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Abstract

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Keywords

justice, gainsharing, agency, theory, team, individual, behavior, peer, research, group, work, manager

Comments

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Justice in Predicting Gainsharing Satisfaction

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JUSTICE IN PREDICTING GAINSHARING SATISFACTION

ABSTRACT

This paper tests three competing hypotheses on the relative importance of distributive and procedural justice in predicting satisfaction with productivity gainsharing. The analysis provides support for one of the hypotheses, which states that the payout will determine which type of fairness (procedural or distributive) is more predictive of gainsharing satisfaction.

THE ROLE OF DISTRIBUTIVE AND PROCEDURAL
JUSTICE IN PREDICTING GAINSHARING SATISFACTION

The 1990s, characterized by vigorous competition and organizational strategies designed to enhance group performance and teamwork, appear to be spurring a number of innovative compensation initiatives, which include productivity gainsharing. Although these plans (e.g. Scanlon, Rucker, and Improshare) have been in existence for over 60 years, recent studies suggest that their use has increased dramatically in the last ten years (Lawler & Cohen, 1992). Within the United States gainsharing has been endorsed by the White House Conference on Productivity, the General Accounting Office, and the President's Task Force on Industrial Competitiveness (Lawler, 1990). Canada is also supporting gainsharing as evidenced by the Royal Commission on the Economic Union and Development Project's recommendation that it be implemented to increase productivity (Long, 1989). Gainsharing plans are being implemented by manufacturing firms, hospitals, banks, restaurants, and government agencies in an effort to improve productivity, enhance quality, lower operating costs, increase profits, and improve the quality of life for employees (Graham-Moore & Ross, 1990).

However, the gainsharing plans of the 1990s differ from their counterparts of the 1930s and 1940s in that they are taking on a more customized approach toward plan design and administration. Rather than implementing standard bonus formulas (based on only productivity and expenses), corporations are customizing their programs to include components designed to measure other aspects of performance such as quality, customer service, and safety. The variance in plan design has led to considerable speculation regarding desired plan characteristics. Given the variability in plan design and implementation, an understanding of the way in which employees evaluate and respond to gainsharing programs should provide insightful data for understanding the process and consequences of gainsharing.

To date, there is limited research addressing this topic. The gainsharing literature that is available tends to focus on plan characteristics that make gainsharing successful, however, success is generally defined by considering plan continuation (Finney, 1989; Naff & Pomerlau, 1988; Ross, Hatcher & Ross, 1989), suggestions submitted (Hatcher, Ross & Collins, 1989), and bonus payment status (Schuster, 1984; 1985). All of these outcomes are important; however, they could be the result of a number of organizational factors not related to the design of gainsharing (e.g. enhanced participation, impending crisis, etc.). In order to better understand the link between gainsharing implementation and organizational outcomes, this paper examines employee reactions to gainsharing. This is particularly important given that it is assumed

gainsharing results in changes in individual employee behavior that eventually drive work group, division, and organization performance.

Therefore, it is suggested that the gainsharing literature can be augmented by exploring some of the determinants of gainsharing satisfaction. Gainsharing results in bonus payments to employees, thus, providing a supplement to base pay. Given that pay satisfaction has long been a standard for evaluating the effectiveness of various pay programs (Miceli & Lane, 1991), it seems reasonable that studies of gainsharing satisfaction should also lead to better understanding of the effectiveness of various gainsharing systems.

DISTRIBUTIVE AND PROCEDURAL JUSTICE IMPLICATIONS FOR GAINSHARING

Gainsharing plans are implemented in an effort to encourage and reward behaviors identified as critical for organizational effectiveness, but it does so in a way that attempts to create a sense of fairness among employees by distributing the "gains" equally between the employer and employees and then distributing the employee portion among all participants in the gainsharing unit (Graham-Moore & Ross, 1990). The goal of fairness in gainsharing design has been emphasized by managers involved with the implementation of gainsharing programs and documented in a number of case studies (Welbourne, 1992). Although gainsharing has emerged independent of academic theory (founder was Joseph Scanlon, a boxer, cost accountant, and union leader), the role of fairness expressed by practitioners is consistent with predictions based on justice theories.

Equity concepts (as defined by Adams, 1965 and Homans, 1960) have spurred volumes of research and have been used to understand how allocation decisions are made within organizations and how outcome distribution affects productivity levels and/or satisfaction among workers (Deutsch, 1975; Leventhal, 1976). This early research on equity theory focused on distributive justice, which was defined as the fairness perceptions of consequences or outcomes (such as pay) that result from various decision processes. During the 1970s the justice literature was augmented to include the concept that the fairness perceptions of procedures had an independent role to play in understanding employee reactions to decisions and allocations (Lind & Tyler, 1988). Thus, a body of research on procedural fairness, which focused on perceptions of the decision processes themselves, began to develop.

The original work in procedural justice was rooted in legal research (Thibaut & Walker, 1975). Although this work focused on citizen perceptions of legal systems and dispute resolution mechanisms, it was eventually extended to other settings such as citizens' encounters with police (Tyler & Folger, 1980), individuals' evaluations of politicians and teachers (Tyler & Caine,

1981), dispute resolution in organizations (Sheppard, 1985), and performance evaluation (Greenberg, 1986). The results from this research supported the original finding that procedural justice was an important factor independent of outcome (or distributive) fairness. As organizational compensation systems involve both decision processes and the distribution of valued outcomes, the procedural justice literature was eventually extended to the topic of pay.

Folger and Konovsky (1989: 128) conducted a study of employee pay focusing on distributive and procedural justice and concluded that "a key aspect of rewards systems involves not only the what of rewards that equity theory has emphasized but also the how emphasized by work on procedural justice". In addition, Folger and Greenberg (1985) and Alexander and Ruderman (1987) also found that procedural justice had an important impact on employee attitudes toward their pay.

Given that gainsharing plans involve allocation decisions and pay, justice theory suggests that both procedural and distributive fairness should be important for predicting gainsharing satisfaction. However, the theoretical development to date is limited in is ability to provide a clear prediction of which type of fairness (procedural vs. distributive) will be more important than the other. Therefore, the empirical studies will be reviewed to develop a set of rival hypotheses on the relative importance of the two types of fairness for predicting gainsharing satisfaction. Although a large body of research on procedural and distributive justice exists, only those studies that have explored fairness of pay will be reviewed. This research provides the closest link to the focus of this study, which is gainsharing satisfaction, because gainsharing plans are part of an overall pay package for employees.

Table 1 summarizes studies of procedural and distributive fairness where pay was specifically studied. The results seem to indicate that distributive fairness predicts more variance in individually-derived outcomes such as pay satisfaction, turnover intention, and job satisfaction. Procedural justice, however, predicts more variance in organizationally-derived or group-based outcomes such as organizational commitment and conflict/harmony within work groups. These pay-related studies provide results that are consistent with the findings from legal and organizational-based research. Lind and Tyler (1988), in their extensive review of the procedural justice literature, concluded that procedures are particularly important for individual performance within a group context. Given that gainsharing payments are based on group performance and outcomes, the pay-based justice studies can be seen as providing evidence to suggest that procedural fairness should be more important than distributive fairness in predicting employee satisfaction with gainsharing.

Hypothesis 1: Procedural fairness of gainsharing will be more important than distributive fairness in predicting gainsharing satisfaction.

However, this same data can be used to develop a rival hypothesis. Gainsharing plans provide employees with a supplement to their base pay. Therefore, if gainsharing is viewed as an extension of individual pay, then distributive justice, rather than procedural justice, should be more important in predicting gainsharing satisfaction.

Hypothesis 2: Distributive fairness of gainsharing will be more important than procedural fairness in predicting gainsharing satisfaction.

Greenberg (1987) concluded, after conducting a number of studies, that procedural fairness should be more important than distributive fairness when outcomes are low. His research indicated that medium and high outcomes seem to result in perceptions of fair procedures regardless of procedures used. Therefore, this body of research suggests that procedural justice will be more important than distributive justice when gainsharing outcomes are low.

Hypothesis 3: Procedural justice will be more important than distributive justice in predicting gainsharing satisfaction when outcomes are low.

Thus, all three hypotheses suggest that both procedural and distributive justice will be important in predicting gainsharing satisfaction. However, they differ in their conclusions regarding the relative importance of procedural and distributive justice for gainsharing satisfaction.

METHODS

Research sites

The study was conducted in two companies in the Rocky Mountain Region. The first firm was a high technology business with over $1 billion in annual revenues. The corporate services department initiated the gainsharing program, which covered approximately 200 exempt and nonexempt employees. The department consisted of non-union employees working in security, food services, real estate, and administrative services.

The second site was a consumer products company that was part of an organization wish over $1 billion in annual revenues. This particular plant generated approximately $35 million in annual revenues per year and employed about 130 employees. These individuals were primarily in blue collar manufacturing jobs, and they were non-union.

The gainsharing plans

      Both firms implemented their gainsharing programs at the same time; however, each program was customized to meet the needs of the firm. The gainsharing programs had two components: the bonus formula and some form of suggestion committees.

      The bonus formula for both firms had a component based on productivity, which incorporated some measures of revenue for the unit in addition to applicable expenses. In addition, the high technology firm included a measure of customer satisfaction; if the employees did not at least meet their previous levels of customer satisfaction, the bonus could not be paid out. Customer satisfaction acted as a "gate". The company determined the bonus pool, then split the pool between the company and the employees; the employee portion was distributed among the employees equally. Therefore, supervisors, managers, and professionals received the same bonus check that was received by the entry-level cafeteria workers.

      The high technology firm emphasized the suggestion committees by providing extensive training to all employees and particularly for those who were part of the committees themselves. Although the program resulted in a total of 341 suggestions during the first 12 months of the program, payouts were fairly low. The first three quarters' payouts were: $380, $63, and $31 per employee.

      The gainsharing program enacted by the consumer products firm was similar in that they also incorporated a component for productivity and expenses. They customized their formula by adding components for safety and quality. Management was concerned about employees reducing expenses and enhancing productivity at the expense of safety and quality. Although this company had suggestion committees, they were not introduced until four months after the gainsharing plan was implemented. In addition, the suggestion committees, although in place, were not emphasized by any sort of formal training or communications. Where the high technology firm had quarterly dinner meetings to enhance interest in the concept of providing suggestions for improvement, the consumer products company simply had a quarterly communication meeting (whoever was available attended), and they communicated the results via a bulletin board. The consumer products received approximately 20 suggestions over the initial 12-month period; however, their bonus payments for the first three quarters were on average: $577, $177, and $1,866 per employee.

      The payouts were also based on 50% to the company and 50% distributed to the employees. However, the consumer products firm distributed the bonus among employees as a percentage of base pay. Therefore, supervisors, managers, and higher paid employees received larger bonus checks.

Measures

In both companies a survey was administered on site before gainsharing implementation and after three quarters' experience with the gainsharing program. At the high technology firm a total of 151 questionnaires were completed (a 76 percent return rate), and at the consumer products firm a total of 70 surveys were completed (a 61 percent return rate). The typical respondent at the high technology firm was an individual between the ages of 31 and 70, with four or less years of service with the company, a high school education, and an equal probability of being male or female. The typical respondent from the consumer products company is an individual over 40 years of age, with between four and ten years of service within the organization, a high school education, and a strong likelihood of being male.

Control variables. Several control variables were included that may influence gainsharing satisfaction. The first set of variables were demographic: gender, age, education, tenure, and income. In addition, pay satisfaction was included as a control variable. Given the relationship between fairness and pay satisfaction noted in the studies cited earlier and the fact that gainsharing plans are part of an overall pay system, pay satisfaction was included as a control in the analysis. Heneman and Schwab's (1985) pay satisfaction scale was used.

Procedural fairness. While an abundance of research on procedural fairness exists, there is no existing scale of procedural fairness of gainsharing. Therefore, a set of 13 items that addressed specific aspects of gainsharing yet that reflected the theoretical dimensions found in the justice literature (see Leventhal, 1976) and based on previous pay fairness studies (e.g. Alexander & Ruderman, 1987; Folger & Konovsky, 1989) was developed. These 13 items are included in Table 2. The response format consisted of a five point, Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree". All items were factor analyzed via principal components with varimax rotation. The factor analysis was conducted for the two separate populations, thus providing some evidence for construct validity. Two factors reached an eigenvalue of 1.0 in both sites. The first factor assessed procedural justice in relation to general rules and administration of the plan. The second factor is more narrow in scope, focusing on the procedural fairness of the gainsharing committees.

For purposes of testing the hypotheses, all items were merged into one scale. Due to the fact that there was no conceptual reason for predicting differential effects for the two factors, one scale seemed appropriate for hypothesis testing. In addition, the statistical evidence supports the use of one scale. The alpha coefficient reached .90 for the composite 13-item scale indicating no loss in internal consistency, and the two individual factors were highly correlated (.60 and .69 for the consumer products and high technology firms, respectively).

Distributive fairness. A seven-item scale was developed to assess perceptions of the distributive justice of the bonus itself (Table 3). The scale consists of seven items adapted from Alexander and Ruderman (1987) and Folger and Konovsky (1989). A principal components factor analysis of the seven items indicate that only one factor reached an Eigenvalue exceeding 1.0 in both firms. The result was a five-'item scale with an alpha coefficient of .80 for the high technology firm and .85 for the consumer products company.

Gainsharing satisfaction and incentive satisfaction. As mentioned earlier, the two firms that participated in the study customized their gainsharing programs. Therefore, the overall gainsharing satisfaction scale is somewhat different for each firm because the gainsharing plans were different. One firm emphasized the gainsharing committees while the other firm concentrated on the financial aspects of the plan. Although different items incorporated into their gainsharing satisfaction scale used by the two firms (see Table 4), both companies incorporated two items that measured incentive satisfaction. Therefore, the overall gainsharing satisfaction scale at each firm includes items that are customized for the company in addition to the two items that are identical for both firms.

A total of six items (using a 5-point very satisfied / very dissatisfied Likert scale) were developed to measure gainsharing satisfaction. A principal components factor analysis with varimax rotation was performed, and the results indicated a one factor solution at both sites (See Table 4). The overall alpha coefficient for the high technology firm was .87; when only the two items representing incentive satisfaction were analyzed, the alpha was .68. The overall alpha for the consumer products company was .95; when the two items for incentive satisfaction were analyzed, the alpha reached .84.

Analysis

The hypotheses were tested using hierarchical multiple regression with overall gainsharing satisfaction and incentive satisfaction as the dependent variables. The control variables were entered in steps 1 and 2. This allowed an analysis of the amount of unique variance associated with procedural and distributive fairness after partialling out the effects of other factors. In addition, a usefulness analysis (as reported by Folger & Konovsky, 1989) was conducted to determine the unique contributions of procedural and distributive justice.

RESULTS

Table 5 includes the descriptive statistics and table 6 shows the correlation matrix for both samples. Table 7 summarizes the results of the regression and usefulness analysis for the

high technology firm, while Table 8 summarizes those same results for the consumer products company.

If hypothesis 1 were supported, we would expect procedural justice to be the more important predictor in both samples. However, the results show that procedural fairness is the more powerful predictor only for the high technology firm. The usefulness analysis indicates that when entered in step 4, procedural justice explains an additional 13 percent of the variance in overall gainsharing satisfaction and 6 percent in incentive satisfaction. However, when distributive fairness is entered at step 4 it only explains an additional 2 percent variance in overall gainsharing satisfaction and 3 percent in incentive satisfaction. The consumer products firm resulted in a different pattern where distributive fairness added an additional 6 percent variance in step 4 for overall gainsharing satisfaction while procedural fairness only results in a change of 3 percent to the overall variance. The same pattern emerges for incentive satisfaction where distributive fairness explains 5 percent additional variance, but procedural fairness at step 4 explains only 3 percent additional variance.

In addition, hypothesis two would be supported if both sites resulted in distributive fairness being the more important predictor. Based on the results indicated above, this hypothesis is also not supported.   However, the data appear to support hypothesis 3. This hypothesis stated that procedural fairness should be the more important predictor when outcomes are low. The high technology firm was characterized as having low outcomes, and the results of the analysis at this site show that procedural fairness explains more variance in both gainsharing and incentive satisfaction than does distributive fairness. On the other hand, the analysis for the consumer products firm, where outcomes were high, resulted in the opposite pattern, where distributive fairness explained more variance in both dependent variables.

DISCUSSION

This study extends the fairness literature to a new domain, gainsharing. The results are consistent with the justice literature in that both distributive and procedural fairness affected gainsharing satisfaction and incentive satisfaction. This was found to be true in both firms, one which had high gainsharing bonuses and the other that experienced low payouts. Additionally, the results appear to support Greenberg's (1987) notion that the amount of outcome will affect the relative importance of procedural and distributive justice on employee satisfaction.

There appears to be an ongoing debate on the relative importance of procedural and distributive justice in predicting a number of attitudes and outcomes. Sweeney and McFarlin (1993) recently characterized their research on this topic as testing four different models of

justice, which they referred to as the two factor model (procedural justice more important for global evaluations of institutions while distributive justice is more important for personal evaluations), the procedural primary model (procedural justice affects distributive justice), the additive model (the two types of justice do not interrelate), and the distributive halo model (distributive justice drives procedural justice). Their research supported the two-factor model, however, they noted that they would not expect this same pattern to be upheld under different circumstances (different sample, issues studied, etc.).

The results of this study do not support the two-factor model, in fact, this study does not strictly support any of the four models proposed by Sweeney and McFarlin (1993). Although the data does nothing more than provide support for the fact that the jury is still out on this debate, results of interviews with employees at both companies provide some insight into measurement problems that might be confounding the research results.

When interviewing employees who expressed dissatisfaction with the gainsharing programs, they were asked whether they thought the plan was fair. The answer, obtained from a number of employees was, "it's fair for everyone else, but not for me". This comment says more about the way in which we are measuring procedural and distributive fairness than it does about the competing models that are currently being discussed and tested. Most researchers ask employees to respond to items that ask whether something is generically fair. When we focus on fairness of pay, we assume that employees consider fairness to themselves. However, when we ask about the fairness of policies and procedures, we should have less confidence in the reference that employees are using. They might think about whether a policy is fair to them or to the overall employee population. The reference might have an effect on their response and ultimately on the relationship of their evaluation of fairness, with other attitudinal and behavioral outcomes. An employee who thinks that a procedure is fair for everyone might be more inclined to evaluate that institution in a more positive fashion, however, that evaluation might have little impact on their feelings about how the individual is affected by the institution.

Maybe the two variables that should be studied are fairness to the individual and fairness to the group, with both distributive fairness and procedural fairness contributing to each evaluation. Fairness to "me" might be related to individually-based outcomes, while fairness to everyone might be related to organizationally-derived outcomes. This is particularly important as organizations move from individually-based pay systems to team and group-based programs. Therefore, before the debate between the superiority of procedural or distributive fairness continues, we need to consider not only the theoretical implications but the way in which we continue to measure distributive and procedural justice.

In addition, further research on the role that outcomes play in making evaluations of fairness is necessary in order to fully understand which type of justice is dominant in understanding employee evaluations of pay systems. For instance, low outcomes might be interpreted by employees as indicative of an institutional-based program, while high outcomes might be seen as more personal. This might result because high outcomes can be used to enhance an employee's lifestyle, or they might see high outcomes as something actually earned by changes in their performance on the job. Given this type of scenario, high outcomes result in distributive justice being more important because gainsharing is viewed not as an institutional program but as a personal system. Low outcomes, then, might result in employee evaluations of gainsharing as an institutional program (similar to entitlements such as health care). Future research should, therefore, not only improve the way in which fairness is measured but also ascertain whether what we are considering institutional vs. individual outcomes are consistent with employee evaluations.

The results of this study indicate that organizations that are implementing gainsharing plans and other types of group incentive systems should consider the degree to which employees will consider the process as fair and the outcomes as fair. In particular, if they anticipate that outcomes might be low, then the business should use its resources to design and communicate an incentive system that employees will consider procedurally fair. They should also consider the implications for various employee groups. For instance, in the high technology firm, where the bonus payment was paid out equally, interviews revealed that managers agreed the overall plan was procedurally fair, but they did not think the method of payment distribution was fair to them. Obtaining management cooperation in establishing and implementing gainsharing was essential for the success of the program, and the company found that the managers' lack of enthusiasm helped contribute to the gainsharing plan's demise. This company discontinued the program after the first 12 months' because they could not document any results to the "bottom line'. The bonus payment reflected the lack of change in their measures of productivity, thus low payments reflected minimal changes. On the other hand, the consumer products firm is currently still using their gainsharing plan; they had support from most personnel even though some of the lower paid employees felt that the bonus payment should be paid out equally. Fortunately for the organization, these few employees were not critical to the business unit's performance.

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Table 1

Summary of pay-related studies

Study	Results
Alexander & Ruderman (1987)	Procedural justice explained more variance in conflict / harmony within group, evaluation of supervisor, and trust in management.
	Distributive justice explained more variance in turnover intention.
Konovsky & Folger (1987)	Procedural justice explained more variance in organizational commitment.
	Distributive justice explained more variance in pay satisfaction.
Folger & Konovsky (1989)	Procedural justice explained more variance in trust in management and organizational commitment.
	Distributive justice explained more variance in pay satisfaction.
Miceli, Jung, Near & Greenberger (1991)	Distributive justice related to pay satisfaction; relationship between procedural justice and pay satisfaction not as strong.
McFarlin & Sweeney (1992)	Procedural justice explained more variance in organizational commitment and evaluation of supervisor.
	Distributive justice explained more variance in pay satisfaction and job satisfaction.
Sweeney & McFarlin (1993)	Procedural justice explained more variance in organizational commitment.
	Distributive justice explained more variance in pay satisfaction.

Table 2
Principal Components Factor Analysis With Varimax Rotation
Procedural Fairness Items[a]

Factor 1: Rules and Administration	High Technology (N=151)	Consumer Products (N=70)
The design of the gainsharing plan seems fair.	.82	.87
The gainsharing formula is fair for all employees.	.81	.82
The gainsharing plan is administered fairly.	.81	.81
The rules used for sharing the gainsharing bonus with all employees are fair.	.73	.79
The gainsharing plan developed by the company to reward employees for their performance is fair and impartial.	.81	.78
When determining whether a gainsharing bonus will be paid, the company uses accurate information about the department's performance.	.71	.44
The performance level required to receive a gainsharing bonus is clear to me.	.57	.50
Eigenvalue	6.21	5.91
Alpha	.90	.89
Factor 2: Suggestion Committees		
People who provide suggestions are treated fairly.	.72	.42
Suggestion committees provide an opportunity for me to express "my opinion."	.69	.67
Members of the suggestion committees are ethical and honest.	.64	.68
The rules adopted by the suggestion committees are fair to all employees.	.59	.82
The suggestion committees and gainsharing program provide an opportunity for us to receive feedback and learn how well we are doing	.51	.45
Suggestion committees are fair and impartial.	.43	.84
Eigenvalue	1.17	1.67
Alpha	.76	.83

Note: Varimax and oblimin rotations yielded similar results.

Table 3

**Principal Components Factor Analysis With Varimax Rotation:
Distributive Fairness Items**

Items

The size of our bonus is fair.	.88	.93
All in all, the bonus payment is what it ought to be.	.82	.91
The bonus we receive is fair.	.87	.90
Our bonus is fair compared to what others are getting.	.75	.77
The extent to which the bonus gives us the full amount we deserve is fair.	.83	.70
Eigenvalue	3.81	3.96
Alpha	.90	.91

Table 4

Principal Components Factor Analysis with Varimax Rotation

High Technology Firm

	Item	Factor Loadings
1.	The gainsharing plan.	.83
2.	The way in which the bonus is calculated.	.69

Two item alpha = .68

	Item	Factor Loadings
3.	The gainsharing committee structure.	.80
4.	The way suggestions are handled by the committees.	.78
5.	The way in which the bonus is distributed among employees.	.78
6.	The way in which gainsharing resulted in changes in my department.	.75

Eigenvalue = 3.60 Alpha (6 items) = .87

Consumer Products Company

	Item	Factor Loadings
1.	The incentive plan.	.85
2.	The way in which the bonus is calculated.	.97

Two item alpha = .84

	Item	Factor Loadings
3.	The incentive plan formula.	.94
4.	How the incentive plan formula was determined.	.94
5.	The way the incentive plan is administered.	.86
6.	The size of my most recent incentive plan bonus.	.79

Eigenvalue = 4.75 Alpha (6 items) = .95

Table 5
Summary Statistics

Variable	CONSUMER PRODUCTS (N=70)		HIGH TECHNOLOGY (N=151)	
	Mean	Standard Deviation	Mean	Standard Deviation
Incentive Satisfaction	3.35	.94	3.55	.74
Gainsharing Satisfaction	3.28	.90	3.43	.66
Age	38.58	9.71	2.23	.78
Sex	.87	.34	.48	.50
Education	3.24	1.42	1.89	.87
Tenure	4.72	2.24	2.86	1.26
Income	3.49	1.00	2.96	1.23
Satisfaction with Pay Level	2.80	1.05	4.09	.65
Satisfaction with Pay Admin.	2.95	.74	2.99	.68
Satisfaction with Raise	2.78	.91	2.95	.89
Satisfaction with Benefits	4.06	.56	2.84	1.10
Distributive Fairness	3.26	.76	3.19	.73
Procedural Fairness	3.49	.74	3.44	.71

Table 6
Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Incentive Satisfaction	1.00	.88**	-.00	.07	-.00	-.26**	-.12	.26**	.39**	.34**	.22**	.61**	.63**
2. Gainsharing Satisfaction	.96**	1.00	.03	.14	.01	-.22**	-.10	.25**	.45**	.35**	.25**	.65**	.74**
3. Age	.35**	.36**	1.00	-.00	.41**	.26**	.10	-.20*	.19*	.i8*	.19*	.01	.02
4. Sex	-.05	-.10	.12	1.00	.01	-.37**	-.10	.06	-.02	.08	.06	.10	.13
5. Tenure	.22	.26*	.39**	.06	1.00	.43**	.12	-.15	.04	.05	.17	-.05	-.04
6. Income	.34**	.38**	.12	.32**	.24*	1.00	.40**	-.12	.06	.05	.26**	-.17*	-.15
7. Education	.22	.21	.06	.19	-.07	.42**	1.00	-.16	-.07	-.02	.05	.00	-.07
8. Satisfaction with Benefits	.28*	.30*	-.05	-.23	-.11	-.09	.09	1.00	.17*	.16*	.06	.18*	.16
9. Satisfaction with Pay Admin.	.52**	.52**	.08	-.42**	.04	-.01	.18	.41*	1.00	.71**	.60**	.36**	.33**
10. Satisfaction with Raise	.34**	.38**	.10	-.39**	.00	.04	.13	.50**	.78**	1.00	.71**	.37**	.33**
11. Satisfaction with Pay Level	.38**	.41**	.05	-.33**	.06	.17	.18	.41**	.80**	.81**	1.00	.22**	.21*
12. Distributive Fairness	.81**	.85**	.30	-.05	.28*	.34**	.15	.34**	.53**	.45**	.34**	1.00	.70**
13. Procedural Fairness	.81**	.84**	.42**	-.09	.19	.36**	.26*	.40**	.50**	.38**	.36**	.80**	1.0

0* - Signif. LE .05   ** - Signif. LE .01

High technology sample (N=151) correlations are <u>above</u> the diagonal; consumer products sample (N = 70) is <u>below</u> the diagonal.

Table 7
Regression Analysis - High Technology Firm (N = 151)

	Overall Gainsharing Satisfaction is Dependent Variable			Incentive Satisfaction is Dependent Variable		
	Beta[a]	ΔR^2	F	Beta[a]	ΔR^2	F
Step 1						
Education	.02			.02		
Age	-.00			-.02		
Sex	-.00			-.10		
Tenure	.11			.15*		
Income	-.17*	.06	1.67	-.27**	.09*	2.31*
Step 2						
Raise	-.14			-.02		
Benefits	.11			.12		
STR	.25**			.15**		
Level	.07	.24***	10.06***	.05	.20***	8.29***
Step 3						
Distributive Fairness	.20*	.22***	55.28***	.25**	.19***	40.87***
Step 4						
Procedural Fairness	.51***	.13***	41.94***	.35***	.06***	4.93***
Summary Statistics						
	$R^2 = .65$***			$R^2 = .53$***		
	Adjusted $R^2 = .62$***			Adjusted $R^2 = .49$***		
	F = 19.74***			F = 11.98***		

Usefulness Analysis

	ΔR^2	F		ΔR^2	F
Procedural Fairness at Step 3	.33***	105.91***		.22***	50.64***
Distributive Fairness at Step 4	.02*	6.06*		.03**	7.30**

* ≤ .05
** ≤ .01　　　　　　　　[a]Standardized regression coefficients.
*** ≤ .001

Table 8
Regression Analysis - Consumer Products Company (N = 70)

		Overall Gainsharing Satisfaction is Dependent Variable			Incentive Satisfaction is Dependent Variable		
		Beta[a]	ΔR^2	F	Beta[a]	ΔR^2	F
Step 1							
	Salary	.09			-.06		
	Age	.06			.07		
	Sex	-.07			.01		
	Education	-.00			.00		
	Company Tenure	.00	.32***	5.34***	-.04	.27**	4.12**
Step 2							
	Benefits	-.04			-.06		
	Level	.04			.03		
	Raise	-.16			-.21 **		
	STR	.16	.22***	6.29***	.27	.24***	6.49***
Step 3							
	Distributive Justice	.48***	.25***	59.27***	.44***	.22***	42.34***
Step 4							
	Procedural Justice	.38**	.03**	9.17**	.38**	.03**	7.24**

Summary Statistics
R^2 = .82***
Adjusted R^2 = .78***
F = 20.71***

R^2 = .76***
Adjusted R^2 = .71***
F = 14.84***

<u>Usefulness Analysis</u>						
		ΔR^2	F		ΔR^2	F
Procedural Justice at Step 3		.22***	45.30***		.20***	35.89***
Distributive Justice at Step 4		.06***	17.80***		.05***	11.52***

* $\leq$ .05
** $\leq$ .01   [a]Standardized regression coefficients.
*** $\leq$ .001