

Table 1. Incentive Prevalence: the Dependent Variables

Variable	Description						
	Does the workplace use the following schemes?						
	yes	no					
Piece Rates (Individual level)	392	773					
Group Level	138	1027					
Workplace Level	124	1041					
Higher than Workplace Level	200	965					
Profit Sharing	91	1074					
	How many of the above schemes are used in total?						
# of Schemes	0	1	2	3	4	5	
# of Workplaces	648	332	135	38	10	2	
	% of non-managerial employees receiving pay from scheme						
	0%	1-10%	11-25%	26-50%	51-75%	76-99%	100%
NonProfit Sharing	57.6	13.2	10.0	5.5	3.8	4.2	5.7
Profit Sharing	93.5	1.1	1.1	0.3	0.7	1.6	1.6

Notes: NonProfit Sharing is % of employees receiving any type of performance related pay (except profit sharing). All figures are based on the sample of 1165 observations.

Table 2. Independent Variable Description

NAME	DESCRIPTION	Mean (s.d.)
EMPLOYMENT	Natural log of number of employees in workplace	4.608 (1.089)
MANAGERS	Managers as a proportion of total employees	.071 (.063)
LABINT	Proportion of total labor cost to total operating cost at workplace, mid-point approximated from Likert scale	.417 (.225)
TECHCHANGE	Dummy equal to 1 if major new plant, equipment or office technology introduced during previous two years, 0 otherwise	.385 (.487)
QUALITY	Dummy equal to 1 if "most" crucial factor for competitive success in market for major product is quality or responsiveness to customer's requirements, 0 otherwise	.354 (.478)
CIRCLES	Dummy equal to 1 if Quality Circles or productivity improvement groups present, 0 otherwise	.164 (.370)
TENURE	Proportion of employees with more than 10 years of service at workplace, mid-point approximated from Likert scale	.202 (.219)
TENURE ²	Square of tenure	.089 (.161)
WOMEN	Women as a proportion of total employees	.361 (.270)
LAYOFFS	Dummy equal to 1 if involuntary layoffs during previous year, 0 otherwise	.341 (.474)
ATTRITION	Dummy equal to 1 if management intentionally reduced employment during previous year without involuntary layoffs, 0 otherwise	.230 (.421)
CASUALS	Casuals as a proportion of total employees	.157 (.251)
COMPETE	Dummy equal to 1 if many competitors in market for workplace's major product, 0 otherwise	.483 (.500)
DENSITY	Proportion of union members among total employees ^a	.571 (.353)
PROMOTE	Proportion of managers promoted to current position from within the organization, mid-point approximated from Likert scale	.562 (.391)
PUBLIC	Dummy equal to 1 if government-owned, 0 otherwise	.160 (.367)
MANU	Dummy equal to 1 if in manufacturing industry, 0 otherwise	.347 (.476)
MINING	Dummy equal to 1 if in mining industry, 0 otherwise	.033 (.180)

Note: All figures based on sample of 1165 observations.

^a DENSITY approximated from questions on whether 'all' (100%), 'most' (66.6%), 'some' (33.3%) or 'none' (0%) of employees in one-digit occupation are union members, weighted by occupational distribution in workplace.

Table 3. Probit Regressions for Incentive Prevalence
(1165 observations)

Independent Variables	Coefficients (t-statistics)				
	Piece Rate	Group Pay	Workplace Level	Higher Than Workplace Level	Profit Sharing
EMPLOYMENT	.147 (3.526)***	.243 (4.645)***	.062 (1.142)	.201 (2.138)**	-.012 (.202)
MANAGERS	1.272 (1.821)*	-.258 (.274)	1.517 (1.834)*	2.662 (2.021)**	2.366 (2.677)***
LABINT	.344 (2.059)**	-.155 (.614)	-.171 (.673)	.056 (.112)	-.279 (.991)
TECHCHANGE	.069 (.824)	.179 (1.696)*	-.098 (.893)	.102 (.489)	.057 (.480)
QUALITY	-.114 (1.368)	-.175 (1.598)	-.160 (1.45)	-.150 (.704)	.123 (1.050)
CIRCLES	.177 (1.603)	-.031 (.226)	.004 (.027)	.624 (2.762)***	.396 (2.693)***
TENURE	.620 (.995)###	-.201 (.251)###	-.682 (.833)	1.525 (.780)	-.784 (.871)
TENURE ²	-1.814 (2.114)**###	-1.035 (.919)###	.719 (.668)	-3.909 (1.037)	1.190 (1.005)
WOMEN	.596 (3.347)***	-.445 (1.884)*	-.017 (.071)	.703 (1.641)	.732 (2.897)***
LAYOFFS	.231 (1.821)*	.288 (1.969)**	.275 (1.809)*	-.227 (.668)	.129 (1.392)
ATTRITION	-.177 (1.765)*	-.511 (2.819)***	-.244 (1.346)	.012 (.031)	-.436 (2.056)**
CASUALS	-.417 (2.131)**	-.642 (2.330)**	-.097 (.378)	-.877 (1.420)	-.876 (2.873)***
COMPETE	.433 (5.196)***	.148 (1.538)	.141 (1.314)	-.130 (.619)	.402 (3.334)***
DENSITY	-.130 (.966)	-.124 (.707)	-.101 (.591)	-.050 (.135)	.175 (.896)
PROMOTE	-.018 (.165)	.307 (2.159)**	-.672 (.876)	-.162 (.595)	.213 (1.341)
PUBLIC	-.608 (4.133)***	-.650 (3.317)***	-.593 (2.703)***	.067 (.206)	.031 (.158)
MANU	-.021 (.210)	-.282 (2.183)**	.050 (.385)	-.190 (.711)	-.197 (1.301)
MINING	-.037 (.150)	-.239 (.832)	.842 (3.53)***	3.077 (.059)	.314 (1.029)

Constant	-1.574 (6.291)***	-1.883 (6.113)***	-1.523 (4.915)***	-2.308 (6.125)***	-2.076 (5.820)***
Log-likelihood	-678.06	-386.78	-372.56	-88.94	-291.80
χ^2	132.00***	74.19***	44.79***	32.04**	55.12***

Notes: Significance levels * - 10%, ** - 5%, *** - 1%, for most tests, # - 10%, ## - 5%, ### - 1% for test of joint significance on tenure coefficients. T-tests are two-tailed; joint significance test on tenure and Log-likelihood χ^2 are one-tailed χ^2 tests.

Table 4. Additional Examinations of Incentive Prevalence
(1165 observations)

Independent Variables	Coefficients (t-statistics)		
	% of Wkplace NonProfit Sharing	% of Wkplace Profit Sharing	# of Schemes
EMPLOYMENT	.025 (2.927)***	.001 (.006)	.149 (4.128)***
MANAGERS	.293 (1.527)	.288 (2.346)**	.353 (3.090)***
LABINT	.029 (.760)***	-.010 (.418)	.019 (.109)
TECHCHANGE	.007 (.375)	-.001 (.117)	.055 (.743)
QUALITY	-.019 (1.144)	.023 (2.051)**	-.123 (1.663)*
CIRCLES	.014 (.550)	.017 (1.089)	.169 (1.777)*
TENURE	-.039 (.312)	-.087 (1.104)#	-.026 (.044)
TENURE ²	-.030 (.185)	-.138 (1.286)#	-.825 (1.072)
WOMEN	.098 (2.228)**	.043 (1.872)*	.423 (2.701)***
LAYOFFS	.034 (1.208)	.009 (.599)	.266 (2.403)**
ATTRITION	-.096 (2.959)***	-.007 (.440)	-.307 (2.342)**
CASUALS	-.215 (5.609)***	-.097 (4.023)***	-.629 (3.647)***
COMPETE	.082 (4.415)***	.030 (2.582)***	.384 (5.213)***
DENSITY	-.003 (.089)	.008 (.417)	.048 (.412)
PROMOTE	.047 (2.080)**	.031 (2.211)**	.103 (1.072)
PUBLIC	-.042 (1.497)	-.003 (.167)	-.608 (4.925)***
MANU	.044 (1.926)*	-.012 (.958)	-.079 (.863)
MINING	.287 (3.851)***	.035 (.946)	.353 (1.746)*
Constant	-.046 (.855)	-.011 (.357)	-1.096 (5.056)***

R ²	.109	.047	
Adjusted R ²	.095	.034	
χ^2			148.21***

Notes: Significance levels * - 10%, ** - 5%, *** - 1%, for most tests, # - 10%, ## - 5%, ### - 1% for tests of joint significance on tenure coefficients. T-tests are two-tailed; joint significance test on tenure is one-tailed F-test in percentage regressions, and one-tailed χ^2 test for number of schemes regression.

Table 5. Circles Programs, Unions and Incentive Prevalence

		<u>Type of Incentive Scheme</u>				
					Higher Than	
		Piece	Group	Workplace	Workplace	Profit
		Rate	Pay	Level	Level	Sharing
Percentage of workplaces in category with CIRCLES program:						
Have Incentive Scheme?	Yes	18.9%	18.8%	16.1%	42.9%***	25.3%**
	No	15.1%	16.1%	16.4%	15.9%	15.6%
Average percentage union DENSITY for workplaces in category:						
Have Incentive Scheme?	Yes	52.2%	55.4%	51.5%	52.1%	53.7%
	No	59.6%***	57.3%	57.7%*	57.2%	57.4%
Percentage of workplaces in category with CIRCLES program, unionized workplaces only:						
Have Incentive Scheme?	Yes	21.2%**	18.9%	15.1%	56.3%***	24.3%
	No	15.1%	16.8%	17.2%	16.4%	16.5%

Notes: Figures based on sample of 1165 observations, except for unionized workplaces only based on sample of 963 observations where DENSITY is positive. Significance levels denoted by ** - 5%, *** - 1%. Nonparametric tests for correlation: one-tailed χ^2 test for CIRCLES and incentives, two-tailed Spearman nonparametric correlation coefficient test for DENSITY and incentives.

This appendix is designed for use of referees and others who may be interested in our attempts to fit values for the circles and union density variables. It summarizes how fragile any conclusions are to the particular specification (restrictions) used.

Appendix Table 1. Summary of Incentive Results from Two-step Procedure
(Sign and Significant of Fitted Value in Relevant Equation)

Variable	Piece Rate	Group Pay	Workplace Level	Higher Than Workplace Level	Profit Sharing	%Non-Profit Sharing	%Profit Sharing	# of Schemes
CIRCLES								
Excluded:								
No Vars Dropped	-***	-	-	+	-	-	-	-**
TECHCHANGE	-**	+	-	+	-	-	-	-
MANU, MINING, PUBLIC	-	-	-	+	-	-	-	-**
LAYOFF, ATTRITION	-	+	+	+	+	-	-	-
DENSITY	-*	-	-	+	-	-	-	-
DENSITY								
Excluded:								
TECHCHANGE	-	-*	+	-	-	-	+	-
MANU, MINING, PUBLIC	-***	-***	-**	+	+	-	-	-***
LAYOFF, ATTRITION	-*	-**	-*	+	-	-*	+	-***
CIRCLES	-*	+	-	-***	-***	-	-	-*

Notes: Significance levels * - 10%, ** - 5%, *** - 1%. All regressions use sample of 1165 observations.