directors Increased The CEOs Portion of the Total Employee Stock Option Pie, 1992-2002.

Market Adjusted TSR Went Up By This Amount	The CEOs Share of The Total Employee Stock Option Pie Went Up By This Number Of Percentage Points At The:	
	Mean	Median
I. Above zero and below 14.64%	9.64%	4.31%
II. Above 14.64% and below 32.58%	9.49%	4.69%
III. Above 32.58% and below 62.55%	9.78%	4.86%
IV. Above 62.55%	11.85%	6.26%

Source: Analysis of the entire universe of Standard & Poors Execucomp by Douglas Kruse and Joseph Blasi of Rutgers University. This includes all cases of favorable total shareholder return in the year, for example, such as a change a -9% total shareholder return to a -8% total shareholder return. Note that there were 4272 instances of increased TSR, however in only 2,947 of these cases did the corporation use stock options, or award stock options in that year.

It is possible -- although we think (in the context of our understanding of how stock options are supposed to function) not persuasive given the stated mission of executive stock options -- to understand the case that a board of directors might make for an increases in the portion of the entire employee stock option pie awarded to the CEO as a perk or reward for same year increase in market-adjusted total shareholder return. Below we will address this issue in more detail by examining whether this had an impact on 1,3, and 5 year future total shareholder return. For now, we wish to look at the phenomenon of board increases of the CEO's share in more

detail. It would however be much harder to understand that boards of directors would use increases in the portion of the entire employee stock option pie awarded to the CEO when market-adjusted total shareholder return in the same year went down. Oddly enough, this was a fairly common phenomenon also.

The finding that boards of directors tended to increase the stock option portion to the CEO when total shareholder return went up in the same year takes on importance when we consider that 39.6% of boards increased the CEO portion when the total shareholder return went down in the same year. Boards are clearly more likely to increase the CEO portion when total shareholder return went up than when it went down.

In 6,458 cases, the market-adjusted total shareholder return of the corporations went down in any particular year. We found that for all years, 39.6% of these boards did in fact take the step to increase the CEO's share of the stock option pie at some time during that year, 16.9% kept it the same, and 43.5% decreased it. Obviously, diverse behavior does exist in what boards of directors did and more boards decreased the CEO's share than did not but, in this second scenario, it is notable that quite a large number did. Our interpretation of this finding is that boards of directors quite commonly used an increase in the portion of the entire employee stock option pie to the CEO apparently to reward a CEO even when there was no short-term total shareholder return in that year. This does not appear to be consistent either with the stated purpose of executive stock options to reward long-term total shareholder return.

Why are increases in the portion of the entire employee stock option pie being rewarded to CEOs in years when they are doing a poor job? It is actually more difficult for us to see a cogent argument for this approach and

it would seem not consistent with the interests of investors. It may be that some boards thought that more stock options would turn around poor total shareholder return in the future, so that the “dividing up” of the employee stock option pie was used as a short-term nudge to the CEO for future performance. However, in light of the stated mission of stock options in executive compensation, this makes even less sense than increasing the portion as a short-term perk.

More insight about this story can be gained by focusing only on the group of firms that had decreases in market-adjusted total shareholder return in any particular year and dividing them into quartiles in order to see how each quartile actually dealt with the increases in the CEO’s stock option slice of the pie during that year. Table 9 below examines the 2,558 instances where market-adjusted total shareholder return went down over the 11 year period and the CEO was awarded a bigger piece of the entire employee stock option pie in that year.

Table 9. Corporations Where Market-Adjusted Total Shareholder Return Went Up and Boards Of Directors Increased The CEOs Portion of the Total Employee Stock Option Pie, 1992-2002.

Market Adjusted TSR Went Up By This Amount	The CEOs Share of The Total Employee Stock Option Pie Went Up By This Number Of Percentage Points At The:	
	Mean	Median
I Worse than -61.8%	9.51%	4.95%
II More than but not including -61.8% to -31.89%	9.65%	5.13%
III More than but not including -31.89% to -13.3%	9.43%	4.7%
IV More than but not including -13/3% to 0%	9.81%	4.9%

Source: Analysis of the entire universe of Standard & Poors Execucomp by Douglas Kruse and Joseph Blasi of Rutgers University. This includes all cases of favorable total shareholder return in the year, for example, such as a change a -9% total shareholder return to a -8% total shareholder return. Note that there were 3828 instances of decreased TSR, however in only 2,558 of these cases did the corporation use stock options, or award stock options in that year.

Thus, many boards of directors over the 1992-2002 period used marginal increases of the portion of the stock option pie awarded to the CEO both as a short-term perk or reward for total shareholder return during the current year and as a short-term nudge perhaps to increase total shareholder return in the future. We understand the logic that executives should make money on their previously granted stock options when shareholders are making money. (Although, as we write this some shareholder advocates and corporate leaders are calling to temper this view by requiring minimum holding periods for stock options to encourage a more long-term perspective.⁵) We have questions about the logic of increasing the CEO's share of the future incentive pie relative to all other employees when the company just because the company doing well in any particular year. These questions arise because stock options grants are not supposed to be used as a short-term perk or nudge. But when a board of

⁵ For example, in a March 10, 2004 editorial page essay for The Wall Street Journal entitled "The Competitive Option," David Pottruck, the CEO of Charles Schwab & Company, said "a CEO should be required to hold at least 50% of his or her options for a minimum of 10 years (and perhaps this percentage should be even higher). This will reduce the CEO's motivation to manage earnings for short-term results simply to garner immediate personal financial gain from a quick exercise of the options. It also ensures CEO commitment to the company for the long-term." He also proposed that "stock options for a company's five most senior executives should not be exercisable for a minimum of three years. Upon receipt of stock options, each of these executives must select one of three sell strategies: (a) wait the three years and then sell in equal annual installments over the subsequent five years; (b) agree to sell the entire grant in a predesignated program after a minimum hold of five years; or (c) hold exercised or unexercised options until retirement or for a minimum of 10 years and then sell the underlying stock as they see fit. These approaches, similar to deferred compensation, require an upfront election, again reducing the motivation to manipulate the company's financial performance for personal benefit." He also proposed that the top five executives not receive more than 10% of the stock options in a company with more than 1000 employees.

directors increases the top five executives portion of the total employee stock option pie when Total Shareholder Return went down, this clearly does not make sense for investors.

Using the perspective of individual CEOs, it also explains several findings from a previous examination of the entire percentage of the stock option pie that went to the top five executives as a group by the co-authors of this article that compared firms not to themselves over time but to other firms. One finding of that previous examination was that a significant number of firms gave unusually high percentages of the stock option pie to the top five executives. Indeed, a quarter of firms gave above 41% of all employee options to the top five executives in certain years and some gave 50, 60.70. 80, even 90, and even 100% while others had boards which allowed them to repeat this behavior year after year. Another finding was that when the average percent of options given to the top five executives as a unit went up above a certain threshold -- the median of 29% - over the entire period (1992-2001), this was associated with average total shareholder return being lower over the period. (See Blasi, Kruse, and Bernstein, 2003:200-202. Reported in Morgenson 2002)

Both of these perspectives on the problem of executive compensation underline that there may be some usefulness of looking at the problem from the perspective of how the entire employee stock option pie is divided. Nevertheless, these findings raise other important issues. Do boards of directors really conceive of stock options as a long-term versus a short term reward. A review of the Executive Compensation Philosophy section of recent proxy filings to the SEC of the ten largest corporations in the country produces a clear picture of the stated goals of stock options (see Table 10)

Table 10. Executive Compensation Philosophies In Major Fortune 50 Companies Proxy Filings To The SEC.

Company #1. "EXECUTIVE COMPENSATION. COMPENSATION, NOMINATING AND GOVERNANCE COMMITTEE REPORT ON EXECUTIVE COMPENSATION. Compensation Philosophy: The Company's executive compensation program is designed to: (1) provide fair compensation to executives based on their performance and contributions to the Company; (2) provide incentives to attract and retain key executives; and (3) instill a long-term commitment to the Company and develop pride and a sense of Company ownership, all in a manner consistent with shareholders' interests....Equity Compensation: Stock options generally are granted annually under ___'s Stock Incentive Plan of 1998 to link executives' compensation to the long-term financial success of the Company, as measured by stock performance." Proxy of April 15, 2003.

Company #2. "REPORT OF THE EXECUTIVE COMPENSATION COMMITTEE.... Stock Options -- Stock options were also granted under the provisions of the 1997 Stock Incentive Plan. All executives are eligible to be considered for stock option grants. Options are granted to emphasize the importance of improving stock price performance and increasing stockholder value over the long-term and to encourage executives to own ___ Stock.... Options are granted based on competitive long-term incentive compensation practices. The size of these grants and other long-term awards is intended to place executives in the third quartile of long-term incentives granted at comparator companies. In determining the size of new grants to each Named Executive Officer, we consider the number of option shares each executive has previously been granted. Options are denominated in Common Stock. An additional option grant was made in February 2002 to executives in recognition of performance during 2001 in the areas of market share, quality, manufacturing productivity, and new products, and to motivate the leadership team to maintain the positive momentum going forward." Proxy of April 14, 2003.

Company #3. "COMPENSATION COMMITTEE REPORT. Long Term Incentives. The nature of the _____ business requires long-term, capital-intensive investments. These investments often take years to generate a return to shareholders. Accordingly, we grant incentive awards with a view toward long-term corporate performance. These awards may not fluctuate as much as year-to-year financial results. Long term incentive awards are intended to develop and retain strong management through share ownership and incentive awards that recognize future performance. Historically, _____ has used stock options as its primary long term incentive award. In 2002, restricted stock was used in place of stock options. The Committee concluded that, at this time, in this industry, and in this Company, restricted stock is more effective in aligning executives' interests with those of shareholders and in achieving the objective of retention... For senior executives, the restrictions on 50 percent of the shares are lifted in five years, and the remaining 50 percent are lifted after 10 years or retirement, whichever is later. See page 18 for more information on restricted stock. The number of restricted shares granted to executive officers is based on individual performance and level of responsibility. For this purpose, the Committee measures performance the same way as described above for short term awards. Restricted stock grants must be sufficient in size to provide a strong incentive for executives to work for long-term business interests and become significant owners of the business. The number of shares held by an executive is not a factor in determining subsequent grants." Proxy of April 17, 2003.

Company #4. "Executive Compensation Philosophy. Our key compensation goals are to hire, motivate, reward and retain executives who create long-term investor value. We use a variety of compensation elements to achieve these goals, including: "stock options and stock appreciation rights: we award these to provide incentives for superior long-term performance and to retain top executives because the awards are

forfeited if the executive leaves before they become fully exercisable five years after grant;" Proxy of March 2, 2004

These excerpts have language similar to that in many proxy statements. They almost uniformly point to a clear philosophy of executive compensation that stock option awards are for future long-term performance. Other portions of the executive compensation philosophy of all the companies make clear that current year bonuses and multi-year cash and stock incentive plans are used to reward short-term behavior. This does not appear to be consistent with increasing the CEO's portion of all employee stock options in a year when total shareholder return goes up in that year. In most of the executive compensation philosophies that we examined was there any statement that the CEO's portion of all employee stock options would go up according to a philosophy that said that such an increase would be used to drive future performance in a year when total shareholder return was sub-par.

However, the issue of boards of directors decisions to increase the percent of the total employee stock option pie in a previous year was meant to drive total shareholder return over the long-term can be tested directly. Now, we will examine this issue of long-term performance more directly by looking at the impact of increasing the CEOs portion of the total employee stock option pie on future 1, 3, and 5 year total shareholder return. Perhaps, one can make a case at the board level that a marginal increase in stock options in a certain circumstance will drive better TSR. Now, we'll examine the results.

Do marginal percent increases of the entire employee stock option pie that boards of directors allotted to CEOs or the top five executives during any year predict total shareholder return in the next 1, 3, and 5 years?

In this case, the independent (predictor) variable is the percent of all employee stock options in a particular year awarded to the CEO or the top five executives and the dependent (predicted) variable is total shareholder return. The results are that each one percent increase in the annual percent of the total option pie that went to the CEO in the current year predicts no increase in TSR the next year, no increase in cumulative TSR over the next 3 years and no increase in cumulative TSR over the next 5 years.

In performing this regression in the case of the top five executives as individuals, we took the average of the percent of options given to each of the top five, so if CEO got 5% and next four top executives received 3%, 3%, 2%, and 2%, then the total percent of all employee stock options to the top five in that year would be 15% and the average per executive would be $15\%/5$ or 3%. The results are that each one percent increase in the average annual percent of the total option pie that went to each of the top five executives as individuals in the current year predicts a 0.05% increase in total shareholder return the next year. While there is a positive relationship to total shareholder return in the next year, there is no relationship to average total shareholder return over the next three or five years.

Thus, there is no meaningful evidence that increasing the marginal share of the stock option pie to either the CEO or top five executives systematically drove higher total shareholder return in the year after the grant, or drove average total shareholder return over the next three years or the next five years. Put differently, for top executives ramping up the

proportion of stock options given to them relative to other employees within companies has been used more as a perk for current year total shareholder return than as a driver of future total shareholder return. The problem with this finding is that stock options for executives were supposed to hold out an incentive for future improvement in total shareholder return according to both the theory and to explicit statements by major corporations in their Securities and Exchange Commission filings.

This evidence does not test nor disprove that stock option grants play a role in aligning top executives with total shareholder value. What it questions and disproves however is whether increasing the pie going to them proportionally over the period made much sense and affected future total shareholder return performance. Stock options can still be a good incentive to align executive wealth opportunity with shareholder performance and it is good that executives make money when shareholders make money. The optimal executive compensation package is not an issue that this research addresses directly.

Total Shareholder Return and The Percent Increase In Total Compensation Of The CEO or the Top Five (Using The Value Of Stock Options Granted)

One question raised by these findings is the limitations of examining the portion of the entire employee stock option pie when Execucomp makes available information about the Black-Scholes value of actual stock option grants in any year. As Tables 1-4 above indicate, stock options make up most of executive compensation. Using the same methodology, the following analysis looks at whether marginal increases over the 1992-2002

period of total compensation from all sources for the CEO or the top five predicts total shareholder return in 1 year into the future or the average over the next 3 or 5 years. This total compensation measure includes the total value of stock options granted at Black-Scholes value plus salary, bonus/ltip, restricted stock value granted, other annual and all other as reported to the SEC.⁶ The advantage of this variable is that we are looking at everything a board gave a top executive in a particular year. In this case we're examining the consequences of thousands of boards of directors actions over the last eleven years.

The result is that there is no evidence that marginal increases in the total compensation percent (with value of options granted) for the CEO or the top five systematically drove higher cumulative total shareholder return in the next year, or average total shareholder return over the next three years or the next five years. It just was not a significant driver of future total shareholder return.⁷

Specifically, our findings are that a one percent increase in the percent of total compensation (including Black-Scholes value of GRANTS) that went to the CEO in the current year predicts a -0.17% decrease in TSR in the next year, a -0.0067% decrease in average TSR over the next 3 years and a -0.0019% decrease in average TSR over the next 5 years (this is not statistically significant). A one percent increase in the percent of total compensation (including Black-Scholes value of GRANTS) that went to each of the top five executives in the current year predicts a -0.022% decrease in TSR over the next year, a -0.012% decrease in average TSR over the next 3 years, and an insignificant effect on average TSR over the

⁶ The variable is called TDC1 in Execucomp and its annual increases is called TDC1 Percent Change.

⁷ Regressions are available from the authors.

next five years. The negative relationship may reflect some regression to the mean in which TSR falls after an especially good year. However, what we think is most important in these findings is that we see no statistically significant evidence of positive increases in prospective TSR.

Remember, in the previous regressions, that we are focusing on the prospective impact of marginal increases. This does not mean that stock options did not align the fortunes of the executive with the fortunes of the firm looking back. Now we look at how current year performance affected rewards, in this case for the CEO alone.

For the entire universe of companies and years, we examined whether increases in the total shareholder return in any year predicted the percent change in total compensation in that year. There is a strong positive relationship that is highly statistically significant. When total shareholder return in a year goes up 1%, the total compensation percent (including value of options granted) goes up 0.284%.⁸ Our interpretation of this finding is that it confirms once again that when companies do well, executives do well, in this case in terms of their total compensation as defined.

As noted, this does not mean that it is not important to compensate executives handsomely for excellent past corporate performance or to give them handsome incentives for the future. It does suggest that the LEVELS OF THE PERCENT INCREASES that took place did not necessarily drive future performance when looking into the past over this period.

⁸ Note that the top and bottom 1% of values of TDC1 Percent Change were trimmed because of extreme values.

Total Shareholder Return and The Percent Increase In Total Compensation Of The CEO and the Top Five (Using The Value Of Stock Options Profits)

Another question raised by these findings whether the ultimate result of stock options granted to the CEO and the top five, namely, stock option profits, drove future total shareholder return. As Tables 1-4 above indicate, stock option profits make up most of executive compensation and they have also grown enormously. Using the same methodology, the following analysis looks at whether marginal increases over the 1992-2002 period of total compensation (now including stock option profits rather than grants) from all sources predicts total shareholder return in 1 year into the future or the average over the next 3 or 5 years. This alternative measure of total compensation measure includes the net value of stock options exercised (that is, the option profits net of the exercise price in the proxy) plus salary, bonus/ltip, restricted stock value granted, other annual and all other as reported to the SEC.⁹ The advantage of this variable is that we are looking at everything that a CEO or the top five actually made from all sources as a result of previous boards of directors actions. In this case we're examining the consequences of thousands of boards of directors actions over the last eleven years.

The result is that there is no evidence that marginal increases in the total compensation percent (with value of options profits) systematically drove higher cumulative total shareholder return in the next year, or average

⁹ The variable is called TDC2 in Execucomp and its annual increases is called TDC2 Percent Change.

total shareholder return over the next three years or the next five years. It just was not a significant driver of future total shareholder return.¹⁰

Specifically, the results showed that, on average, a one percent increase in the percent of total compensation (with stock option profits as the typical major component) that went to the CEO in the current year predicts a -0.019% decrease in TSR in the next year, a -0.01% decrease in cumulative TSR over the next 3 years and a -0.009% decrease in cumulative TSR over the next 5 years (this one not statistically significant).

On average, a one percent increase in the percent of total compensation (including stock option profits as a major component) that went to each of the top five executives in the current year predicts small negative decreases in TSR in the next year, the next 3 and 5 years or 0.059%, 0.028%, and 0.013%. The negative relationship may reflect some regression to the mean in which TSR falls after an especially good year. However, what we think is most important in these findings is that we see no statistically significant evidence of positive increases in prospective TSR.

Again, remember that with this previous analysis that we are focusing only on the prospective impact of marginal increases. This does not mean that stock options did not align the fortunes of the executive with the fortunes of the firm looking back. The next regression looks at the impact of current year TSR performance on current year total compensation percent (including the value of stock option profits) for the CEO only. For the entire universe of companies and years, we examined whether increases in the total shareholder return in any year predicted the percent change in total compensation in that year when option profits are added in. There is a strong positive relationship that is highly statistically significant. When total

¹⁰ Regressions are available from the authors.

shareholder return in a year goes up 1%, the total compensation percent (including value of options profits) goes up 0.526%.¹¹ Our interpretation of this finding is that it confirms once again that when companies do well, executives do well, in this case in terms of their total compensation as defined, of which the major component is stock option profits.

As noted, this does not mean that it is not important to compensate executives for excellent past corporate performance or to give them significant incentives for the future. It does suggest that the LEVELS OF THE PERCENT INCREASES that took place did not necessarily drive future performance. Again, this particular research does not offer guidance on the optimal executive compensation package.

Total Shareholder Return and The Percent Increase In The Black-Scholes Value of Stock Options Granted To The CEO and the Top Five

One further question to explore is the impact of marginal increases in the Black-Scholes value of stock options granted to the CEO or the top five executives on prospective total shareholder return (TSR) in the next year, and the average of the next 3 and the next 5 years. This is an important refinement of the previous analyses for several reasons. One is that it regularizes the dollar value of all the company's options using a common technique (about which there has been some level of disagreement as a valuation technique for employee options). Another is that the measure actually looks at dollar values. Two executives may have had a 100% increase in total direct compensation (including the value of options granted)

¹¹ Note that the top and bottom 1% of values of TDC2 Percent Change were trimmed because of extreme values.

but for one the option granted part of this may have been worth \$1. Million, while for the other, it may have been worth \$100,000. So, the reason why this is salient is that a percent increase in the value of options granted as part of Total Compensation in one of the ten largest Fortune 500 companies may represent a very different kind of incentive than a percent increase in the value of options granted in a one of ten smallest Fortune 500 companies. This measure looks at each executive in the sample and analyzes the relationship between increases in the same dollar values of annual option grants and prospective shareholder return. To summarize, the results using three different regression approaches indicates that marginal increases in the Black-Scholes value of stock options offered this year do not predict current year, next year, or average 3 and 5 year prospective increases in total shareholder return. In fact, they predict small negative decreases in most of the specifications in most of the periods.

The first approach is a fixed effects regression with an AR1 correction that looks at the CEO and top executives within their own company. This allows us to address the problem that there may be that there are some executives in companies with high total shareholder return and some executives in companies with low total shareholder return. The results are that for CEOs in the entire universe of Execucomp, a \$1,000. increase in the Black-Scholes value of options granted in the current year predicts a – 0.0009 decrease in TSR in the current year (although this is not statistically significant), a –0.00036 decrease in TSR over the next year, a –0.00022 decrease in average TSR over the next three years, and a –0.00012 decrease in average TSR over the next five years, all of which are highly statistically significant.

For the top five executives, in the entire universe of Execucomp, a \$1,000. increase in the Black-Scholes value of options granted in the current year predicts a -0.0009 decrease in TSR in the current year, a -0.00032 decrease in TSR over the next year, a -0.00015 decrease in average TSR over the next three years, and a -0.0008 decrease in average TSR over the next five years, all of which are highly statistically significant.

In a second approach, we also tested this relationship across the entire economy using the entire universe of Execucomp by comparing all companies to each other. This approach uses a no fixed effects OLS regression. The results are that for CEOs in the entire universe of Execucomp, a \$1,000. increase in the Black-Scholes value of options granted in the current year predicts a $+0.0006$ increase in TSR in the current year (although this is not statistically significant), a -0.00017 decrease in TSR over the next year that is highly statistically significant, a -0.00011 decrease in average TSR over the next three years (statistically significant at the 0.01 level) , and a -0.0005 decrease in average TSR over the next five years that is highly statistically significant.

For the top five executives, in the entire universe of Execucomp, a \$1,000. increase in the Black-Scholes value of options granted in the current year predicts a $+0.0004$ decrease in TSR in the current year (that is statistically insignificant) , a -0.00014 decrease in TSR over the next year that is highly statistically significant , a -0.0009 decrease in average TSR over the next three years that is highly statistically significant, and a $+0.00001$ increase in average TSR over the next five years that is statistically insignificant.

In a third approach, we also tested this relationship across the entire economy using the entire universe of Execucomp by comparing all

companies to each other with a methodology that adjusted for outliers. Perhaps, it is possible that a few companies with high values were driving these results. This approach uses a median regression in the statistical program STATA to correct for this concern. This specification also controls for any general market movements.¹²

The results are that for CEOs in the entire universe of Execucomp, a \$1,000. increase in the Black-Scholes value of options granted in the current year predicts a +0.0007 increase in TSR in the current year that is statistically significant at the 0.05 level), a -0.00022 decrease in TSR over the next year that is highly statistically significant, a -0.00017 decrease in average TSR over the next three years that is highly statistically significant, and a -0.00001 decrease in average TSR over the next five years that is not statistically significant.

For the top five executives, in the entire universe of Execucomp, a \$1,000. increase in the Black-Scholes value of options granted in the current year predicts a +0.0003 decrease in TSR in the current year (that is statistically insignificant) , a -0.00017 decrease in TSR over the next year that is highly statistically significant , a -0.00010 decrease in average TSR over the next three years that is highly statistically significant, and a 0.0000 increase in average TSR over the next five years that is statistically insignificant.

Executive Profit Sharing and Total Shareholder Return

¹² This is done using year dummies that are not shown in the regression table.

Another key way that companies align executives with capitalism is through profit sharing. This next section examines whether executive profit sharing serves as a reward for previous total shareholder return and whether it drives future total shareholder return. Executive profit sharing is fairly widespread among public corporations. As Table 2 indicates, Profit Sharing as a Percent of Salary for the top five executives averaged 78% over the 1992-2002 period (the median was 61%). When the value of Long-term Incentive Plan payments is included, Profit Sharing as a Percent of Salary for the top five executives averaged 93.9% over the 1992-2002 period (the median was 67.1%). Appendix III provides detailed information on executive profit sharing in the corporate economy.

The first analysis examined whether past total shareholder return in the last 1, 3, or 5 years predicted profit sharing as a percent of salary. The results are very positive and highly statistically significant. Indeed, executive profit sharing does seem to be working as planned. When shareholders have had past total shareholder return, boards of director frameworks have in general assured that executives get high profit sharing rates as a percent of their salary in the current year.

The average Bonus as a Percent of Salary over the period ranged from 80-110% of base salary per year over the entire 11 years. It crept up over the 1992-2002 period and was in fact highest after the stock market bust, 110% in 2000 and it did not go down a lot the year after the crash in 2001. Now going to total executive profit sharing, that is, cash Bonus + Long Term Incentive Plan payouts (some of which is paid in stock) as a percent of base salary, the average ranged from 64% to 84% over the entire 11 years including all executives. (This means not just figuring the average with only those executives who received profit sharing) and spiked at 87% in 2000

and did not go down markedly in 2001 at 74%. The median ranged from 51% to 69%. If one just examines the executives who received such profit sharing, the average ranged from 80-104% over the 11 years and it also spiked in 2000 at 100% but only went down to 87% in 2001. The median was at 57%-77% and it was also unusually high in 2000 at 70% and only went down the second year of the crash to 61%. (Appendix III)

Next we look at any impact of any current year executive profit sharing on the future total shareholder return. We examine whether marginal increases in executive profit sharing drove future 1, or average 3 and average 5 year total shareholder returns. For CEOs, on average, when Bonus as a percent of base salary went from 0-100% in the current year total shareholder return in the next year went down -7.3%, average TSR in the next 3 years went down 7.4%, and average TSR in the next 5 years went down -3.5%. For CEOs, on average, when Bonus+LTIP as a percent of base salary went from 0-100% in the current year total shareholder return in the next year went down -5.6%, average TSR in the next 3 years, went down -4.3% , and average TSR in the next 5 years it went down -3.5%.

For top five executives as individuals, on average, when Bonus as a percent of base salary went from 0-100% in the current year total shareholder return in the next year went down -10.8%, average TSR in the next 3 years went down -11%, and average TSR in the next 5 years went down -5.3%. On average, when Bonus+LTIP as a percent of base salary went from 0-100% in the current year total shareholder return in the next year went down -4.1%, average TSR in the next 3 years went down -3.9% , and average TSR in the next 5 years it went down -2.9%.

These predictions about the relationship between current year profit sharing and future total shareholder return do not surprise us. They

underline the short-term nature of profit sharing which has traditionally had a strong look-back feature for executives. They also underline the importance of finding a forward-looking incentive that drives total shareholder return into the future.

Conclusion

Our interpretation of these findings is that they do not question the prudence of using stock options to resolve the principal-agent problem, but rather they question the ways in which boards of directors have made decisions about marginal increases in the stock option pie to top executives over this period. They raise principally questions of corporate governance. Taken together with the evidence of how executive stock option grants and profits have rapidly increased over this period and the evidence on how many boards of directors use increases in the stock option pie as a short-term perk under various scenarios, this further evidence on the zero impact that these marginal increases in the pie have on future total shareholder performance, lend credence to the argument that the corporate governance implications of executive compensation merit further examination. As noted, these findings provide a comprehensive examination of thousands of boards of directors decisions regarding executive compensation over the last 11 years and their effect on investors and shareholders. It is also possible that these results suggest a “leap-frog” phenomenon whereby executive compensation was bid up over the period without a clear justification for some of the marginal percentage increases.

One interpretation of these results is to blame top executives or to say that they should not have significant pay. However, we do not agree with

this interpretation. First, executives play an important leadership role in the American economy and they do deserve to get pay increases if shareholders gain. Second, realistically, it is not clear that every board of directors understood the prospective impact of its decisions made in the past on total shareholder return into the future. Third, like any employee a top executive wants to be paid as much as they can for their job especially if they believe that there is evidence that they have done their job well or that their effort is at a high performance level. That is natural. It is not the institutional role of top executives to police their own behavior. That role falls to the boards of directors.

Boards of directors and those who design and regulate and monitor the country's corporate governance system need to take these results to heart. With this historical perspective, more care and objective analysis needs to go into the consideration of executive compensation going forward. These results have some powerful implications for corporate governance because they raise serious questions about the quality of many boards of directors decisions over this entire period.

What makes boards make marginal reward decisions for top executives that are not clearly tied to improving future total shareholder value? We think that the answer is a lack of independence and objectivity. They strongly suggest that many of the weak governance features of corporate boards over this period which could undermine independence and objectivity could certainly have played a role in this dysfunctional process. As such, the findings lend powerful support for the efforts of Secretary Donaldson of the U.S. Securities and Exchange Commission to allow more involvement of shareholders in board of director nominations.

One important point raised by these results is what should guide when CEOs and top executives should get marginal increases in their share of the stock option pie. It is a fair question but one for which these data and results do not have a detailed answer. As noted, the research does not offer a specific design for an optimal executive compensation package. Our general response is that the system of the last decade where boards often just laddled out more stock option grants to executives in the short-term when the company did well that year (presumably using one theory) or when the company did poorly that year (presumably using another theory) was not a good system. Also, the frameworks put in place allowed marginal increases in option grants and option profits that drove increases in total compensation, but apparently did not drive total shareholder return in many companies. Furthermore, the notion – as expressed in so many executive compensation sections of proxy filings – that a study of what other corporations have done -- as supplied by a compensation consultant -- somehow justifies what the board decides, is not acceptable in retrospect. More than a few observers have guessed whether many of these studies had a role in driving the leap frog phenomenon. We have not directly measured or studied the “leap-frog” phenomenon, but this study sheds some light on discussions about its possible existence.

The results also suggest that the oft-repeated notion that “there is a tight labor market for good executives” and their pay is what the market will bear, is an insufficient explanation. Why, for example, does the market bear marginal increases in the pay package that produce no marginal better results for shareholders? Again, our response is that this is a broken and imperfect market because the corporate governance mechanism that decides on the pay is not sufficiently independent and objective. In many cases, corporate

governors at the top might were more oriented to using the corporate machinery to reward executives for short-term behavior rather than more carefully and judiciously aligning them with shareholders to drive future behavior. But the key piece of evidence is how any current year marginal endowments in executive compensation apparently made no significant difference for investors in the future. How boards of directors address this situation in the future is a major problem that they face. The evidence clearly suggests that maybe some of the largesse of increases in executive stock options -- as a percent of the total employee pie and in terms of the value of grants and profits -- were of no avail over the last 11 years. This fits with comparative studies that show that other Western and Asian countries apparently get by with less executive rewards than we do. (See Murphy and Conyon 2000).

It is important to digest the fact that the employee stock option pie is a pie that is divided by the board each year between top executives and all other employees. When top executives get marginal increases, other employees get less of the pie. These results relate to something we have been saying for some time: the research evidence indicates that on average broad-based stock option plans, employee ownership plans, and profit sharing plans are associated with future improvements in total shareholder return. (For a review of this evidence see, Blasi, Kruse and Bernstein, 2003:153-204; Sesil, Kroumova, Kruse, and Blasi,. 2000; Blasi, Kruse, Sesil, Kroumova, and Carberry, 2000; Sesil, Kroumova, Blasi, and Kruse. 2002; Ittner, Lambert and Larcker, 2001).¹³ Why then have many boards of

¹³ The results in this paper do not reflect the performance of broad-based plans since the Execucomp data do not report on the number of employees in any corporation who actually receive stock options in any year apart from the top five. A company could give a large or a small share of all employee stock options to the top five and then include just a small sliver of executives below them or up to the entire work force.

directors consistently focused marginal increases in their reward programs on the top of the corporation rather than on the rest of the corporation?

The answer we think is fourfold. First, that there has not been a solid awareness of the value of broad employee ownership. A gradual evolution of broad-based plans has been taking place in both technology and non-technology sectors of the economy that has not attracted as much attention as the headlines on executive pay. Some companies do take a different approach to dividing the incentive pie. (Whether their executives get too much or too little is a separate issue.)¹⁴ Second, the executive compensation philosophy that the board adopts has been overly influenced by the self-interest of the CEO and the top executives who have more than a small amount of self-interest in persuading the board that “we are the group that affects total shareholder return” not these other less significant people. Using a national random sample of the entire US working population Freeman, Kruse, and Blasi (2004) have demonstrated that grants of profit sharing and broad-stock options does appear to change the behavior of mid-level and lower level managers, supervisors, and employees to impact the operations of the corporation. So this “we are the group” approach may have to be revised. Third, boards are not prominently involved in the strategic design of the company’s work with its human resources, its reward systems and the corporate culture of the entire company. In effect, the boards are too “big man” and “big woman” focused on the human, intellectual, problem-solving, and social capital of the corporation. A recent book by Becker, Huselid, and Ulrich (2001) suggests how boards can do a

¹⁴ For the whole economy the diffusion of these plans were measured in a recent survey designed by the authors with Richard Freeman of Harvard University at <http://www.rci.rutgers.edu/~blasi> For the computer

comprehensive strategic human resource management audit of human capital. These researchers found that the companies that significantly revised their corporation with a high performance workplace culture had better productivity and returns. Part of this story was a broader sharing of results documented in their empirical research. Fourth, if the board were to adopt a broad program of employee ownership and profit sharing, research evidence strongly suggests that it requires an ongoing attention to participatory management to make it work. Many top executives and many boards have been uncertain or unwilling to raise these questions as important strategic policy questions at that level of the company.

These findings combine with a contemporary development to create a serious quandry for boards of directors. At the end of March 2003, the Financial Accounting Standards Board called for the expensing of stock options on the income statement of corporations. Announcements by companies of changes in their stock option programs, surveys of their likely future behavior, and evidence from recent Securities and Exchange Commission findings have all confirmed that companies are and intend to reduce the number of employees who participate in their stock option programs and concentrate the percent of the entire employee stock option pie more at the top of the corporation. A recent issue brief provides a comprehensive summary and analysis of this evidence. (NCEO 2004). If as a response to expensing companies increase the percent of the annual stock option pie going to the CEO and the top five executives, the data in our study strongly suggest that this will be the absolutely wrong response and will work against rather than for corporate reform for investors and will in

technology sector we documented this in Blasi, Kruse, and Bernstein (2003) and for the biotechnology sector we documented this in Blasi and Kruse (2004). See www.nceo.org for more on this sector.

fact not help total shareholder return. It would be ironic if, what is considered one of the most far-reaching reforms of executive compensation in decades, stock option expensing, were to have the opposite effect on corporate reform than it intended.¹⁵ We have had serious reservations about the expensing of stock options for this reason. (Blasi, Bernstein, and Kruse chapter 10). We are floating the policy idea that would provide only companies with truly broad-based stock option programs a tax deduction or tax credit that would offset the stock option expense that FASB plans to require.

We recognize that just because marginal increases of shared capitalism for top executives may not lead to better investor returns, that it does not necessarily follow that marginal increases of shared capitalism for middle and lower level employees necessarily will in some automatic way. However, at the same time that this has been happening, there is a growing evidence that broad-based employee ownership and profit sharing can improve long-term corporate performance when combined with the proper corporate culture. Moreover, there is comprehensive evidence that the opposite of concentrating the top five employee stock option pie at the top does have implications for investor returns. As noted, corporations with significantly higher than average shares of all employee stock options going to the top five executives as a whole have had lower average total

¹⁵ The authors intend to empirically measure the impact of FASB's decision on these questions by studying changes in the total percent of all employee stock options granted to the top five executives using two methods. First, we will use U.S. SEC filings to measure this proportion before the announcement of the FASB decision (between fiscal year 2002 and fiscal year 2003) – in expectation of the decision – and after the announcement of the FASB decision (between fiscal year 2003 and fiscal year 2004) after the Exposure Draft was announced. Second, we are also planning to collaborate with other scholars on conducting a nationwide random sample of the entire U.S. workforce on who is receiving and holding stock options, in 2006.

shareholder returns over the last decade (Blasi, Kruse, and Bernstein, 2003: 200-201; Morgenson 2001). The authors are collaborating with Professor Richard Freeman of Harvard University and others on a multi-year study of shared capitalism among different employee groups of corporations of various sizes and industries. This is funded by the Russell Sage Foundation and the Rockefeller Foundation at the National Bureau of Economic Research.

So what are the preliminary implications of these findings for the issue of shared capitalism in general? Our study suggests that boards of directors may have been paying too much attention to improving employee ownership and profit sharing for one group of its employees when it might make sense to focus on the role of broader employee ownership and profit sharing for a wider group of employees. Perhaps, broad employee ownership and profit sharing – within prudent limits with a participatory corporate culture that supports the incentive -- should be expanded and excessive emphasis on top executive compensation should be moderated.

Most boards have designed a system of partnership capitalism for the top while ignoring the importance of independently assessing the role that broader use of profit sharing and employee ownership could play throughout the entire corporation. Shared capitalism should not be a system that boards of directors are willing to design only for the top executives sitting around the table with them. Boards need to start spending a lot more time on strategic human resource management. This means benchmarking their company with how leading firms divide the entire incentive pie more broadly and build a corporate culture to drive shareholder return. (for how to do this, see Becker, Huselid, and Ulrich 2001). If they can not do this then serious issues of independence start to arise.

Too many boards of directors think that only the top executives make a difference in the company's value, and the rest of the employees are just static factors of production like machinery. But a growing body of evidence shows that regular employees can really make a difference, and it's a mistake to exclude them from programs that reward good company performance.

Bibliography

Becker, Brian E., and Mark A. Huselid, and Dave Ulrich. 2001. *The HR Scorecard: Linking People, Strategy, and Performance*. Cambridge: Harvard Business School Press,

Blasi, Joseph R., and Douglas Kruse, and James Sesil, Maya Kroumova, and Ed Carberry. 2000. *Stock Options, Corporate Performance and Organizational Change*. Oakland, Ca.: National Center for Employee Ownership. (The full research report is available at www.nceo.org/library/optionreport.html)

Blasi, Joseph, Douglas Kruse, and Aaron Bernswtein. 2003. *In The Company of Owners: The Truth About Stock Options and Why Every Employee Should Have Them*. New York: Basic Books.

Blasi, Joseph, and Douglas Kruse. 2004. *Shared Capitalism in the Biotechnology Industry, 2002: A Fact Sheet*. Rutgers University, School of Management and Labor Relations.

Core, John E., and Wayne R. Guay. 2001. "Stock Option Plans for Non-executive Employees," *Journal of Financial Economics*, Volume 61, pps. 2532-287.

Freeman, Richard, Douglas Kruse, and Joseph Blasi. 2004. *Monitoring Colleagues at Work: Profit Sharing, Employee Ownership, and Broad-Based Stock Options*. Presented at the 2004 Association for Comparative Economic Studies conference, San Diego, CA. This paper is part of the National Bureau of Economic Research's Shared Capitalism

Hall, Brian, and Jeffrey Liebman. 1998. "Are Ceos Paid Like Bureaucrats?" *Quarterly Journal of Economics*, Issue 3, August, 653-691.

Ittner, Christopher, and Richard Lambert, and David Larcker. *The Structure and Performance Consequences Of Equity Grants To Employees Of New Economy Companies*. Philadelphia, Pa. : University of Pennsylvania, Wharton School of Business, January 2001.

Jensen, Michael, and Kevin Murphy. 1990. "Performance Pay and Top-Management Incentives", *The Journal of Political Economy*, Volume 98, No. 2, pps. 225-265. (Available on Prof. Murphy's web site at: <http://www-rcf.usc.edu/~kjmurphy/jmjpe.pdf>)

Mehran, Hamid and Joseph Tracy. 2001a. "The Impact of Employee Stock Options on the Evolution of Compensation in the 1990s," *National Bureau for Economic Research Working Paper 8353*, July 2001.

Mehran, Hamid and Joseph Tracy. 2001b. "The Effect of Employee Stock Options on the Evolution of Compensation in the 1990s," *Economic Policy Review*, December 1.

Morgenson, Gretchen, 2002. "When Options Rise To The Top, Guess Who Pays," *The New York Times*, November 10.

Murphy, Kevin. 1999. "Executive Compensation," in *Handbook of Labor Economics* by Orley Ashenfelter and David Card. Amsterdam: North Holland. Available online at: <http://www-rcf.usc.edu/~kjmurphy/ceopay.pdf>

Murphy, Kevin, and Martin Conyon. 2000. "The Prince and the Pauper? CEO Pay in the US and UK," *Economic Journal*, November, 2000.

National Center for Employee Ownership. 2003. Issue Brief: The Future of Broad-Based Stock Options. Oakland, Ca.: National Center for Employee Ownership. (available at www.nceo.org)

Sesil, James, and Maya Kroumova, and Douglas Kruse, and Joseph Blasi,. 2000. *Broad-based Employee Stock Options in the U.S.: Company Performance and Characteristics*. Academy of Management National Conference, Toronto, Canada, 2000.

Sesil, James, and Maya Kroumova, and Joseph Blasi, and Douglas Kruse. 2002. "Broad-based Employee Stock Options in U.S. New Economy Firms," *British Journal of Industrial Relations*, Volume 4, Number 2, June, pps. 273-294.

Appendix I. The Actual Number Of Corporations For Which Execucomp Data Was Available From 1992-2002.

Year	For The CEO	For The Top Five Executives
1992	425	1567
1993	1142	1676
1994	1534	1745
1995	1580	1847
1996	1616	1972
1997	1634	2030
1998	1693	2066
1999	1750	1943
2000	1735	1818
2001	1609	1692
2002	1569	1607

Total Potential Boards of Directors

Decisions Studied: 19,963

Source: Analysis of Execucomp by Douglas Kruse and Joseph Blasi, 2002-2004.

Appendix II. Co-efficients and t-statistics For Regressions.

This Appendix is attached in an Excel file in the electronic edition of this paper.

Appendix III. Profit Sharing For Chief Executive Officers.

	Only Those Who Got Profit Sharing	Including Those Who Got/Did Not Get It	Including Those Who Got/Did Not Get It
	Mean Bonus As A Percent OF Salary	Mean Bonus As A Percent of Salary (Median)	Bonus + LTIP As A Percent of Salary Mean (Median)
1992	81%	68%(62%)	89%(69%)
1993	80%	64%(51%)	79%(57%)
1994	85%	69%(56%)	80%(60%)
1995	90%	73%(58%)	80%(60%)
1996	97%	79%(62%)	97%(70%)
1997	100%	84%(69%)	104%(77%)
1998	101%	80%(63%)	98%(72%)
1999	106%	84%(67%)	101%(74%)
2000	111%	87%(66%)	100%(70%)
2001	103%	74%(55%)	87%(69%)
2002	110%	84%(62%)	99%(67%)

Source: Analysis of Execucomp entire universe by Douglas Kruse and Joseph Blasi, 2002-4

END

This is the Appendix to Corporate Governance, Executive Compensation, and Strategic Human Resource Management Fr

Appendix II. Coefficients and t-statistics For Regressions.

Each figure represents a coefficient (with t-statistics in parentheses) from a separate regression, using the dependent variable

Dependent variable:	Current year TSR			TSR in following year		
Type of regression:	OLS (1)	Median (2)	Fixed effects AR1 (3)	OLS (4)	Median (5)	Fixed effects AR1 (6)
Independent variables						
% Option Pie						
CEO	0.092 (3.18)	0.092 (4.07)	0.212 (5.38)	-0.030 (0.98)	-0.034 (1.19)	0.029 (0.65)
TOP FIVE	0.017 (1.05)	0.023 (1.66)	0.104 (4.59)	-0.023 (1.33)	-0.016 (1.22)	0.050 (2.06)
Option Profits as % of salary						
CEO	1.539 (16.16)	1.439 (17.25)	0.988 (8.09)	-0.202 (1.99)	-0.311 (3.41)	-1.160 (8.69)
TOP FIVE	3.409 (24.93)	3.291 (26.96)	2.874 (14.90)	-0.751 (5.22)	-0.830 (6.55)	-3.627 (17.60)
% change in Tot Comp1						
CEO	0.060 (17.30)	0.056 (16.68)	0.048 (11.69)	0.003 (0.77)	-0.002 (0.65)	-0.017 (3.83)
TOP FIVE	0.091 (20.31)	0.082 (18.95)	0.084 (15.16)	0.007 (1.51)	0.002 (0.63)	-0.022 (3.58)
% change in Tot Comp2						
CEO	0.054 (22.56)	0.052 (24.38)	0.043 (15.27)	-0.004 (1.56)	-0.006 (2.81)	-0.019 (5.90)
TOP FIVE	0.137 (38.76)	0.128 (44.61)	0.128 (29.82)	-0.011 (3.03)	-0.018 (5.34)	-0.050 (10.19)
Black Scholes value of SO grants						
CEO	-0.00006 (1.51)	0.00007 (2.14)	-0.00009 (1.87)	-0.00017 (4.19)	-0.00022 (6.51)	-0.00036 (6.96)
TOP FIVE	0.00004 (1.83)	0.00003 (1.60)	-0.00009 (3.06)	-0.00014 (5.76)	-0.00017 (8.95)	-0.00032 (10.53)
Bonus/Salary						
CEO	0.121 (27.24)	0.118 (30.70)	0.192 (27.08)	0.009 (1.77)	0.017 (3.47)	-0.073 (8.68)
TOP FIVE	0.131 (24.02)	0.137 (26.57)	0.283 (28.43)	0.540 (0.91)	0.025 (5.32)	-0.108 (9.39)
(Bonus+LTIP)/Salary						
CEO	0.077 (22.30)	0.075 (25.62)	0.119 (21.84)	0.004 (1.03)	0.014 (3.69)	-0.056 (8.77)
TOP FIVE	0.060 (16.30)	0.078 (26.77)	0.101 (17.00)	0.001 (0.35)	0.014 (4.17)	-0.041 (6.30)

Total Comp1 includes value of option grants. Total Comp 2 includes value of option profits.

Note: Sheet 2 in this Excel file has further data.

om 1992-2002, A Portrait Of What Took Place.

ble at the top and controlling for year effects.

Average TSR in next 3 years			Average TSR in next 5 years		
OLS (7)	Median (8)	Fixed effects AR1 (9)	OLS (10)	Median (11)	Fixed effects AR1 (12)
-0.063 (3.29)	-0.031 (1.59)	-0.023 (1.14)	-0.094 (5.22)	-0.061 (2.85)	-0.009 (0.61)
-0.056 (5.57)	-0.031 (3.11)	-0.004 (0.34)	-0.064 (7.19)	-0.044 (5.15)	-0.007 (0.93)
-0.238 (3.63)	-0.225 (3.68)	-0.620 (9.59)	-0.059 (0.89)	-0.143 (2.06)	-0.300 (5.59)
-0.457 (4.91)	-0.473 (5.18)	-1.884 (17.31)	-0.032 (0.34)	-0.232 (2.36)	-1.148 (12.29)
-0.017 (3.83)	-0.003 (1.34)	-0.004 (1.71)	0.003 (1.41)	0.003 (1.10)	-0.002 (1.36)
-0.008 (2.73)	-0.011 (3.51)	-0.012 (4.73)	-0.001 (0.23)	-0.004 (1.49)	-0.003 (1.46)
-0.005 (2.99)	-0.004 (2.67)	-0.010 (7.52)	0.001 (0.58)	-0.001 (0.69)	-0.001 (0.86)
-0.011 (4.34)	-0.014 (5.37)	-0.028 (12.93)	-0.002 (0.89)	-0.004 (1.33)	-0.013 (7.14)
-0.00011 (2.63)	-0.00017 (4.66)	-0.00022 (5.45)	0.00005 (1.03)	-0.00001 (0.08)	-0.00012 (3.66)
-0.00009 (4.52)	-0.0001 (5.59)	-0.00015 (6.84)	0.00001 (0.20)	0 (0.11)	-0.00008 (3.98)
0.014 (4.39)	0.013 (4.54)	-0.074 (16.00)	0.019 (6.28)	0.010 (3.23)	-0.035 (9.28)
0.013 (3.64)	0.018 (5.36)	-0.110 (17.82)	0.023 (6.78)	0.017 (5.11)	-0.053 (10.61)
0.010 (4.12)	0.009 (4.07)	-0.043 (13.08)	0.012 (5.47)	0.008 (4.16)	-0.020 (8.22)
0.008 (3.50)	0.010 (4.76)	-0.039 (11.57)	0.015 (6.48)	0.013 (5.22)	-0.029 (9.62)

MONITORING COLLEAGUES AT WORK:
PROFIT SHARING, EMPLOYEE OWNERSHIP, BROAD-BASED STOCK OPTIONS
AND WORKPLACE PERFORMANCE IN THE UNITED STATES

Richard Freeman
Harvard University and NBER
1050 Massachusetts Avenue, Cambridge, MA, 02138
freeman@nber.org

Douglas Kruse
Rutgers University and NBER
School of Management and Labor Relations
94 Rockafeller Road, Piscataway, NJ, 08854
dkruse@rci.rutgers.edu

Joseph Blasi
Rutgers University
School of Management and Labor Relations
94 Rockafeller Road, Piscataway, NJ, 08854
jrbu@hotmail.com

Presented at the 2004 Association for Comparative Economic Studies conference, San Diego, CA. This paper is part of the National Bureau of Economic Research's Shared Capitalism Research Project, funded by the Russell Sage and Rockefeller Foundations. Additional funding for the General Social Survey questions was provided by the Beyster Institute for Entrepreneurial Employee Ownership, the ESOP Association, the Employee Ownership Foundation, Hewitt Associates the National Center for Employee Ownership, and the Profit Sharing Council of America. The authors wish to thank Tom Smith with the General Social Survey at the National Opinion Research Center of the University of Chicago and Peter Marsden of Harvard University with the National Organizations Study for their assistance in arranging the shared capitalism segment of both surveys.

Worker Responses to Shirking

“Buddy – get to work, you’re taking money from my pocket”
– archetypical worker in team production

What do workers do when they see someone slacking off in ways that reduce the productivity of their work group and enterprise?

The rational response depends on the circumstances. In a tournament race for promotions, having a competitor slack off is good news. You don’t have to go all out to win the promotion. Cheers for the shirker. In a piece-rate pay system where the firm lowers the rate per piece when workers produce more than expected, you will also welcome the shirker. The more other workers shirk, the less likely will management lower the rate per piece and make it harder for you to earn your weekly pay.

By contrast, when part of workers’ pay comes in the form of profit-sharing or share ownership or stock options, a worker who does not do his or her job takes “money out of your pocket”. You’d be better off if someone took action against the shirker. But standard analysis suggests that it will rarely be rational for anyone to intervene. The full costs of reading the riot act to the shirker fall on the intervener but only part of the benefit accrues to them (in an N worker group the worker who intervenes gains only $1/N$ th of the benefit going to workers and none of the benefit that goes to capital). The implication is that rational workers should not act against a shirker just as rational players should not cooperate in a prisoner’s dilemma game.

The facts are different. Experimental economics finds cooperative behavior in all sorts of collective goods games when game theory rationality predicts that the rational player defects. Theoretical models of cooperative behavior stress the role of players who voluntarily “police” cooperation by sacrificing some payoff to penalize those who defect from the cooperative

solution. As the putative worker quote indicates, many workplaces develop cultures where workers discourage shirking. Indeed, widely used forms of workplace arrangements, such as team production and group incentive plans, can succeed only if they overcome the free riding problem and stop shirking behavior. Since workers often have better information than management on what fellow workers are doing, worker responses to shirking are critical to the success or failure of these schemes.

This study seeks to increase our understanding of worker reactions to shirking by analyzing two new questions on shirking from the 2002 General Social Science Survey (GSS). We developed the questions in order to illuminate the factors that enable some shared capitalist enterprises to overcome the free rider or 1/N dilemma. Our guiding principle is the notion that for profit-sharing, worker ownership, and broad-based stock options to produce economic benefits, workers must “buy into” shared arrangements and create a workplace culture that discourages shirking. The special segment of the GSS also included several detailed questions on shared capitalist programs.

The first new question that we entered onto the GSS asked workers about their ability to detect the performance of other workers at their workplace:

In your job how easy is it for you to see whether your co-workers are working well or poorly? On a scale of 0 to 10 please describe with 0 meaning not at all easy to see and 10 meaning very easy to see

If workers cannot detect shirking, it is impossible to imagine them monitoring co-workers and developing peer pressure against shirking, so the responses to this question define the feasibility of employees taking a lead role in reducing shirking.

The second question asked how workers would respond to seeing another employee shirk. It used a three-part design.

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. Do Nothing

We recognize that a better research strategy for determining employee responses to shirking would be to conduct a random assignment experiment in which we placed shirkers in different workplaces and observed what workers did. But there is almost no chance that firms will cooperate with such a design. Absent a controlled experiment, we chose to use survey analysis to gain insight into worker reactions to shirking in the real economy.¹ While people may not behave exactly as they say they would on a survey, survey responses generally correlate well with behavior, which explains their widespread use. In our case and in most surveys respondents have no incentive to lie about their expectations of what they would do, so that at the minimum, the new questions should accurately measure how workers think they would respond to situations in which they observe shirking.

We begin our analysis of the new survey questions by describing the distribution of responses to the questions and the interrelations of responses among the questions. Then, we examine the characteristics of workers associated with different responses to the questions.

¹ The other way we might get insight into responses to shirking would be to conduct an experiment in a laboratory setting.

Finally, we estimate how responses vary across firms that offer workers different financial incentives, workplace participation arrangements, and employee-management relations.

Our principal findings are:

1. Most workers believe that they can readily detect shirking by fellow employees.
2. There is wide variation in the extent to which workers say they will act to discourage shirking. Workers who are younger and less educated and in small firms are more likely to act against shirkers than other workers, but most of the variation in acting against a shirker occurs within demographic groups.
3. Organizational factors affect worker responses to shirking. Workers are most likely to take action against shirkers in workplaces where employees are paid by profit sharing or gain sharing, and where they participate in decisions or work in team settings.
4. There are some intriguing interactions among the determinants of taking action against a shirking co-worker. Workers are more likely to take action when they trust management/have good employee management relations **and** have some form of profit- or gain-sharing or grants of broad-based stock options than in other situations.

The bottom line message from our analysis is that shared capitalist arrangements, in which firms share rewards and decision-making with workers and have good labor-management practices, encourage workers to act against shirking behavior and thus to reduce the tendency to free ride that risks loss of productivity.

Theory

A number of theorists have recognized that an important cooperative solution exists to the classic free rider problem. In a review of theory and evidence on the question, Canice Prendergast (1999: 7) underlines the critical weight of this issue by writing that “Incentives are

the essence of economics.” The problem can be conceived as a Principal-Agent problem. Adam Smith crystallized the point by writing that “The directors of such companies, however, being the managers of other peoples money rather than of their own, it cannot well be expected that they should watch over it with the same anxious vigilance with which the partners in a private copartnery watch over their own” (2003). Jensen and Meckling (1976) defined the problem and discussed monitoring and pecuniary and nonpecuniary bonding mechanisms for an intervention that can help to resolve it.

As applied to various forms of shared capitalism (employee ownership, profit/gain sharing, and broad-based stock options), agency theory requires recognizing that the same Principal-Agent dilemma that affects owners and managers is also present in the relationship between management and workers, and among co-workers. In the traditional approach to agency, senior management “employees” who operate the firm on a day to day basis must decide how to divide the “incentive pie” (fixed wages, stock, profit sharing, options, etc.) between themselves and the other employees. Agency theory would suggest that this division may not necessarily be optimal for owners or fair to the other employees. (This is the problem of executive compensation.)

From this perspective, the employee incentive structure is a key mechanism in determining how the money of owners/shareholders gets spent either in the interests of maximizing profit or in the interest of redistributing wealth to undeserving employees. Looking at employee ownership in this way requires a closer examination of both monitoring mechanisms and “non-pecuniary as well as pecuniary forms of bonding” that exist between workers and managers and among the workers themselves. The original conception of Principal-Agent theory involved the separation of ownership and control (Jensen and Meckling 1976).

Examining this issue in terms of shared capitalism involves exploring what happens when various forms of control – variations in peer pressure, organization of work and the company's culture – are recombined with various forms of shared capitalism.

The 1/N problem can also be seen as a form of the "Prisoner's Dilemma" from game theory. (Rapoport and Chammah, 1965). Theorists have suggested that the Prisoner's Dilemma may be overcome by a cooperative agreement among participants (Axelrod, 1984; Fudenberg and Maskin, 1986; Weitzman and Kruse, 1990; Ben-Ner and Jones, 1995). The notion that there is a workplace solution to the Prisoner's Dilemma has been suggested by researchers (see Blasi, Conte, and Kruse, 1996; Blasi, Kruse, and Bernstein, 2003: 226-228).

In the workplace setting, this may involve developing a corporate culture that emphasizes company spirit, promotes group cooperation, encourages social enforcement mechanisms, and so forth. Workers may discourage "shirkers" through peer pressure and nonpecuniary sanctions such as social ostracism, personal guilt, or shame (Kandel and Lazear 1991). Since the 1/N problem is lessened in small companies (which have a smaller denominator), such cooperative agreements may be easier to establish and maintain in small companies than in large ones.

Theories of agent-based computational economics look at how autonomous economic agents develop interaction networks and develop social welfare outcomes. This perspective develops a critique of "the top-down construction" of traditional economic models where the "face-to-face interactions among economic agents typically play no role" and "economic agents in these models have little room to breathe" (Tesfatsion 2002). The application of this theory to the workplace suggests that the economic analysis of the production of economic value has been overly focused on the role of the top-down managerial hierarchy without a more textured look at interactions among workers. In echoes of the corporate culture solution to the free rider

problem, Axelrod (1997) has shown how mutual cooperation can develop among agents through reciprocity. Klos and Nooteboom (2001) explore the creation of interaction networks that have trust as a major component. A review of agent-based computational studies of firms in organizational theory “stress[es] the effects of a firm’s organizational structure on its own resulting behavior” (as quoted in Tesfatsion 2002; see Prietula, Carley, and Gasser 1998).

Prendergast (1999: 40) discussed the limitations of four studies of the free rider problem which “simply compare different productivity of partnerships on different sharing rules without addressing why contracts vary...” (1999: 40) In his study of group incentives in medical practices, Newhouse (1973) discovered that increasing the share fraction received increased the overhead costs and decreased the hours which the doctors worked. Research by Bailey (1970) and Gaynor and Pauly (1990) supported these conclusions. In law firms, Leibowitz and Tollison (1980) found the bigger partnerships, the worse the cost containment.

Prendergast also suggested that monitoring with a sufficiently low cost can negate the free rider problem but finds that “empirical evidence on peer pressure reveals behavioral responses different from those posited in the theory” although he observed that this evidence is “admittedly scant.” The research in question is Weiss’s study of workers in a pharmaceutical company (1987) and Hansen’s examination (1997) of the incentives of telephone operators for a large financial corporation. Both found that group incentives improved the performance of workers who were less productive under individual schemes but decreased the performance of more productive workers. Prendergast also cited the steel industry incentive studies of Boning, Ichniowski, and Shaw (1998) and the profit sharing studies of Jones and Takato (1995), Kruse (1993) and Knez and Simester (1997), some of which present results that are “such a violation of standard agency theory” that alternative explanations need to be explored by looking at the

role of peer pressure (1999:41) Prendergast sees methodological limitations in some of these studies. Our use of a national random sample of both employees and establishments which includes a lot more detail on the work environment and corporate culture attempts to begin tackle these questions in a more comprehensive manner.

Detecting Shirking

In some jobs and workplaces it is relatively easy to tell if an employee is shirking. The worker comes late and leaves early, spends most of his or her time at the coffee machine, calls in sick when the weather turns bad, and so on. If the workplace is a boxing ring, the participant falls to the canvas at the first punch; if it is a battlefield, the participant drops his or her weapon and flees at the first shot. In other jobs and workplaces, it is hard to tell if an employee is shirking. Is the mathematician sitting alone in his office or, shades of Andrew Wiles, in his attic, thinking of ways to solve the Riemann hypothesis or pondering a vacation to France? Is the office worker who spends the afternoon surfing the Web seeking information that may help solve a work-related problem or simply having fun? Is the CEO charging the company for the gourmet meal at the expensive restaurant conducting business or charging the firm for his or her gastronomy?

To get some sense about whether workers can readily detect shirking behavior, we asked whether workers could tell if fellow employees were working as hard or as well as they should, using the question given above. We gave respondents an 11 point scale for answering. The scale ranged from “not at all easy to see” (0) what coworkers were doing to “very easy to see” (10). Figure 1 displays the frequency distribution of answers. The distribution is highly concentrated at the upper end, with 43% of workers giving the highest possible answer (10)

about the ease of detecting how co-workers are doing, and another 28% giving answers in the 7-9 categories. Responses are also bunched at the 0 category as well, with 11% of workers giving the lowest score for being able to tell how others are doing, but otherwise there is a paucity of responses at the low end. The overall pattern suggests that the vast majority of workers have (or think they have) a good idea of how hard their fellow employees are working.

As best we can tell, moreover, the variation among employees in their responses makes sense. Workers who answered with a 7 or more to the question report disproportionately that they work in a team as opposed to by themselves, that they rely on coworkers and supervisors for help, compared to workers who answered 3 or less to the question about seeing how coworkers perform. In addition, 13% who answered 7 or higher reported that they were managers compared to 7% of those answered 3 or less.

Response to shirking

Given that most workers believe that they can observe the effort of co-workers, what do they do if they catch someone shirking?

Figure 2 summarizes responses to the three-part question about what people would do if they saw someone shirking. The responses use a four-point scale: not at all likely, not very likely, somewhat likely, and very likely. In addition since some respondents said that they did not have a supervisor or manager the sample size of answers to that question is smaller than the sample size for the other questions.

Panel A of figure 2 displays the distribution of responses to whether the respondent will personally talk to the shirker. The distribution is roughly uniform. A substantial proportion of workers said that it was very likely they would talk to the employer, but an almost equally large number said that it was not at all likely that they would do so. Panel B displays the distribution

of responses to whether the respondent will talk to a supervisor or manager about the shirking behavior. Proportionately fewer workers said that it was very likely they would talk to management than said that it was very likely they would talk to the worker themselves; and correspondingly more said that it was not very likely or not likely at all that they would speak with the manager or supervisor. The implication is that many workers see taking the case to the supervisor as a more drastic act than confronting the shirker directly. Finally, panel C of figure 2 displays the distribution of responses to the question of whether the worker said that they would do nothing in response to observing shirking behavior. While a majority of workers said it was very unlikely or somewhat unlikely that they would do nothing, nearly one in four said they would in fact do nothing.

From these tabulations, we conclude that while most workers can tell when a fellow employee is shirking or not, there is wide variation in what they will do when faced with a situation in which someone shirks, possibly for reasons of personal attitudes or, of greater interest to us, of differences in incentives at the workplace.

Consistency

The three-part design of the shirking question allows us to check the consistency of answers. Someone who said it was very likely they would do nothing about the observed shirking should report that it was not at all likely they would talk to the employee or the supervisor. To see if responses are consistent across questions, panel A of table 1 presents cross tabulations of the answers to the shirking questions. The columns give responses to the questions about talking to the worker or supervisor/manager. For simplicity, we have organized the column data into four categories: people who said it was very likely they would talk to the shirker **or** very likely they would talk to the supervisor; those who said that they were somewhat

likely to talk with the shirker or somewhat likely to talk with the supervisor; people who said it was not very likely they would talk to the shirker or not very likely they would talk supervisor; and those who said that they were not at all likely to talk to the shirker or to the supervisor. The rows give responses to the question about doing nothing but in reverse-coded order, so that they refer to the likelihood of doing something. That is, the response very likely to do something was in fact the response not at all likely to do nothing. We have done this to avoid the confusion of reading double negatives.

Ideally, all of the answers would lie along the diagonal, but given the fuzziness of the four- point scale,² we measure consistency by whether or not many responses diverge greatly from the diagonal. Sixty percent of answers lie along the diagonal and 34% lie in the spaces around it, whereas just 6% of responses diverge so much as to suggest either measurement error or an inconsistency in the responses. These include the 20 respondents who said they were very likely to talk to the worker or supervisor but also said that it was very likely they would do nothing and the 35 who said it not likely they would talk to the supervisor or worker but said that it was very unlikely they would do nothing (though it may be that they have some other creative approach to dealing with shirkers). From the limited number of seemingly blatant inconsistencies, we concluded that the questions elicited consistent responses.

Another check on the reasonableness of answers is to contrast the responses of workers who said they could not readily observe the work of their co-workers with the responses of workers who said they could very easily see what co-workers were doing. Someone who said

² By fuzziness, we mean the inherent fuzzy arithmetic associated with qualitative statements such as very likely, somewhat likely, and so on, not to any fuzziness in the question. Fuzzy numbers associate a range around a particular response, so that it is possible for individuals to mix categories – to be somewhat likely and somewhat unlikely.

they could not easily observe their fellow employees effort ought to be more likely to do nothing in response to shirking behavior (after all, their information is patchy) compared to someone who can readily observe the behavior of fellow employees.

Panel B of table 1 records cross-tabulations of responses to the shirking question by whether workers said they could easily tell how fellow employees were doing (responses 7-10) or could not easily tell how fellow employees were doing (responses 0-3) shows that those who said they could tell easily were more likely to take action against the shirker than those who said they could not tell easily. The difference in the distribution of responses between the two groups is highly statistically significant.

Complementarity of Responses

Are the acts of talking to a shirker and act of talking to a supervisor about shirking behavior complementary or substitute forms of behavior? Is someone who takes one of these actions against shirking more likely or less likely to take the other action?

The evidence in figure 2 that more workers are very likely to talk to the shirker than to the supervisor/manager shows that these responses are not perfectly correlated, but is insufficient to tell us whether the relation is positive or negative, large or small. Table 2 gives the cross-tabulation of responses the questions about talking to the shirker or to a supervisor/manager. If there was no relation between the two responses, each column/row would resemble the others. If, by contrast, workers likely to talk to the shirker are also likely to talk to the supervisor, the observations would be concentrated along the diagonal.

The table shows a concentration of responses along the diagonal, implying a substantial positive relation between responses to the two forms of intervening against the shirker. There are two large clumps of observations, 228 workers who report that it is very likely they would

talk to the shirking employee and who also report that it is very likely they would talk to a supervisor/manager; and 301 workers who report that it was not at all likely they would do either of those actions. The chi square measure of the relation is 713, which is significant at standard levels. Coding the responses from 1 (not at all likely to speak to the shirker or to the supervisor) to 4 (very likely to speak), the standard Pearson correlation coefficient between talking to the shirker and to the supervisor is 0.48, which is significant at the 1% level. Since the responses are polytomous, however, this understates the strength of the correlation.³

Complementarity between talking to workers and talking to supervisors dominates table 2, but the table reveals one imbalance that indicates the existence of some form of substitution. Looking down the column for persons “very likely” to talk to a supervisor, we see that just 32 persons or 9% of those respondents said it was not at all likely that they would talk to a worker. Looking along the row for persons “very likely” to talk to a worker, 76 persons or 17% of those respondents said it was not at all likely that they would talk to supervisor. The implication is that there is a fairly substantial proportion of workers who want to stop shirking but who do not regard telling management about a fellow employee shirking as appropriate behavior. This reluctance may reflect attitudes from schooldays towards tattling to teachers.

Finally, since it is easier to analyze a single scale measure of behavior than a set of polytomous variables, we examined whether responses to the three shirking questions could be amalgamated onto an “intervention/non-intervention” against shirking measure without loss of much information. For simplicity, we formed a summated rating of responses to all three shirking questions, using a 1 to 4 scale, where 1 always measures the lowest intervention and 4

³ The more appropriate statistic would be the polychoric correlation coefficient

the greatest intervention. The summated rating ranges from 3 to 12. In this ordering a 12 means that the worker reported that it was very likely they would talk to the shirking employee and very likely that they would talk to the supervisor and not at all likely that they would do nothing. A 3 means that they said it was very unlikely that they would talk to the shirking employee and very unlikely that they would talk to the supervisor and very likely that they would do nothing.

Figure 3 shows that the summary statistic does what a good scale index should do: differentiating people along the relevant dimension in a relatively continuous way. The new “intervention” variable has a mean of 7.53 and a standard deviation of 2.90. It provides a useful summary statistic, even though table 2 showed that some elements lie off the diagonal.

Demographic Characteristics and Responses to Shirking

We examine next the socio-economic correlates of whether workers say that they would/would not intervene in the face of coworker shirking. Because most demographic and economic variables are likely to affect the benefit from intervening and the cost of intervening against shirkers, it is difficult to predict how they will be related to responses to shirking. We have explicit expectations about the correlations for only two variables. The first variable for which we have strong priors is the number of workers in the enterprise. Workers in small workplaces are likely to benefit more from stopping shirking behavior than those in workplaces with more employees, so we expect size of enterprise to be inversely related to actions to limit shirking. Second, since managers and other workers in the upper echelons of the company hierarchy have responsibility for firm performance, we expect them to oppose shirking actively. We view the rest of the analysis of socio-demographic factors as descriptive -- designed simply to measure what characteristics, if any, are associated with greater willingness to act against shirking: age, gender, race, education, and so forth.

Table 3 summarizes the results of our analysis of the link between socio-economic factors and actions against shirking behavior. Column 1 records regression coefficients and standard errors from ordinary least squares of the summated rating measure of willingness to intervene against shirkers on standard socio-economic variables. Column 2 records coefficients from a linear probability analysis of the likelihood that a worker was very likely to talk to a shirker or to a supervisor: the dependent variable is one when the respondent said they would very likely talk to either the worker or supervisor and zero otherwise. Column 3 gives ordered probit estimates of the factors that affect worker responses to the question about their talking to the shirking worker. Column 4 gives ordered probit estimates of the factors that affect worker responses to the question about their talking to a supervisor or manager.

Among the demographic variables, age and being female reveal an interesting pattern. The coefficient on age is negative and significant in all four columns, indicating that older workers are less likely to intervene actively against a shirker than younger workers. At the same time, however, workers with more tenure are more likely to intervene against shirking than workers with less tenure. Perhaps older workers see smaller gains from stopping shirking since they are closer to retirement while those with greater tenure have more specific human capital tied up with the firm. The coefficient on the dummy variable for female is significant in column 1 but not column 2, indicating that women may be less likely than men to take action against shirkers. This appears to apply, however, only to one form of acting against a shirking co-worker. The significant coefficient -0.312 in column 3 indicates that women are less likely than men to talk to a co-worker about their shirking behavior, while the non-significant positive coefficient 0.075 in column 4 indicates that they are not less likely (and may be more likely) to

talk to a supervisor. This suggests that women may often choose a different strategy to oppose shirking than men, possibly to avoid direct conflict with the shirking co-worker.

Table 3 also shows that workers in management jobs are more likely to intervene, while workers in clerical occupations are the least likely to act against shirking. Most important in terms of free-riding behavior, workers in establishments with few employees (1-9) are more likely to intervene when they see shirking than workers at larger workplaces. Although standard economic analysis provides no clean way to resolve the free rider problem, almost any theory of behavior predicts that free riding tendencies will be lower with fewer workers, and thus that workers would intervene more to stop shirking in a smaller workplace if shirking harms their economic position than in a larger workplace.⁴

Shared capitalism, participation, and labor-management relations

Workers are likely to act against shirking when the expected benefit of such an action exceeds the costs. This basic principle suggests that workers should be more likely to speak to a supervisor or to the shirker when they have some financial interest in the performance of the firm, be it through profit sharing, gain sharing, or some form of share ownership or stock options. It also suggests that they are more likely to act against shirking when they regularly participate in workplace decisions, since regular participation should reduce the cost of speaking out. Finally, we expect workers to oppose shirking more actively when they have trust in management and good labor-management relations. In these situations the link between their actions and potential future rewards is more amorphous, but still likely to affect responses to shirking. If you don't trust management, you can hardly be expected to report shirking to

⁴ We also looked at the effect on union membership on responses to shirking, and found no relation. Including union membership reduced the sample size, so we simply deleted the variable.

management. If you regard labor-management relations as poor, you may regard shirking as a justifiable response to management's poor treatment of workers.

Table 4 shows the measures of shared capitalist compensation, participation, and labor-management relations in our data set. In these tabulations we limit the sample to private sector employees, since the reward system for government workers differs from that for private employees (e.g., no profit-sharing, civil service regulations, etc). To judge the plausibility of the estimates, we compare them with those from the 1994-95 Workplace Representation and Participation Survey (WRPS) – the first national survey devoted specifically to obtaining workers' views of participation, labor-management relations, and workplace economic incentives (Freeman and Rogers, 1999).

The column in Table 4 listed as GSS 2002 shows that in the 2002 General Social Survey, 34% of private sector workers reported being in profit-sharing plans, 23% reported being in gain-sharing plans, 21% said they owned company stock, and 13% reported that they had stock options (the relevant survey questions are in the appendix). Taken together, 43% of workers said that their pay was affected by at least one of these forms of shared capitalist programs. The column listed as NOS 2002 gives comparable estimates from the National Organizations Study conducted in coordination with the GSS. This survey was administered to over 500 establishments that employed the respondents and their spouses in the GSS. Our tabulation is limited to 315 private sector firms. The NOS estimates of the extent of profit sharing and gain sharing are quite similar to the GSS estimates, while the NOS estimate of options granted annually is consistent with the GSS estimate of options held if options are granted on 3-4 year cycle.

The WRPS found that 31% of US workers participate in firm decision-making through employee involvement committees, team production, or quality circles in the mid 1990s.⁵ Unfortunately, the 2002 GSS did not ask detailed questions about the organizational structure of employee participation in decision-making. Rather, it asked whether employees normally work as part of a team and how often they participate with others in determining how things are done at their job. Table 4 shows that over 60% of private sector workers report working in a team setting; 40% report that they often participate with others in helping set the way things are done on a job; and 30% say they do that sometimes. To obtain a better fix on formal employee involvement programs, we went to the NOS survey. The 2002 NOS asked employers the percentage of workers involved in self-managed teams; the percentage of employees involved in quality circles and employee involvement committees that occasionally meet to solve problems; and whether the firm had established a committee that meets regularly about worker safety. The NOS figures in table 4 suggest that formal participative programs have a smaller reach than more loosely defined participation shown by the GSS. According to the NOS 17% of US workers are involved in self-managed teams and 17% are involved with employee involvement committees or quality circles, while nearly half of workers are in firms that had formal safety committees. The GSS and NOS estimates on participation thus bracket the WRPS estimates.

The WRPS found that a majority of US employees reported good labor management relations at their workplace and trusted management to carry out its promises to workers, but that a significant minority reported poor workplace relations or that had little trust for management. The 2002 GSS results summarized in table 4 show a similar pattern, though there are some differences between the GSS figures and WRPS figures. On the one side, the GSS finds less

⁵ Freeman and Rogers, table V-1, p 92

trust in management than did the WRPS: 28% gave management the highest trust on the GSS compared to 38% who gave management the highest trust on the WRPS (Freeman and Rogers, exhibit 3.3, p 46). On the other side, 34% of workers placed labor-management relations in the highest category on the GSS, which is nearly twice the 18% reported in the WRPS (Freeman and Rogers, exhibit 3.2, p 44).

We surmise that these differences are due largely to differences in the wording of the survey questions, rather than to any change in attitudes over time. The highest category in trust on the GSS required workers to say that they “strongly agree” that they trust management while the highest category for trust in management on the WRPS was defined as trusting management “a lot”. Strongly agree would seem to more demanding than trusting a lot. As for the difference in labor-management relations, the GSS called its highest category “very good” whereas the WRPS worded its highest labor-management relations as “excellent”.

Separately, the 2002 NOS asked management how they rated labor-management relations at the workplace and how they thought employees would respond to the question of trusting management. The responses given under the NOS column in table 4 show that management respondents rate labor-management relations considerably better than do workers, and believe that workers have greater trust in them than in fact workers say they have.

Organizational characteristics and responses to shirking

To what extent, if at all, does the variation in the incentives, participation, and employee relations documented above influence worker responses to shirking behavior by co-workers?

As a first step to answering this critical question, table 5 compares two measures of the responses of workers to shirking in establishments with given practices and in establishments without those practices. The first measure is the summated rating, described earlier. The second

measure is the proportion of respondents who said that they were very likely to talk to the worker or who said they were very likely to talk to a supervisor/manager. There are other ways to summarize the data, but these two statistics provide a good picture of the pattern in the data.

Employees in workplaces that have profit sharing and those in workplaces that have gain sharing have statistically significantly higher scores on the summated rating measure than employees without those incentives. Similarly, the proportion of workers who say that they are very likely to talk to the worker or to a supervisor/manager is significantly higher under profit sharing and gain sharing than the proportion of workers who say they would do so absent such financial incentives. By contrast, there is no statistically significant difference between the responses of workers who own company shares or hold stock options and those who do not own shares or options. One possible explanation is that this survey was administered during and after one of the largest stock market corrections in recent history and workers holding stock or holding options saw little potential “profit” in these holding at that moment. In addition, the more immediate rewards associated with profit or gain sharing are associated with stronger actions against shirking.

The tabulations relating to workers’ reported participation in decision-making in table 5 show that participation enhances the likelihood that workers will act against shirkers. Workers who are part of a team or who report that they often participate with others in deciding how their job is done have higher summated ratings and greater probabilities of acting against a shirker than workers who are not part of a team or who participate less. As noted earlier, however, the GSS questions on participation do not identify formal participative programs, and thus are an imperfect measure of company policy or enterprise organization. Workers who say they work as part of a team may operate in a group under management direction rather than in a self-directed

team, while those who report participating in decisions may simply be referring to discussions with workers rather than any participative structure where they had any power to change management decisions.

To see whether acting against shirking is linked to formal participative programs, we analyzed the effect of the NOS responses of percentage of workers involved. Since the percentage of workers covered by the programs averages just 17%, the link from the prevalence of the program to the possibility that a worker participates is noisy one. A randomly sampled worker in firm with, say, 40% of workers covered by a program would be more likely not to be involved in the program than to be involved. Still, the worker in the firm with 40% coverage would have 4 times the chance of being in the program than the worker in a firm with 10% coverage, and thus be expected to respond to shirking more than the worker in the firm with 10% coverage. With the small number of workers in the GSS-NOS (371 in our private sector sample), however, we obtained no statistically significant relation between our measures of worker response to shirking and either the percentage of employees in a self-directed team and the percentage of employees in a quality circle/employee involvement committee. In fact, there is virtually no relation between workers reporting that they work on a team on the GSS and the employer reports of team or quality circle/employee involvement committees on the NOS.⁶

The final part of Table 5 shows the value of the two measures of worker responses to worker perceptions of labor management and trust in management. The data support the notion that workers are more likely to act against shirking behavior when labor/management relations

⁶ Dube and Freeman find that there is considerable disagreement between the employer reports and employee reports on other variables as well.

are good than when they view those relations as quite or very bad, and when they trust management than when they do not trust management.

In sum, the GSS evidence supports the principle thesis of this study: that workers are more likely to self-monitor their workplace under shared capitalist arrangements -- be it financial sharing that gives them monetary incentive or shared decision-making that encourages them to participate in decisions -- and when the firm establishes good workplace relations. This analysis has, however, been univariate, which leaves open the questions of whether the observed patterns could be due to differences in the demography of the work force across firms with different labor practices, or whether some of the patterns may be due to the inter correlation of practices, rather than to the independent effect of each.

To examine these possibilities, table 6 presents the results of multivariate calculations that link the three measures of worker response to shirking to the organizational/company policy variables and the socio-economic factors identified in table 3. The summated rating measure of worker responses is the dependent variable in columns 1 and 2. Column 1 shows that, holding fixed for demographic and job variables (including the size of the establishment), profit/gain sharing has a substantial impact on the likelihood the worker will take action against shirking behavior.⁷ Column 2 adds measures of participation -- whether the worker works as part of a team and whether the worker participates often with others in determining how their job is done -- and measures of employee management relations. Both of the participation variables have a substantial positive impact on the summated rating, while the labor-management relations variables have no noticeable effect. The calculations in columns (3) to (5) give similar results.

⁷ Profit and gain sharing are combined in one measure due to their high correlation (0.70). Similarly, owning company stock and holding stock options are combined due to their high correlation (0.68).

In (3), the dependent variable is the measure that takes value 1 if the worker says it is very likely that they would talk to a supervisor or that they would talk to the shirker, and 0 otherwise. Profit/gain-sharing matters, as do the two participation variables. In (4) the dependent variable is the ordered probit for talking to the shirker. In (5) the dependent variable is the ordered probit for the likelihood of talking to a supervisor/manager. Again, profit/gain sharing matters, as do the two participation variables. As the participation variables, which are based on worker reports from the GSS, are not well connected to employer practices from the NOS, we regard the results on the profit/gain sharing as more reliable in indicating responses to shared capitalist policies.

While we have examined different functional forms, we have thus far made no effort to specifically model interactions among the major organizational variables. Analysis of the basic decision equation for workers to intervene against shirking suggests, however, that there should be some interactive effects. The worker decides to intervene against a shirker when the expected benefits of intervening exceed the costs: $p(G) - C$, where p is the probability that the intervention will succeed, G is the gain to the worker and C is the cost. The financial incentive would affect G ; participation should affect p and the cost. Labor-management relations L-M might affect both G and p . More complicated analyses, in which the worker is assumed to take account of the possible behavior of other employees, lead to even more complexity, which we will ignore. Instead, we have looked for potential interactions of key variables in our data. Table 7 and figure 4 give our main results. In the table, we report specifications that include interactions between profit/gainsharing and view of management employee relations.

The message of Table 7 is clear: profit/gainsharing is associated with taking action against shirkers only when combined with a very positive view of management employee relations. The effect is strong and significant across all four specifications. In contrast,

profit/gainsharing with less favorable views of management employee relations, as well as positive views of management employee relations without any profit/gainsharing, are not associated with taking action against shirkers. Figure 4 illustrates the results from column 3 of the table. Very similar results are obtained when profit/gainsharing is interacted with trust in management.⁸ This makes sense: employees are likely to take action to increase productivity only when they are confident that any gains will in fact be shared with workers—not withheld or frittered away by managers believed to be inefficient or ornery.

We have run a number of other exploratory specifications to see how shared capitalism arrangements may interact with other workplace policies (not reported here). The positive profit/gainsharing effect on the likelihood of taking action against shirkers is significantly lower among those who plan to look for a new job in the next year (presumably because they will not be around to receive the profit share), and also significantly lower in companies with high injury rates (which could easily worsen management employee relations and decrease expected tenure). While it is often theorized that financial participation will have a positive interaction with participation in decision-making in affecting worker motivation and performance (e.g., Ben-Ner and Jones, 1995), we do not find significant interactions using the GSS participation measures. Again, this may reflect the limitations of the participation questions: they do not measure actual participation in an employee involvement or similar program, but rather the subjective sense of participation in decisions affecting one's job. Profit/gainsharing is strongly associated with a sense of participation, shown both by the simple comparisons in Table 5 and by estimates that adjust for other job and demographic characteristics. It is therefore possible that

⁸ The correlation between trust in management and view of employee management relations is .60, indicating they appear to represent a common attitude.

profit/gainsharing increases worker co-monitoring in part by increasing a sense of participation, but there is no extra interaction effect between the two.

In other exploratory specifications, we do not find that employee stock ownership or holding stock options have significant interactions with any of the measured policies. This again suggests that immediate rewards are more of a motivator; in addition, it may reflect the poor stock market performance through 2002 as the GSS was being conducted, which could dampen worker views of the likely value of owning stock or holding stock options (many stock options were underwater at this time). There is, however, an intriguing relationship in the NOS sample between the percentage of workers who received stock option grants in the past year (as opposed to currently holding stock options) and several of the workplace variables. These grants -- given at lower exercise prices as a result of the market decline -- would have signaled to employees the possibility of some future profit. The pattern in fact matches the profit/gainsharing results in Table 7: workers are more likely to talk to shirkers to the extent that a favorable view of management employee relations (or more trust in management) is combined with a higher percentage of workers who received stock options in the past year. Since recently-granted stock options were less likely to be underwater in 2002, the recipients may have been more optimistic than all stock option holders about the prospect of rewards from better workplace performance. In addition, a working hypothesis for further investigation is suggested by the fact that profit sharing and gainsharing bonuses appear to generally come on top of standard levels of pay and benefits (Kruse, 1998). Employee stock ownership and stock options may have positive effects when they function like profit sharing, as an additional incentive given to employees rather than being purchased by workers with their own salary or savings (e.g., when workers buy stock in employee stock purchase plans or 401k plans).

Conclusion

This study has examined employee responses to new questions on the General Social Survey 2002 that we posed on whether workers can easily observe whether co-workers are shirking and how workers respond to shirking. The answers to the new questions provide valuable insight into the likely magnitude of mutual monitoring and peer pressure against shirking behavior. They show that most workers believe that they are able to observe the effort/activity of fellow workers, which is the first prerequisite for mutual monitoring and peer pressure against shirking to work. In addition, about half of the work force says that they would be very likely to respond to poor job performance by co-workers, with more saying that they would talk to the shirker rather than reporting the behavior to management. While there are some demographic correlates to responding against shirking, workplace factors are more strongly related to employee efforts to reduce shirking. Employees respond more against shirking in workplaces with shared capitalism institutions, notably profit/gain sharing, recent grants of stock options and employee participation in decision-making, and where labor-management relations are good. While firms that expect workers to mutually monitor and pressure peers could try to select workers with innate propensities to engage in such activities, our analysis suggests that their most sensible strategy would be to give workers financial participation and some shared decision-making as well as establish good labor-management relations. These findings may have some implications for addressing the principal-agent problem in corporate governance. Top executives frequently oppose profit sharing and broad-based stock option programs because of the free rider or 1/N problem. The result is that many executives and their hired gun compensation consultants get boards to approve incentive plans that give most of the pie to

themselves and other top officials. (Morgenson 2002: B1; Blasi, Kruse, and Bernstein 2003).

If some shared capitalist programs and certain types of corporate cultures can actually address these same objections, then there may be a conflict of interest for top executives to make most of the strategic decisions on shared capitalist programs and corporate culture essentially by themselves.

END

References

- Appelbaum, Eileen, Thomas Bailey, Peter Berg, and Arne Kalleberg. 2000. Manufacturing Advantage: Why High-Performance Work Systems Pay Off. Ithaca, NY: Cornell University Press.
- Axelrod, Robert M. 1984. The Evolution of Cooperation. New York: Basic Books.
- Bailey, Richard M. 1970. "Economies of Scale in Medical Practice," in Empirical Studies in Health Economics. H. Klarman. Baltimore: Johns Hopkins Press.
- Ben-Ner, Avner, and Derek C. Jones. 1995. "Employee Participation, Ownership, and Productivity: A Theoretical Framework," Industrial Relations. Vol. 34 (4). p 532-54.
- Blair, Margaret, Douglas Kruse, and Joseph Blasi. 2000. "Is Employee Ownership an Unstable Form? Or a Stabilizing Force?" in Thomas Kochan and Margaret Blair, eds., The New Relationship: Human Capital in the American Corporation. Washington, D.C.: The Brookings Institution.
- Blasi, Joseph R. and Douglas Kruse. 1991. The New Owners. New York: HarperCollins.
- Blasi, Joseph R., Michael Conte, and Douglas Kruse. 1996. "Employee Stock Ownership and Corporate Performance Among Public Companies," Industrial & Labor Relations Review, Volume: 50, Issue 1, pp. 60-79.
- Boning, Brett, Casey Ichniowski, and Kethryn Shaw. 1998. "Incentive Pay for Production Workers: An Empirical Assessment," mimeo, Carnegie Mellon University.
- Blasi, Joseph, Douglas Kruse, and Aaron Bernstein. 2003. In the Company of Owners. New York: Basic Books.
- Collins, Denis. 1998. Gainsharing and Power: Lessons from Six Scanlon Plans. Ithaca and London: Cornell University Press, ILR Press.
- Craig B. and J. Pencavel. 1992. "The Behavior of Worker Cooperatives: The Plywood Companies of The Pacific Northwest," American Economic Review, 82, 1083-1105.
- , 1993. "The Objectives of Worker Cooperatives," Journal of Comparative Economics, Vol. 17(2), June, pp. 288-308.
- , 1995. "Participation and Productivity: A Comparison of Worker Cooperatives and Conventional Firms in The Plywood Industry," Brookings Papers on Economic Activity, 212-160.

- Freeman, Richard, and Arin Dube. 2000. "Shared Compensation Systems and Decision Making in the U.S. Job Market," Draft, Harvard University Department of Economics.
- Freeman, R and Joel Rogers. 1999. What Workers Want. New York: Russell Sage and Cornell University Press.
- Fudenberg, Drew, and Eric Maskin. 1986. "The Folk Theorem in Repeated Games with Discounting or with Incomplete Information." Econometrica, Vol. 54, No. 3 (May), pp. 533-54.
- Gaynor, Martin and M. Pauly 1990. "Compensation and Productive Efficiency in Partnerships: Evidence from Medical Group Practice," Journal of Political Economy, 98, pps. 544-574.
- Jensen, Michael C. ,and William H. Meckling. 1976. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," Journal of Financial Economics, Vol. 3, No. 4.
- Jones, Derek, and Takeo Kato. 1995. "The Productivity Effects of Employee-Stock Ownership Plans and Bonuses," American Economic Review, 83 (3), 391-415.
- Kandel, Eugene, and Edward P. Lazear. 1992. "Peer Pressure and Partnerships," Journal of Political Economy, Vol. 100, No. 4 (August), pp. 801-17.
- Knez, Marc, and Duncan Simester. 1997. "Firm-wide Incentives and Mutual Monitoring at Continental Airlines," mimeo, University of Chicago.
- 2001. "Firm-Wide Incentives and Mutual Monitoring at Continental Airlines," Journal of Labor Economics, Vol. 19, No. 4. (Oct., 2001), pp. 743-772.
- Kruse, D. 1993. Profit Sharing: Does It Make A Difference? Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- 1998. "Profit Sharing and the Demand for Low-Skill Workers," in Richard Freeman and Peter Gottschalk, eds., Generating Jobs: Increasing the Demand for Low-Skill Workers. New York: Russell Sage Foundation, 1998, pp. 105-153.
- , and Joseph Blasi. 1997. "Employee Ownership, Employee Attitudes, and Firm Performance: A Review of the Evidence," in The Human Resources Management Handbook, Part 1. Edited by David Lewin, Daniel J.B. Mitchell, and Mahmood A. Zaidi. Greenwich, CT.: JAI Press.
- Levine, David. 1995. Re-inventing the Workplace: How Both Business and Employees Can Win

- Leibowitz, Arlene and Robert Tollison. 1980. "Free Riding, Shirking, and Team Production in Legal Partnerships," Economic Inquiry, 18, pps. 380-394.
- Logue, John, and Jacquelyn Yates. 2001. The real world of employee ownership. Ithaca, N.Y.; London: ILR Press.
- Morgenson, Gretchen. 2002. "When Options Rise to Top, Guess Who Pays," The New York Times, Money & Business Section.
- Newhouse, Joseph. 1973. "The Economics of Group Practice," Journal of Human Resources, 8, pps. 37-56.
- Prendergast, Canice. The Provision of Incentives in Firms. Journal of Economic Literature, Vol. 37, No. 1. (Mar., 1999), pp. 7-63.
- Prietula, M.J., K.M. Carley, and L. Gasser. 1998. Simulating Organizations: Computational Models of Institutions and Groups. Cambridge: MIT Press.
- Smith, Adam. 2003. The Wealth of Nations. Introduction by Alan B. Krueger. New York: Bantam Books.
- 1776. An Inquiry Into The Nature and Causes of the Wealth of Nations. London: W. Strahan; and T. Cadell.
- Rapoport, Anatol, and A. M. Chammah. 1965. Prisoners' Dilemma. Ann Arbor: University of Michigan Press.
- Tesfatsion, Leigh. 2002 Agent-Based Computational Economics. Ames, Iowa: ISU Economics Working Paper Number 1.
- Weitzman, Martin, and Douglas Kruse. 1990. "Profit Sharing and Productivity." In A. S. Blinder, ed., Paying for Productivity: A Look at the Evidence. Washington, D.C.: Brookings Institution, pp. 95-141.

Appendix:
General Social Survey questions on peer pressure and shared capitalism arrangements

Ability to monitor co-workers:

In your job how easy is it for you to see whether your co-workers are working well or poorly? On a scale of 0 to 10 please describe with 0 meaning not at all easy to see and 10 meaning very easy to see.

Response to shirking co-worker:

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. Do nothing

Answer options:

- 1 Not at all likely
- 2 Not very likely
- 3 Somewhat likely
- 4 Very likely
- 0 I do not have a supervisor or manager (for question b)

Profit sharing:

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? IF YES, THEN: Does the size of these performance-based payments depend on company profits or performance?

Gainsharing:

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? IF YES, THEN: Does the size of these performance-based payments depend on workgroup or department performance?

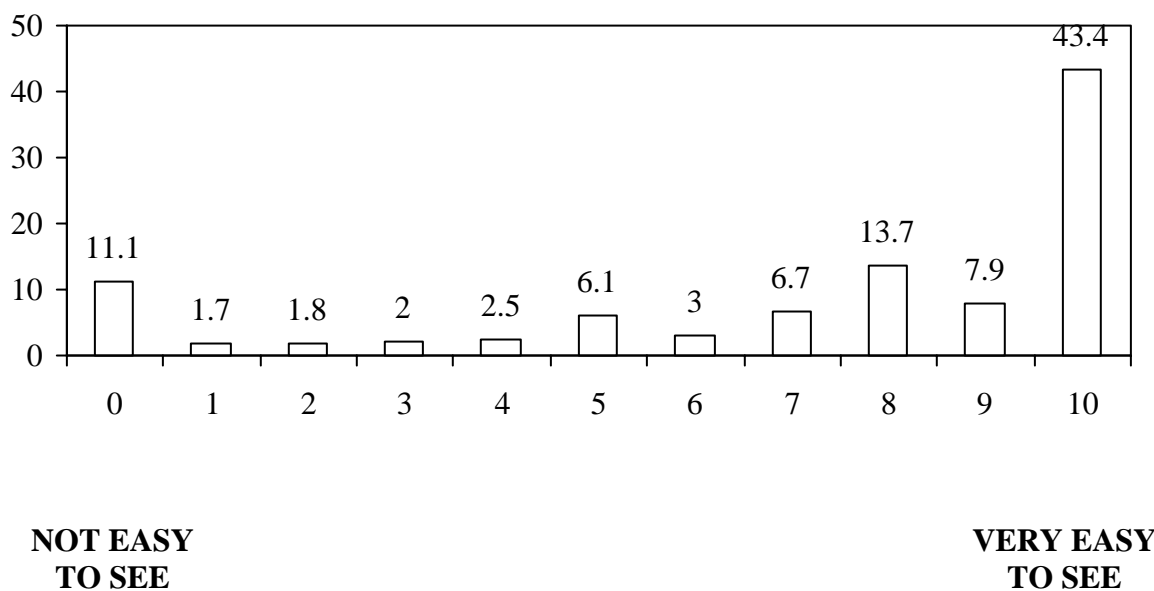
Employee ownership:

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?

Stock options:

Do you currently hold any stock options in your company (vested or unvested)?

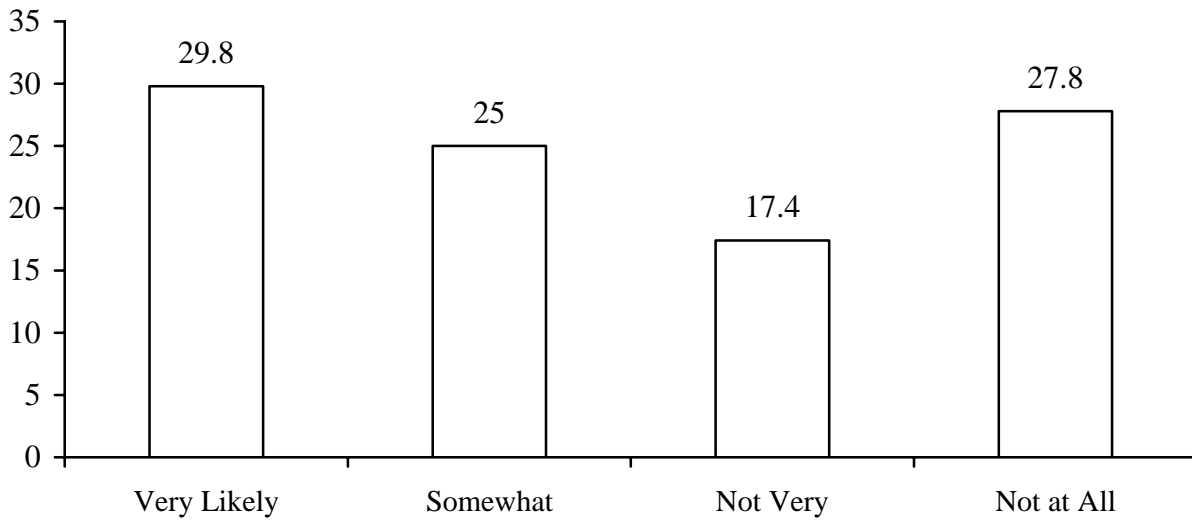
Fig 1: Percentage Distribution of Workers By How Well They Can See Whether Co-workers Are Working Well or Poorly



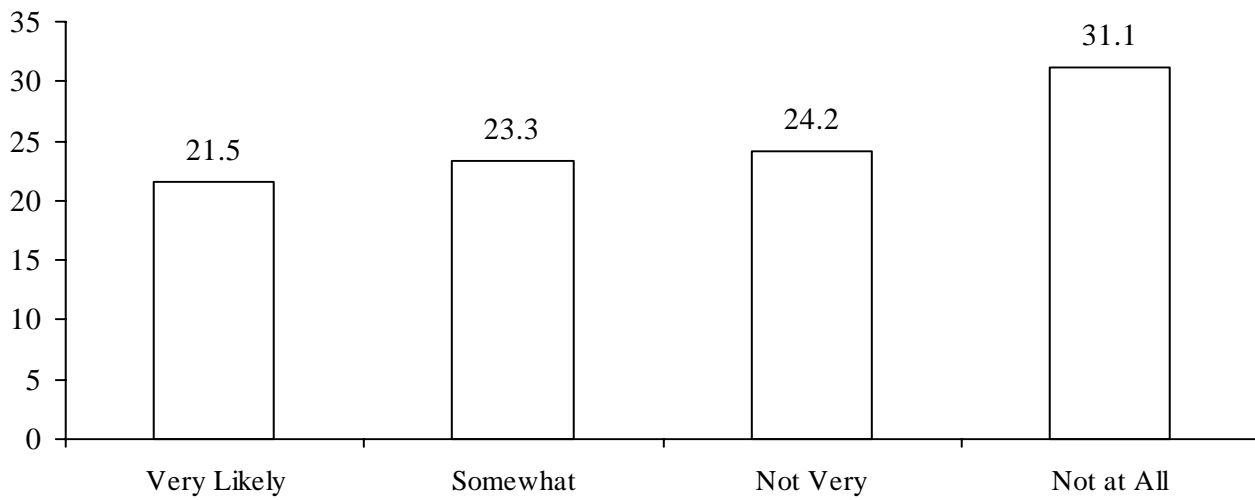
Source: General Social Survey 2002, q 924 *In your job how easy is it for you to see whether your co-workers are working well or poorly? On a scale of 0 to 10 please describe with 0 meaning not at all easy to see and 10 meaning very easy to see;*
Sample size = 1536, eliminated 36 don't knows and 19 no answers

Figure 2: **Percentage Distribution of Workers Responses to Seeing Fellow Employee Shirking**
(Source: General Social Survey 2002)

Panel A: Talk Directly to Employee



Panel B: Talk to Supervisor/Manager



Panel C: Do Nothing

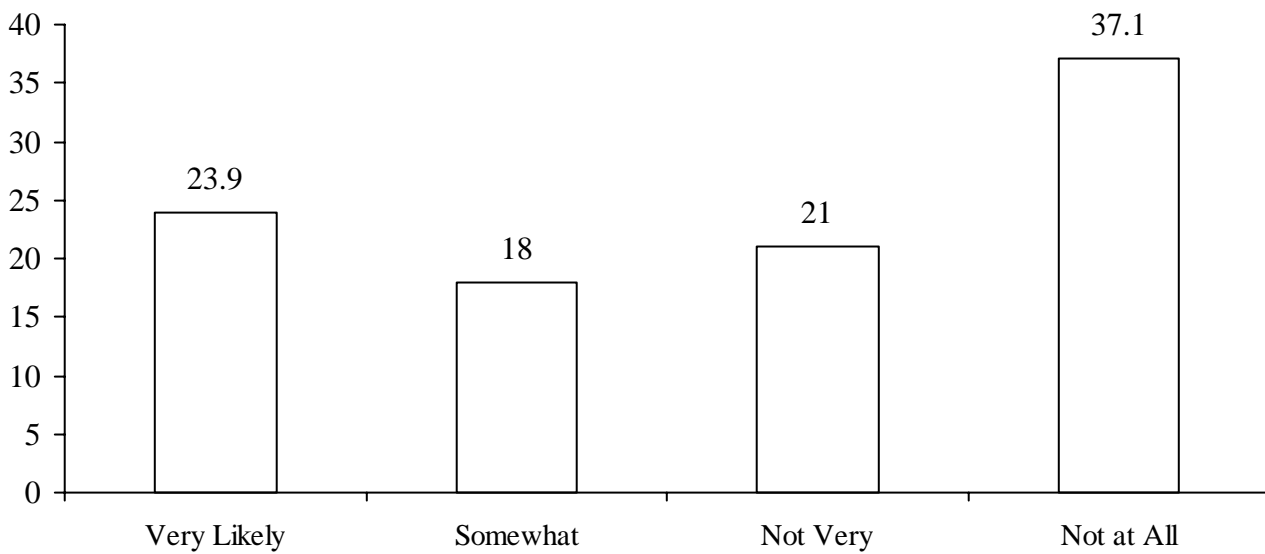
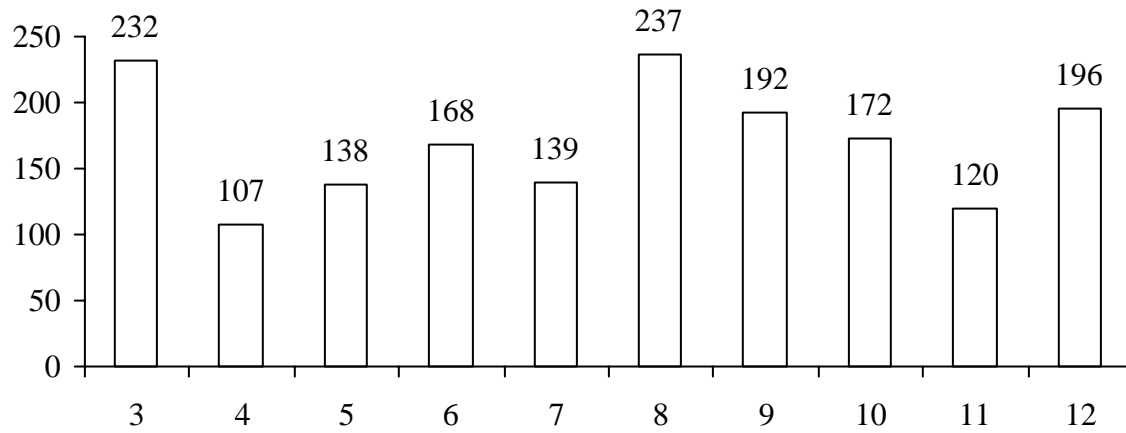


Figure 3: Frequency Distribution of Summated Rating of Responses



Source: Tabulated as follows: q925a 4 for very likely etc q925b 4 for very likely etc q925c reverse code so that we give 4 to value 1, 3 to value 2, etc by taking 5-value

Figure 4: Peer Pressure, Employee-Management Relations, and Profit/Gainsharing

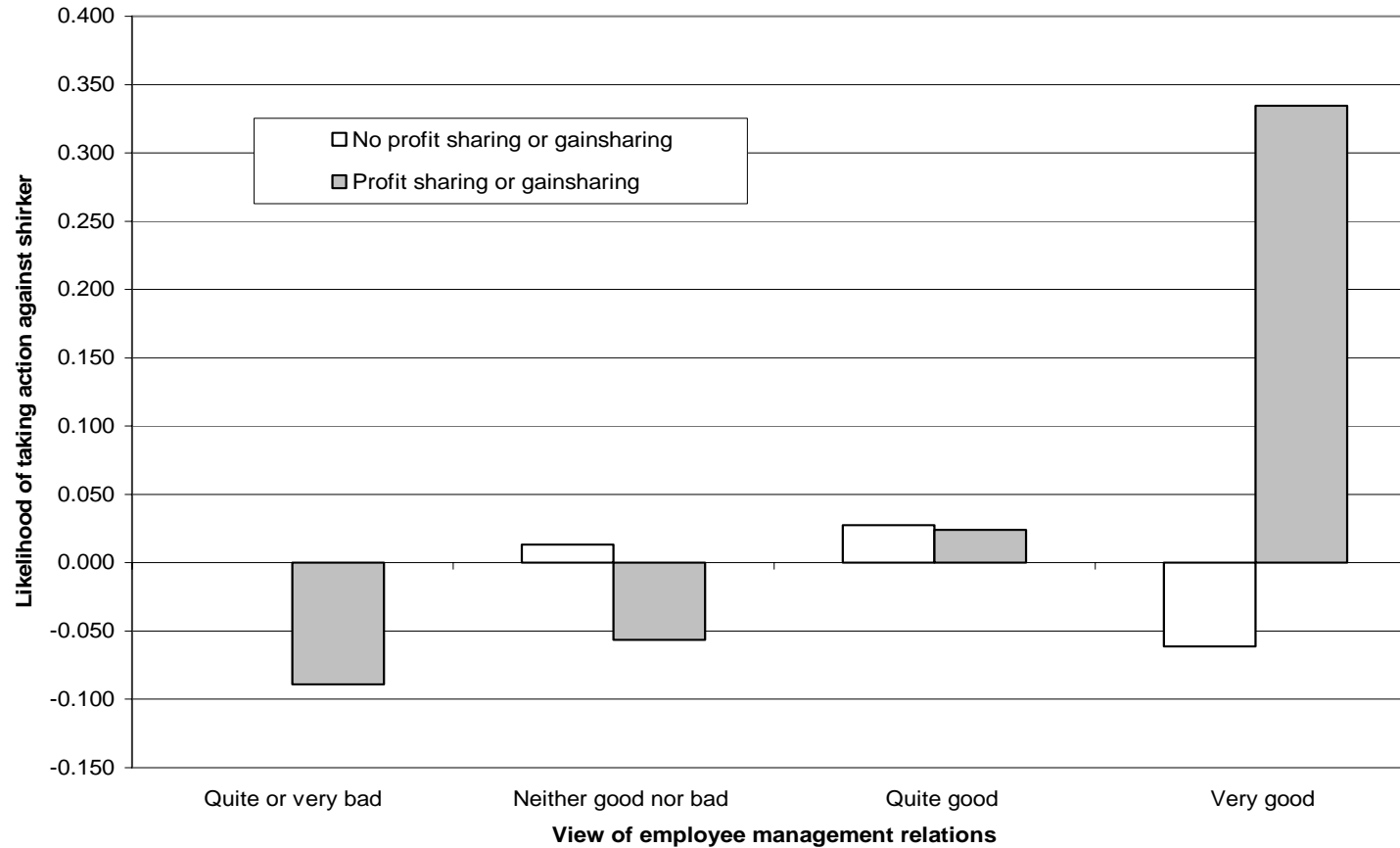


Figure based on regression results from column 4 of Table 6. The values represent a worker's reported likelihood of talking to a shirking co-worker (measured on 1-4 scale) relative to the likelihood for workers who receive neither profit sharing nor gainsharing and view employee-management relations as quite or very bad.

Table 1: Cross-tabulations of Responses on How Workers React to Shirking**Panel A: Numbers of Workers, by response to shirking behavior**

	Would Talk to Worker or Supervisor			
	very likely at least once	somewhat likely at least once	not very likely	not at all likely
Would do nothing reverse coded as do something				
very likely	465	121	13	30
somewhat likely	115	204	32	34
not very likely	27	127	112	114
not at all likely	20	34	114	242

Panel B. Percentage of Workers, by Ability to Observe Shirking

	Would Talk to Worker or Supervisor			
	very likely at least once	somewhat likely at least once	not very likely	not at all likely
Ability to see whether co-worker is shirking				
High (7 -10)	41%	29%	13%	16%
Low (0-3)	29%	24%	20%	27%

Source: Tabulated from General Social Survey, 2002.

Figures represent row percentages. The number who reported in the high category was 894; the number in the low category was 174. Chi-sq.=35.999, p<.00001

Table 2: Cross-tabulation of Numbers of Workers Who Would Talk to Shirking Co-Worker and Numbers of Workers Who Would Talk to Supervisor or Manager About Shirking Co-Worker

Likelihood of Talking to Worker	Likelihood of Talking to Supervisor or Manager			
	very likely	somewhat likely	not very likely	not at all likely
Very likely	228	77	72	76
Somewhat likely	65	176	122	55
not very likely	23	66	137	67
not at all likely	32	55	60	301

Source: Tabulated from General Social Survey, 2002

Table 3: The Relation between Demographic and Job Market Factors and Peer Pressure

Dep. var.:	Summated rating		Likelihood of doing Something		Likelihood of talking to shirker		Likelihood of talking to supervisor or manager	
	(1)		(2)		(3)		(4)	
Age	-0.022	(0.007) **	-0.002	(0.001) *	-0.008	(0.003) **	-0.009	(0.003) **
Education	-0.048	(0.033)	-0.011	(0.005) *	-0.012	(0.012)	-0.015	(0.012)
Female	-0.323	(0.165) *	-0.039	(0.027)	-0.312	(0.063) **	0.075	(0.063)
Black	0.044	(0.207)	0.026	(0.034)	0.037	(0.079)	-0.093	(0.080)
Occupation								
Mgt.	1.312	(0.302) **	0.167	(0.049) **	0.597	(0.116) **	0.376	(0.115) **
Mgt.-related	0.063	(0.394)	-0.057	(0.065)	-0.104	(0.151)	0.320	(0.148) *
Professional	-0.416	(0.289)	-0.076	(0.047)	-0.184	(0.110)	-0.060	(0.110)
Technical	-0.685	(0.383)	-0.045	(0.063)	-0.158	(0.146)	-0.059	(0.147)
Sales	0.416	(0.288)	0.047	(0.047)	0.138	(0.111)	0.142	(0.111)
Clerical	-0.684	(0.269) **	-0.101	(0.044) *	-0.293	(0.104) **	-0.179	(0.104)
Service	0.329	(0.261)	0.034	(0.043)	0.196	(0.101)	0.037	(0.100)
Blue-collar (excl.)								
Size 1-9 ees.	0.889	(0.279) **	0.107	(0.046) *	0.243	(0.106) *	0.308	(0.108) **
10-49 ees.	0.626	(0.254) *	0.042	(0.041)	0.162	(0.097)	0.233	(0.097)
59-99 ees.	0.343	(0.281)	0.026	(0.046)	0.113	(0.108)	0.131	(0.108)
100-999 ees.	0.098	(0.250)	-0.020	(0.041)	-0.014	(0.096)	0.086	(0.096)
2000+ ees. (excl.)								
Tenure	0.028	(0.011) *	0.002	(0.002)	0.008	(0.004)	0.007	(0.004)
Non-profit ee.	0.251	(0.310)	0.052	(0.051)	-0.021	(0.117)	0.198	(0.119)
Gov't. ee.	-0.189	(0.209)	-0.079	(0.034) *	-0.204	(0.079) **	-0.011	(0.080)
For-profit ee. (excl.)								
Constant	8.664	(0.543) **	0.582	(0.089)				
N	1467		1470		1504		1472	
(Pseudo) R-sq.	.071		.061		.038		.016	

Column 1 presents results of OLS regression, while columns 2-4 present results of ordered probits.

* p<.05 ** p<.01 Standard errors in parentheses.

Table 4 – Percentage of Workers in Shared Capitalist Programs and in Enterprise Decision-Making, and with Different Qualities of Labor-management Relations

	GSS 2002	NOS 2002
Shared Capitalist Financial Incentives		
Profit-sharing	34%	38%
Gain-sharing	23%	13%
Own company stock	21%	21%
Hold stock options	13%	--
Granted stock options last year	--	3%
Any of above	43%	--
Participation in Decision-Making		
Work as part of team	61%	--
Often participate with others in making decisions that affect job	42%	--
Often participate with others in helping set how things are done on job	45%	--
Percent of employees involved in self-managed teams	--	17%
Percent of employees in Quality Circles or Employee Involvement Committees--	--	17%
Existence of worker safety committees	--	49%
Labor/Management Relations		
% who describe relations as		
Very good	34%	52%
quite good	36%	41%
neither good nor bad	22%	6%
quite or very bad	8%	1%
% who agree that they/workers “trust management”		
Strongly agree	28%	30%
Agree	48%	55%
Neither agree nor disagree	--	10%
Disagree	18%	4%
Strongly disagree	6%	1%

Source: Tabulated from General Social Survey 2002 and National Organizations Study, 2002.

Table 5: Measures of the Responses of Workers to Shirking, by the Characteristic of Employing Organization

Characteristic of Employing Organization (Yes= Has characteristic; No= does not have it)	Responses of Workers, Measured by			
	Summated Rating ⁹		% very likely to act against shirking	
	YES	NO	YES	NO
Shared Capitalist Financial Incentives				
Profit-sharing	7.97	7.45*	43%	34%*
Gain-sharing	8.05	7.50*	41%	36%*
Own company stock or Hold stock options	7.59	7.62	37%	37%
Participation in Decision-Making				
Work as part of team	8.12	6.84*	43%	27%*
Often participate with others in how job is done	8.27	6.84*	47%	26%*
Labor/Management Relations				
% who describe relations as				
Very good	7.92	--	45%	--
quite good	7.56	--	32%	--
neither good nor bad	7.36	--	32%	--
quite or very bad	7.32	--	38%	--
% who agree that they "trust management"				
Strongly agree	8.09	--	46%	--
Agree	7.56	--	33%	--
Disagree	7.31	--	36%	--
Strongly disagree	7.07	--	36%	--

* Difference from "yes" group is significant at $p < .05$

⁹ The summated rating is the sum of the responses to the three questions about whether workers would talk to the employee or to a supervisor or manager or do nothing when they encountered shirking. Responses to the questions about talking to the worker or to the supervisor/manager are coded 1 to 4 with higher values reflecting greater likelihood of acting. Responses to the question about doing nothing are reverse coded 1 to 4, so that higher values reflect greater likelihood of acting.

Table 6: Regression Analysis of Company Policies and Opposition to Shirking

Dep var.:	Summated rating		Summated rating		Likelihood of doing something		Likelihood of talking to shirker		Likelihood of talking to sup./manager	
	(1)		(2)		(3)		(4)		(5)	
<u>Without interactions</u>										
Profit- or gain-sharing	0.557	(0.190) **	0.402	(0.186) *	0.086	(0.031) **	0.114	(0.073)	0.186	(0.073) **
Own co. stock or hold stock options	0.023	(0.217)	-0.006	(0.210)	0.015	(0.035)	0.076	(0.083)	-0.024	(0.082)
Work as part of team			0.907	(0.172) **	0.108	(0.029) **	0.341	(0.068) **	0.320	(0.068) **
Often participate with others in how job is done			1.049	(0.173) **	0.164	(0.029) **	0.455	(0.069) **	0.168	(0.068) **
View of mgt-ee relations: Quite or very bad (excl.)										
Neither good nor bad			-0.016	(0.334)	-0.064	(0.056)	0.010	(0.134)	0.048	(0.132)
Quite good			-0.109	(0.317)	-0.108	(0.053) *	0.036	(0.127)	-0.020	(0.126)
Very good			0.054	(0.326)	-0.013	(0.054)	0.090	(0.131)	0.008	(0.130)
n	1179		1176		1178		1206		1180	
(Pseudo) R-sq.	.071		.135		.113		.063		.03	

* p<.05 ** p<.01 (s.e.) Cols. 1-3 contain OLS regressions, and cols. 4-5 contain ordered probits.

All regressions use the demographic and job variables from Table 3 as controls.

Table 7: Regression Estimates of Coefficients on the Interaction of Profit/Gain Sharing and Mgt-Employee Relations

Dep. var.:	Summated rating		Likelihood of doing something		Likelihood of talking to shirker		Likelihood of talking to sup./manager	
	(1)		(2)		(3)		(4)	
Have profit- or gain-sharing and view of mgt-ee rels. is:								
Quite or very bad	-0.179	(0.650)	0.061	(0.108)	-0.089	(0.264)	-0.159	(0.259)
Neither good nor bad	0.123	(0.387)	0.023	(0.065)	-0.070	(0.152)	0.133	(0.151)
Quite good	0.221	(0.286)	0.091	(0.048)	-0.003	(0.113)	0.198	(0.112)
Very good	0.875	(0.300) **	0.121	(0.050) *	0.396	(0.121) **	0.274	(0.119) *
Own co. stock or hold stock options	0.007	(0.210)	0.017	(0.035)	0.088	(0.083)	-0.024	(0.082)
Work as part of team	0.925	(0.173) *	0.109	(0.029) **	0.353	(0.068) **	0.322	(0.068) **
Often participate with others in how job is done	1.057	(0.173) **	0.164	(0.029) **	0.462	(0.069) **	0.170	(0.068) *
View of mgt-ee relations:								
Quite or very bad (excl.)								
Neither good nor bad	-0.084	(0.393)	-0.051	(0.065)	0.013	(0.157)	-0.028	(0.156)
Quite good	-0.192	(0.375)	-0.117	(0.063)	0.027	(0.151)	-0.117	(0.149)
Very good	-0.264	(0.381)	-0.032	(0.064)	-0.061	(0.153)	-0.114	(0.152)
n	1176		1178		1206		1180	
(Pseudo) R-sq.	.138		.115		.066		.030	

* p<.05 ** p<.01 (s.e.) Cols. 1-2 contain OLS regressions, and cols. 3-4 contain ordered probits.

All regressions use the demographic and job variables from Table 3 as controls.