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Group Incentives and Pay Satisfaction: Understanding the Relationship Through an Identity Theory Perspective

Abstract

The goal of this paper is to develop a conceptual model based on identity theory to specify the relationship between group incentives and pay satisfaction. Pay satisfaction, as currently measured, does not include items that directly assess group-based rewards, therefore, any changes in pay satisfaction associated with group incentive implementation would be the result of some spillover effect. Identity theory is employed to model this effect by delineating how group incentives tap salient work-related roles; the theory also has implications for various behavioral consequences. The research described in this paper tests two hypotheses derived from the conceptual model. These hypotheses are tested in two quasi-experimental field studies conducted in a high technology firm and a consumer products company that both implemented gain sharing programs. The findings indicate that gainsharing plans can be viewed as either a benefit or as part of individual pay based on the ability of the incentive plan to activate salient work roles.

Keywords

pay, satisfaction, group, incentive, gainsharing, identity theory, employee, performance, firm, research

Disciplines

Human Resources Management

Comments

Suggested Citation

Welbourne, T. M. & Cable, D. M. (1993). *Group Incentives and pay satisfaction: Understanding the relationship through an identity theory perspective* (CAHRS Working Paper #93-10). Ithaca, NY: Cornell University, School of Industrial and Labor Relations, Center for Advanced Human Resource Studies. <http://digitalcommons.ilr.cornell.edu/cahrswp/265>

**GROUP INCENTIVES AND PAY SATISFACTION:
UNDERSTANDING THE RELATIONSHIP THROUGH
AN IDENTITY THEORY PERSPECTIVE**

by

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Working Paper #93-10

This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research, conferences, and projects available to others interested in human resource management in preliminary form to encourage discussion and suggestions.

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PAY SATISFACTION / GROUP INCENTIVES / GAINSHARING / IDENTITY THEORY

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Businesses today are altering the ways in which employees receive rewards by decreasing the use of traditional pay-for-performance plans such as merit pay and implementing more creative forms of pay that are based on group rather than individual performance (Long, 1989; Ost, 1990). For example, team incentives, gainsharing, and profit sharing are all currently being utilized by firms interested in redirecting their workers toward group rather than individual goals (Lawler, Ledford & Mohrman, 1989). This trend is occurring because group incentive plans are being hailed as resulting in significant productivity gains for employers (Schuster, 1984) in addition to decreases in grievances and increases in product quality (Hatcher & Ross, 1991). In fact, Milkovich and Wigdor (1991: 86) suggest that "the adoption of group incentive plans may provide a way to accommodate the complexity and interdependence of jobs, the need for work group cooperation, and the existence of work group performance norms and still offer the motivational potential of clear goals, clear pay-for-performance links, and relatively large pay increases".

Although interest is escalating, very little is known about how employees covered by various group incentives perceive and respond to the programs. In general, the focus has been on the outcomes of group bonus plans (bonus payment, profit, quality, costs, job satisfaction, etc.) rather than the behavioral process that must occur to achieve these results.

In many cases it is not clear how the employer expects the incentive package to interact with the currently established pay system. This is a critical point because while some group incentives replace individual rewards programs and aggressively send a message that performance expectations have changed, others simply supplement current pay and benefits with group incentives. When this is done, the previously established behavioral expectations are retained and augmented with new performance goals that might or might not be consistent with those instituted in the past (Lawler, 1990; Welbourne & Gomez-Mejia, 1991).

This paper develops a conceptual model that focuses on employee responses to group incentives by considering the relationship between the

implementation of group-based bonus systems and pay satisfaction. Pay satisfaction, as traditionally measured, does not address satisfaction with group incentive programs. Therefore, if pay satisfaction is affected by a group bonus plan, the change would be the result of some "spillover" effect.

The proposed model suggests that by employing identity theory the process by which employees evaluate group incentives can be better understood. Identity theory describes the way in which individuals respond to events, and it provides a framework for understanding the types of psychological or emotional responses that should be expected when an event occurs (Pearlin, 1989). Pay satisfaction has been studied in some detail and is understood to be an emotional or affective state towards various components of pay (Heneman, 1985; Heneman & Schwab, 1985; Miceli & Lane, 1992). Therefore, identity theory will be used to predict how an organizational event (group incentive plan implementation) should affect a particular emotional response (pay satisfaction). Although the overall conceptual model is developed, only two hypotheses from that model will be tested and presented in this paper.

In order to test these hypotheses pay satisfaction data were collected at two companies that implemented gainsharing systems. The data were collected before gainsharing plan implementation and ten months after the two programs were in place; during that period of time, both firms held other pay and benefits systems constant.

PAY SATISFACTION

Conceptual models of pay satisfaction have included the consequences of and determinants of pay satisfaction. To date, the outcomes studied represent individual behaviors such as turnover, absenteeism, and union voting (Motowidlo, 1983; Schriesheim, 1978; Weiner, 1980).

Research exploring antecedents of pay satisfaction has focused on individual differences such as age, gender, socioeconomic status, race, education, skills, experience, and job performance (Berkowitz, Cochran, Fraser & Treasure, 1987; Dreher, 1981; Shank, 1986; Shapiro & Wahba, 1978). Job characteristics such as difficulty, responsibility, occupational level, and

shifts worked have also been considered as determinants of pay satisfaction (Ash, Lee & Dreher, 1985; Berkowitz et. al., 1987; Shank, 1986). In addition, some research suggests that pay system characteristics (pay level, benefits, and rules) affect pay satisfaction (Dyer & Therialut, 1976; Berger & Schwab, 1980; Jenkins & Lawler, 1981).

Although there is an abundant amount of research on individual-based criteria, studies on the effects of group based incentives on pay satisfaction are fairly scarce. Campbell (1952) examined the effect of pay system understanding and group size on pay satisfaction, and several authors have studied individual vs. group incentives as predictors of pay satisfaction (Farr; 1976; Gomez-Mejia & Balkin, 1989; Schwab & Wallace, 1974). However, the results of these studies are mixed, and the definition of pay satisfaction utilized varied between studies. While one examined overall pay satisfaction another considered satisfaction with base pay. The goal of this research was to understand what might increase or decrease pay satisfaction rather than to discern the process by which individuals evaluate group incentive plans.

Even though there appears to be some evidence that group incentives impact pay satisfaction, due to the fact that pay satisfaction is measured as a multi-dimensional construct, the question becomes which component of pay satisfaction (e.g. level, raise, or benefits) should be affected by which type of group bonus system (e.g. gainsharing, profit sharing, or team-based). To date, there is nothing in this literature to suggest how various group incentive plans might affect pay satisfaction.

IDENTITY THEORY PERSPECTIVE

Identity theory will be used to delineate the process of evaluation employees engage in after group incentives are implemented and how this process affects pay satisfaction. Identity theory has been employed in social psychology to study a variety of life events, how these events are interpreted and thus "internalized" by individuals, and the effect of these events on individual behaviors (Burke, 1991; Thoits, 1992). Although the theory has not

been utilized within an organizational setting to understand and interpret the implementation of events, Simon (1992) has recently suggested that this perspective of identity theory appears to be developed to a point where it should be expanded to additional domains, in particular, to employment situations.

According to the theory, the identity process is an internal control system used by individuals to filter information about events and interpret these events, whereby the interpretation leads to an emotional response and ultimately to behaviors (Burke, 1991). This interpretation process is done through the lens of a salient role. Stryker and Serpe (1982: 206) note that "persons have as many identities as the number of distinct sets of structured relationships in which they are involved. Thus, a person may hold the identities of doctor, mother, churchgoer, friend, skier, etc., all of which collectively make up her self". Given the number of roles that each person has, social psychologists have suggested that certain roles become more salient than others as a result of 1) characteristics of the event, and 2) self conceptions (Stryker & Serpe, 1982; Thoits, 1991).

Therefore, the filtering system described in identity theory is governed partly by the saliency of given roles in relation to an event. If an event affects a salient role, then the likelihood for a significant emotional and behavioral response increases (Stryker, 1987). According to Thoits (1991: 106), "the more salient the role identity, the more meaning, purpose, and behavioral guidance the individual should derive from its enactment, and thus the more that identity should influence psychological well being".

As mentioned earlier, identity theory has been applied to help explain individuals' reactions to stressful events (Burke, 1991; Hammen et al, 1985; Simon, 1990). This line of research holds the event constant; although events are characterized as stressful, the research to date has not specifically considered varying characteristics of the event itself, such as degrees of stress. These studies have utilized an array of measures to assess individual psychological reactions to events, including measures of depression (Constance

et. al., 1985a, 1985b) and psychological distress (Simon, 1990; Thoits, 1992). In addition, behavioral consequences such as substance abuse have been investigated (Thoits, 1992).

The model proposed in this paper views group incentive implementation as the event in question; however, the event in this case is not held constant. Group incentives vary considerably, and they can be designed (intentionally or unintentionally) to tap a variety of roles in the workplace. An employee has a number of roles at work; the most distant role could be considered that of an organization member (such as being an "IBM'er"). The person identifies with the organization, regardless of job title, level in hierarchy, department, or business unit. In addition, employees have very distinct roles within their specific jobs (such as being the best regional sales representative). This 'job holder' role might be perceived as the most personal role within a company. In addition to the job holder and organizational member roles, a number of additional work-related roles can be considered. For instance, an employee might be part of a team, committee, department, plant, business unit, or profession; each of these represents a different work-related role.

Group incentives can be thought of as not only prompting one or more of these work-related roles, but also rearranging the saliency of the roles. For instance, in the case of scientists and engineers, incentive plans have been carefully designed so that these professionals identify with the business rather than with their own specific scientific discipline, thus discouraging the saliency of the scientist role and encouraging the importance of the team member role (Gomez-Mejia & Balkin, 1989). Gainsharing plans have been utilized by firms in an effort to encourage employees to identify with the needs of a particular department or business unit (Frost, Wakeley, & Ruh, 1974; Schuster, 1984; Welbourne & Gomez-Mejia, 1988). At the same time, profit sharing plans have often been implemented in an effort to bring diverse business units together, thus promoting organizational membership roles (Hammer, 1988).

The model (See Figure 1) proposed here suggests that the characteristics of the incentive plan will activate one of the work-related roles. Even though an individual might not hold a certain role as particularly salient before group incentive implementation, it is suggested that the characteristics of the event itself will result in workers reordering the salience of various work-related roles. The characteristics will then not only determine if the event (group incentive) will be identity relevant or identity irrelevant, but it will also affect which specific work-related role will be most salient.

Insert Figure 1 About Here

Although a number of work-related roles could be considered, due to the fact that the research question focuses on the relationship between group incentives and pay satisfaction only two salient roles, which might be viewed as points on a continuum, will be utilized. The two roles included are the more personal role of job holder and the more distant role of organizational member, which each should have associated emotional and behavioral expectations.

Consistent with considering only two work-related roles (job holder and organizational member), the characteristic of group incentives that will be pursued in this particular study is the distribution rule. The distribution rule seems to parallel the two work-related roles because it also can be designed to be extreme points on a continuum where distribution can be based on individual differences (or based on performance/skills), or it can be based on organizational membership where all employees in the work group receive equal payments (as with an entitlement). In addition, the distribution rules must be determined for any group incentive system, not merely the one studied in this research (Graham-Moore & Ross, 1990).

Of course, the impact of distribution rule depends on the existence of a bonus pool, therefore, amount itself will determine whether the group

incentive is identity relevant or irrelevant. Given the existence of a bonus pool, it can be distributed equally among all employees, or it can be divided based on some measure of individual contribution. There has been a significant amount of research examining the differences in reactions to equally distributed pay versus pay allocated according to inputs (Freedman & Montanari, 1980). For instance, equity theory and related models of pay satisfaction (discrepancy theory) suggest that pay should be based on worker input to maximize satisfaction. On the other hand, equally distributed pay has been found to be more appropriate when employee cooperation is a priority (Cook & Hegtvedt, 1983; Greenberg, 1987). However, these two suggestions contradict each other; therefore, although distribution method seems to be key, there is no consensus on how the distribution process should affect employees. .

Thus, method of distribution can have an effect on the outcomes of various incentive programs, and it is suggested here that it has an effect because the distribution rule triggers a specific work-related role. If group bonus payments are distributed equally, this method of distribution should result in employees' referring to their organizational membership role as the most salient. When this role is the most salient, the evaluation process will then result in employees viewing the incentive as part of their entitlements based on organizational membership.

H1: Group incentives that pay participants according to an equal distribution rule should affect components of pay satisfaction that measure satisfaction with entitlements (such as benefits).

In addition, if the group incentive is designed so that the pool of money is divided in a way that recognizes individual accomplishment, such as is the case when the money is distributed as a percentage of base pay (where those performers earning higher wages also receive larger bonus payments), then the most salient role should be the more personal role of job holder. If the more personal role were activated, the evaluation of this event should be reflected in the components of pay satisfaction that address the individual job holder role. These could be satisfaction with pay level or pay rules

(e.g. rules used to derive merit increases or job level).

H2: Distribution rules based on individual differences should result in changes in components of pay satisfaction that address personal pay (such as pay level).

In addition, it is always possible that a group incentive could be developed such that it taps absolutely no salient work-related roles, and the result would be an identity irrelevant event (at least with respect to work-related roles) with no subsequent behavioral changes. This should be the case when no bonus pool results from the group incentive program.

METHOD AND RESULTS

Measures of pay satisfaction were collected in two firms that implemented gainsharing programs. Firm A, a high technology organization, instituted the gainsharing plan in its corporate services department, which consists of a variety of groups providing service to other employees within the firm. Personnel worked in the following functions: facilities, security, food services, administration, and real estate. Firm B is a manufacturing plant that is part of a larger consumer products organization. Employees in this plant engage in production, engineering, and general staff functions (accounting and administration).

The two gainsharing plans utilized different distribution rules. Firm A implemented an equal distribution rule (each employee received equal bonus checks) while Firm B used an equity-based distribution rule (each employee received the same percentage of base pay). Therefore, employees in Firm B did not receive equal bonus amounts; higher paid employees received larger bonus checks. Pay satisfaction measures were collected via surveys that were distributed on site both before and after (10 months) gainsharing plan implementation. Table 1 summarizes characteristics of both samples and gainsharing plans.

Insert Table 1 About Here

Heneman's (1985) modified four factor pay satisfaction scale was used for the analysis. This scale has been successfully utilized in several other studies and contains measures of the sub-scales of interest for this research; it measures satisfaction with: pay level, raise, structure and administration, and benefits with a 1 to 5 Likert scale where 1 represents very dissatisfied and 5 indicates very satisfied. These measures are appropriate because both firms involved in this research had similar pay systems prior to gainsharing, and these programs were retained and held constant during the duration of this study. Both firms considered satisfaction with level, raise, and structure/administration to represent individually determined pay. This is due to the fact that merit pay programs based on formal performance appraisal were in place at both companies. In addition, both companies had benefits programs that were delivered to all employees based on membership, therefore they were seen as entitlements. Table 2 indicates the standardized Cronbach alpha coefficients for the four factors in addition to correlations, means, and standard deviations for Firms A and B.

Insert Table 2 About Here

Individual employees could not be identified over time in this research, because in order to encourage participation, workers needed a guarantee of confidentiality. Therefore, the results report overall change in pay satisfaction between the pre-treatment and post-treatment time periods for the gainsharing units. Although surveys were not identified, a Chi-Square test of the distributions of the two samples over age, education, gender, and tenure revealed no significant differences ($p < .05$).

In order to test whether pay satisfaction changed as a result of gainsharing plan installation a MANOVA analysis was performed on the data for all four sub-scales. Significant main effects were found for both firms. The data from Firm A indicated a significant main effect, $F(4,299)$, at the .005

probability level. The data from Firm B also indicated a significant main effect, $F(4,151)$, at the .001 probability level.

Insert Table 3 About Here

Subsequent univariate analysis for Firm A data showed that only satisfaction with benefits changed (mean value changed from 3.71 to 4.08), significantly (See Table 3). However, in Firm B satisfaction with pay administration (from 2.53 to 2.97) and to a somewhat lower degree pay level (from 2.54 to 2.83) (See Table 3) were affected.

DISCUSSION

The data analysis seems to provide initial support for the application of identity theory toward understanding the relationship between group incentives and pay satisfaction. The results show that in Firm A, where the distribution rule was based on equal payments, gainsharing was viewed as a benefit. In fact, in feedback sessions with employees, when asked why benefits satisfaction increased, they indicated that "gainsharing is a benefit". Firm B, where the distribution rule was based on individual performance, experienced a situation where satisfaction with pay administration/structure and pay level were affected by the gainsharing program. This indicates that employees in Firm B viewed the gainsharing plan as part of their personal pay package rather than as an employee benefit; this was confirmed during interviews with employee groups.

Satisfaction with raise was not affected by gainsharing at either plant. This is not surprising in that both companies have formal performance appraisal programs that are directly tied to raises. Therefore, the term 'raise' might be so specific to these workers that no spillover effect was found.

Consistent with identity theory, the model presented in this paper predicts that events considered identity relevant should result in behavioral changes associated with the needs of the most salient role in question. The

model suggests that if the event is considered identity relevant for the job holder role, then changes in job-related behaviors might be expected. These behaviors would depend on the specific job in question, but, in general, the model predicts that people will respond by altering the ways in which they perform the tasks associated with their particular job. On the other hand, if the event is viewed as being identity relevant for the organizational member role, a different set of behavioral reactions should be expected. Rather than changes in individual job-specific behavior, it is suggested that behaviors associated with organization membership, such as citizenship behaviors, might be expected to occur (Smith, Organ, & Near, 1983).

Although individual job behavior data were not available, a review of the overall results of the gainsharing programs might lend some evidence toward understanding the behavioral consequences. Firm A, after four quarters experience with the gainsharing program, decided to discontinue the plan due to lack of impact on revenue or costs. However, over the 12-month period of time that the plan was in effect, 341 suggestions were presented to the gainsharing committees.

In contrast, Firm B continues to utilize the gainsharing program because it resulted in significant improvements in quality and safety in addition to expanded production and increased revenue. The result has been production at levels higher than previously anticipated and bonus payouts exceeding the employees' expectations. However, this company received only 20 suggestions from their committees during the same initial 12-month time period.

If suggestion making can be considered a citizenship behavior, then there is some evidence, although limited, that changes in benefits satisfaction were associated with suggestion making activity. Also, if it is assumed that production, quality, and safety improved at Firm B due to changes in job specific behaviors, then one might interpret the data as indicating that changes in components of pay satisfaction that address personal pay are related to job specific behaviors.

Although the initial results are encouraging, the model needs to be

further elaborated to include additional characteristics of incentives. For instance, amount of payout might be an important criteria, particularly given research indicating that there is a threshold below which pay increases are not meaningful to employees (Krefting & Mahoney, 1977; Worley, Bowen & Lawler, 1992). There might also be a threshold effect for group incentives, whereby below a certain level a bonus is not identity relevant. In addition, bonus amount might affect which work-related role will be salient. The model should also be expanded to take into consideration individual differences that might moderate the relationships that were developed, particularly given that identity theory suggests that not only characteristics of the incentive but also self conceptions affect emotions and behaviors (Stryker & Serpe, 1982).

This study was somewhat limited in that it only considered two firms and one type of group incentive system. Future research including a large number of companies in addition to other forms of group incentives would be useful; however, as the differences between group incentives increase, it is more difficult to isolate which characteristics of the incentives drive identity relevance and saliency of roles.

The initial support for this model does not indicate that either distribution rule is better; it simply suggests that the plans can be viewed differently, and this insight could be important to companies in the process of designing group incentives. In addition, the model does not predict the direction of the change in pay satisfaction. Although satisfaction increased in these two firms, it is quite possible that the result might be decreases in pay satisfaction.

Identity theory appears to be useful for understanding the relationship between group incentive implementation and pay satisfaction. The theory, however, is quite generic and can be used to study any number of organizational interventions and how these programs affect employee emotional or psychological responses and subsequent behaviors.

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FIGURE 1

Group Incentives and Pay Satisfaction

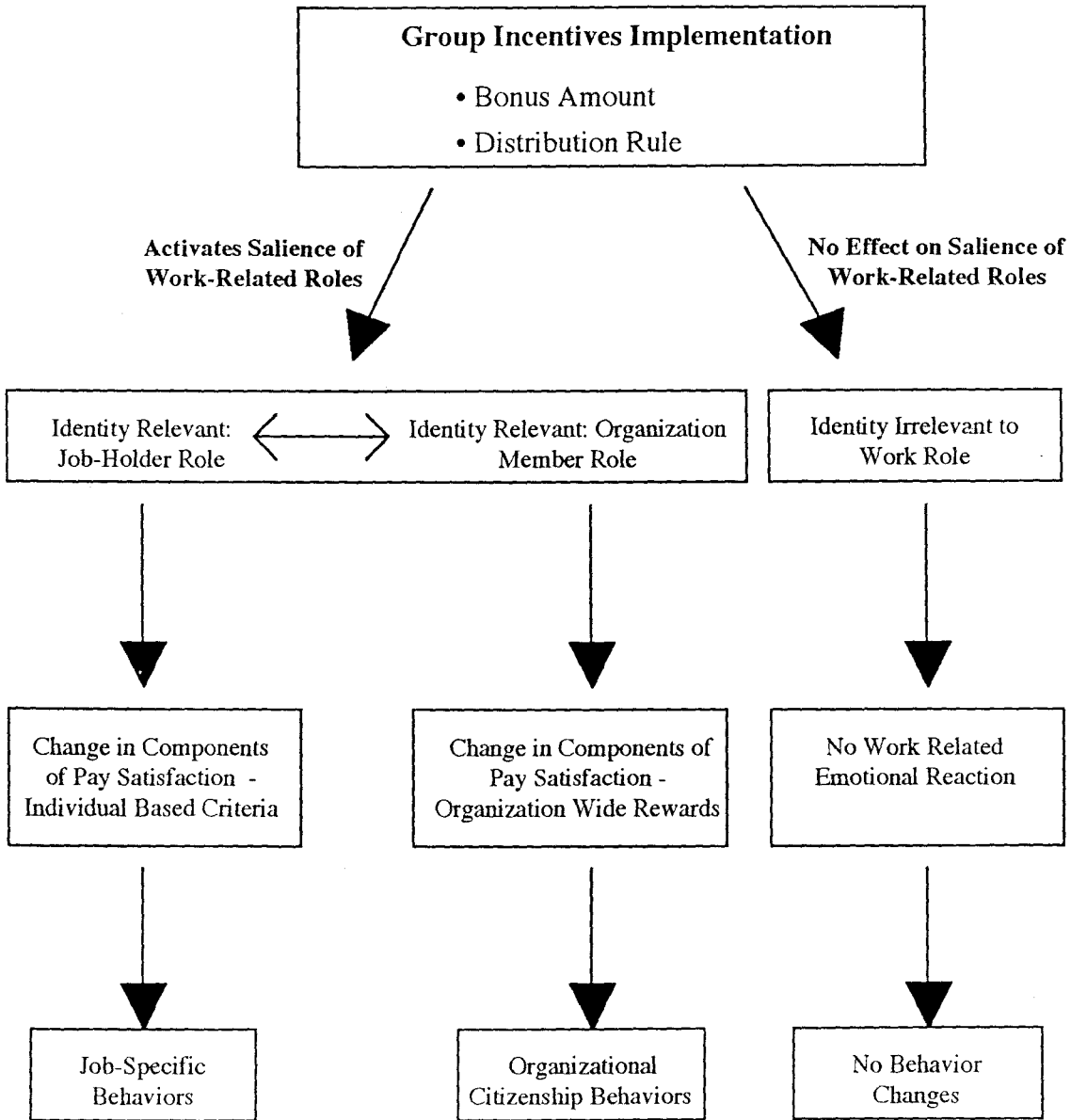


TABLE 1

Sample and gainsharing plan characteristics

<u>FIRM A*</u>		<u>FIRM B*</u>	
Pre-treatment	Post-treatment	Pre-treatment	Post-treatment
N = 172	N = 151	N = 92	N = 70
Full time = 150	Full time = 146	Full time = 89	Full time = 69
Male = 85	Male = 71	Male = 77	Male = 59
Female = 85	Female = 76	Female = 13	Female = 9
Exempt = 36	Exempt = 27	Exempt = 15	Exempt = 15
Non-exempt = 114	Non-exempt = 119	Non-exempt = 77	Non-exempt = 54
Gainsharing payouts:		Average gainsharing payouts:	
Quarter 1 =	\$380	Quarter 1 =	\$577
Quarter 2 =	\$ 63	Quarter 2 =	\$177
Quarter 3 =	\$ 31	Quarter 3 =	\$1,866
Total	<u>\$474</u>	Total	= <u>\$2,620</u>
DISTRIBUTION RULE - Equality		DISTRIBUTION RULE - Percentage of pay	
Gainsharing calculation based on revenue and expenses.		Calculation based on revenue and expenses.	
Customized component for customer satisfaction.		Customized component for safety and quality.	

BOTH GAINSHARING PLANS SHARED THE FOLLOWING CHARACTERISTICS:

- Once the bonus pool is determined, it is divided so that 50% of the pool is allocated to employees and 50% back to the company.
- Gainsharing bonus is calculated and distributed quarterly with 50% retained in reserve until the end of the year.
- Gainsharing plans included suggestion committees.

* Both firms indicated no significant turnover during the ten-month period of time between the pre-treatment and post-treatment.

TABLE 2

Pay satisfaction summary statistics

PRE-TREATMENT DATA

Zero-order Correlations

	1.	2.	3.	4.	Mean	St. dev.	Alpha
1. Pay satisfaction Pay level	1.0	.04	.59**	.55**	2.93	1.05	.95
2. Pay satisfaction Benefits	.37**	1.0	.18*	.17*	3.71	1.05	.95
3. Pay satisfaction raise	.75**	.39*	1.0	.60**	2.91	.90	.79
4. Pay satisfaction structure & administration	.76**	.36**	.76**	1.0	2.89	.73	.83
Mean	2.54	3.87	2.62	2.53			
Standard deviation	1.13	.87	.98	.76			
Alpha	.97	.95	.86	.84			

Firm A = above diagonal; Firm B = below diagonal

* = $\leq .05$; ** = $\leq .01$ POST-TREATMENT DATA

Zero-order Correlations

	1.	2.	3.	4.	Mean	St. dev.	Alpha
1. Pay satisfaction Pay level	1.0	.06	.71**	.60**	2.85	1.11	.95
2. Pay satisfaction Benefits	.41**	1.0	.16*	.17*	4.08	.65	.91
3. Pay satisfaction raise	.81**	.50**	1.0	.71**	2.96	.89	.79
4. Pay satisfaction structure & administration	.80**	.51**	.79**	1.0	2.99	.69	.84
Mean	2.83	4.06	2.82	2.97			
Standard deviation	1.04	.56	.89	.73			
Alpha	.96	.87	.87	.87			

Firm A = above diagonal; Firm B = below diagonal

Note: Standardized Cronbach alpha coefficients reported

* = $\leq .05$;** = $\leq .01$

TABLE 3
Follow-up Univariate Analysis

PAY SATISFACTION	FIRM A			FIRM B		
	Means Pre	Post	F	Means Pre	Post	F
Pay level	2.93	2.85	.36	2.54	2.83	2.84*
Benefits	3.71	4.08	13.35**	3.87	4.06	2.26
Raise	2.91	2.96	.22	2.62	2.82	1.58
Structure and administration	2.89	2.99	1.31	2.53	2.97	12.93**

* = $\leq .10$

** = $\leq .01$