

Effect of Perceived Organizational Justice on Technicians' Work Engagement

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Abstract—This article applies factor analysis, descriptive statistical analysis and regression analysis to explore the effect of perceived organizational justice on technicians' work commitment based on the sample of the entire workers from some Henan manufacture enterprises. Results show organizational justice can be measured by procedural justice and distributive justice. Job satisfaction is measured by salary, promotion and supervision. Moreover, organizational commitment is measured by continuous commitment, affective commitment and normative justice. In manufacture enterprises, procedural justice and distributive justice have significant and positive effect on performance appraisal satisfaction, job satisfaction and organizational commitment.

Keywords—technicians; organizational justice; work engagement

I. INTRODUCTION

In China, most manufacturing enterprises are in the period of transformation and various factors affect their development, which contains many unfair phenomena. When technicians feel they are not treated fairly, usually they will show some negative behavior, thereby affecting work efficiency and enterprise performance. In addition, recently, more and more global manufacture enterprises have been established and technicians have become the most wanted, the result of which is that most manufacture enterprises are seriously lack of technicians, which has resulted in high salary to compete for technicians and even prevented the normal economic growth due to enterprises not being in time to meet market need.

Scholars both at home and abroad have recently conducted intensive study on the effect of perceived organization justice towards employees' work attitude. As for the organization justice, scholars don't have uniformed view on the division of organization justice, which starts from the early single division of distribution justice to the two dimensional view of distribution justice and procedural justice and then three dimensional view is given based on the separation of interaction justice from procedural justice. Lastly four dimensional view of justice is formed based on

the point that interaction justice can be divided into communication justice and information justice. In terms of work attitude, this article discusses three aspects including job satisfaction and organization commitment, which is comprised by affective commitment, continuance commitment and normative commitment. However, it's rare to find the research on technicians' work attitude affected by perceived organization justice in manufacturing enterprises.

II. THEORETICAL FOUNDATION AND HYPOTHESIS

Work engagement includes performance evaluation satisfaction, job satisfaction and organizational commitment [1]. But how to make technicians perceive organizational justice? Perceived organizational justice in performance appraisal plays the fundamental role in distributive justice and procedural justice [2]. technicians not only cares about the fair evaluation of work result but also care about the process of performance appraisal decision.

The effect of distributive justice on performance appraisal can be measured by the actual performance, pay and promotion in performance evaluation. During the process of performance evaluation, technicians will compare their performance appraisal result with their commitment and also with others or unified standard. Manufacture firms have established the performance and return closely connected performance appraisal system, which can help improve the distributive justice of technicians and the negative perception of distributive justice will cause low job performance, unwillingness to communicate with other colleagues and even the burglary. Therefore, hypothesis 1 is proposed.

H1: distributive justice in performance appraisal has positive correlation with technicians' performance appraisal satisfaction.

Procedural justice refers to the perception of mechanism and process justice of the assessed on performance appraisal. Dipboye and de Pontbriand describe that one important question in research is how to design evaluation process to make technicians agree with evaluation itself and evaluation system [3]. Performance appraisal not only make technicians

understand the execution condition of performance appraisal but also will effect technicians' future devotion and task direction[4].If the performance assessment process is transparent, operational and reasonable which is acknowledged by assessed technicians, they will have high royalty and trust on enterprises. Moreover, the absolute distributive justice doesn't exist. Though technicians sometimes can't obtain the relative return, they still could accept the unbeneficial result only when they understand the process of performance process is fair. Based on this, hypothesis 2 is proposed.

H2: procedural justice in performance appraisal has positive correlation with technicians' performance appraisal satisfaction.

Distributive justice is an important affecting factor to explore job satisfaction. Equity theory hold that whether the person is satisfied with pay doesn't depend on the absolute value but the relative value compared socially with other. Employees always compare their devotion and relative pay with others at the same level. When the comparison value is equal, both parties will be satisfied and have the perceived justice. Correspondingly, they will work hard and improve their performance [5].Based on this, hypothesis 3 is given.

H3: distributive justice in performance appraisal has positive correlation with technicians' job satisfaction.

Organization procedural justice can significantly effect on the job satisfaction. Tang and Sarsfield-Balwin describe that distributive justice not only relates to pay, promotion and performance evaluation to the largest extent, but also each dimension in procedural justice relates to job satisfaction. Procedural justice can influence employees' job satisfaction and the positive comment towards organization, which can even enable employees to sacrifice their short-term benefit for the tem or organization benefit. Based on this, hypothesis 4 is given.

H4: procedural justice in performance appraisal has positive correlation with technicians' job satisfaction.

Organization commitment is initially proposed by Becker to discuss the important variable of employees' work behavior [6]. Meyer and Allen divide organization commitment into affective commitment, continuance commitment and normative commitment [7].Affective commitment means the extent that employees involve in the enterprise devotion and participation, which mainly comes from technicians' deep emotion towards organization. Normative commitment means employees' responsibility and obligation that stay in enterprises. Respectful leaders are most attractive for technicians. Therefore, normative commitment can be improved by technicians' trust and acknowledgement towards managers. Continuance commitment means employees have to stay in organization just for keeping their current pay and benefit and are not willing to sacrifice their obtained position and long-term devotion. Meanwhile, normative commitment is a kind of loss cognition on quitting the job. Pay satisfaction can enhance the level of continuance commitment. Therefore, talents can be attracted by improving the perception of

distributive justice. Organization procedural justice and distributive justice will affect organization commitment. Peng Z also explores the relations between procedural and normative commitment and proposed that procedural justice will provide talents a feeling of the ownership and make them responsible stay in organization [8]. Based on this, hypothesis5 and hypothesis6 is proposed.

H5: distributive justice in performance appraisal has positive correlation with technicians' organization commitment.

H6: procedural justice in performance appraisal has positive correlation with technicians' organization commitment.

III. DESIGN AND METHODOLOGIES

A. Sample collection

The sampling frame consisted of part Henan small and medium sized manufacture enterprises to complete questionnaires by posting, E-mail and visiting. Data collection yielded 120 questionnaires. After dropping surveys completed by individuals not fully answered or given invalid answers, a useable sample of 74 questionnaires was utilized in this study(valid response rate 61.67%).The proportion of male is 75.95% and female is 24.15%.Qualification of 64% technicians is senior high school or below. Duration of technicians is five years or above.

B. Variable measurement

Distributive justice in performance appraisal means the performance review mark depends on the actual job performance. Procedural justice in performance appraisal means the process justice. In this article, distributive justice and procedural justice are measured by the application of Panggabean M S (2001). Job satisfaction applies the research by Viswesvaran, Despande and Joseph (1998) and selects three variable which is the pay satisfaction, promotion satisfaction, and managerial satisfaction. Performance appraisal satisfaction includes six variables initiated by Tand and Sarsfield-Baldwin. Moreover, organization commitment variable includes continuance commitment, affective commitment and normative commitment. Continuance commitment is measured by five items according to Bing, Buroughs and Helford (1999). Affective commitment is measured by seven items according to Bing, Buroughs and Helford. Normative commitment is measured by four items. 5-point Likert scale is used to evaluate statements using 5 for strongly agree and 1for strongly disagree.

C. Analysis Method

Firstly, SPSS11.5 is applied to conduct exploratory factor analysis and calculate each factor's Cronbach alpha to test factor structure. Then, descriptive analysis is applied to five variables to calculate correlation coefficients between variables. Lastly, regression analysis is used to explore relations between two variables which are distributive justice and procedural justice and three variables which are

performance appraisal satisfaction, job satisfaction and organization commitment.

IV. STATISTICAL RESULTS

A. Factor analysis result

Factor analysis is used to measure five variables which are distributive justice, procedural justice, job satisfaction, performance appraisal satisfaction and organization commitment. Result details can be seen in table 1, table 2, table 3, table 4 including all the measuring item, factor loading, total variance and characteristic value. Based on the principle that only factor load more than 0.4 can be kept [9], distributive justice Cronbach alpha 0.789 and procedural justice 0.748 are selected in organization justice factor analysis. Pay satisfaction 0.785, promotion satisfaction 0.789 and managerial satisfaction 0.765 are selected in the factor analysis of job satisfaction. One factor is selected in the analysis of performance appraisal satisfaction and its Cronbach alpha is 0.701. At the same time, three factors are selected which are continuance commitment Cronbach alpha 0.707, affective commitment Cronbach alpha 0.782 and normative commitment Cronbach alpha 0.774. When alpha is greater than 0.7, test will have high validity [9]. Therefore, using these factors has high validity.

TABLE I. RESULT OF FACTOR ANALYSIS ON ORGANIZATION JUSTICE

Item	F1	F2
The assessed wants to add the prior performance evaluation result and applies it	0.846	
I have known the standard applied in the appraisal	0.844	
I can challenge and complain the appraisal result	0.767	
Assessor treats the evaluation informally.	0.797	
My job is fairly assessed.	0.687	
Standard of skill appraisal relates to job		0.752
Appraisal Rank obtained mainly relates to job.		0.841
Pay is based on appraisal rank		0.786
Promotion is based on appraisal rank.		0.698
Further study opportunity is based on appraisal rank		0.804
Technician skill enhancement training opportunity is based on appraisal rank		0.816
Characteristic value	3.694	2.472
Explained Variance(83.818%)	51.49	32.32
	3	5

^a Note: factor extraction method is principal component analysis, Varimax rotation, loading factor equals to or is more than 0.4.

TABLE II. RESULT OF FACTOR ANALYSIS ON JOB SATISFACTION

Item	F1	F2	F3
The pay is higher than other enterprises provided	0.855		
The pay is enough to match my duties I fulfilled.	0.842		
The pay is lower than what I have done.	0.657		
I am dissatisfied with the grounding on promotion.		0.753	
In my enterprise, promotion is rare.		0.762	
I can be promoted due to the good job I		0.857	

have done.			
I am satisfied with my progress.		0.784	
Supervisors are always supporting me.			0.763
My supervisor doesn't listen to my suggestion.			0.842
Supervisors don't treat me fairly.			0.689
Characteristic value	3.543	3.026	2.567
Explained Variance (89.44%)	36.523	31.375	21.542

^b Note: factor extraction method is principal component analysis, Varimax rotation, loading factor equals to or is more than 0.4.

TABLE III. RESULT OF FACTOR ANALYSIS ON PERFORMANCE APPRAISAL SATISFACTION

Item	F1
It's usual and timely to review the performance.	0.653
I know how I have performed in the job appraisal.	0.795
I think it's fair to appraise the job performance.	0.658
My job is reviewed based on the job duty standard.	0.713
My supervisor is always rewarding my job performance.	0.657
I am satisfied with my last performance appraisal.	0.731
Characteristic value	3.157
Explained Variance (81.753%)	81.753

^c Note: factor extraction method is principal component analysis, varimax rotation, loading factor equals to or is more than 0.4.

TABLE IV. RESULT OF FACTOR ANALYSIS ON ORGANIZATION COMMITMENT

Item	F1	F2	F3
I have wasted lots of time here and should leave.	0.679		
Changing boss is simple for me .	0.623		
Cost of looking for a new job is high.	0.756		
The pay I get from other boss isn't less than my current boss.	0.695		
Starting a new job is hard for me.	0.781		
I will tell my friend this is a good place to work.		0.771	
What the enterprise pursues is the same as what I want.		0.713	
I work harder because I wish my enterprise could be better.		0.769	
I am loyal to my enterprise.		0.727	
I am part of the enterprise.		0.837	
I care about whether my enterprise could be successful.		0.841	
I feel it's my responsibility to support my enterprise.		0.815	
When I am on business trip, I feel I am part of my enterprise.			0.798
I devote myself to enterprise.			0.754
I feel frustrated when I listen to the bad news from others			0.731
If this enterprise is absolutely better than others, I am happy to be one member.			0.811
Characteristic value	3.312	2.977	2.576
Explained Variance (89.439%)	38.569	28.283	22.587

^d Note: factor extraction method is principal component analysis, varimax rotation; loading factor equals to or is more than 0.4.

B. Descriptive Analysis

Descriptive analysis for five variables can be seen in table 5. Mean and standard deviation of distributive justice is 3.1067 and 0.454, of which procedural justice is 3.2288 and 0.157, job satisfaction is 3.1064 and 0.417, performance

appraisal is 6.9378 and 0.559 and organization commitment is 3.4043 and 0.324. According to the result, distributive justice has high correlation with procedural justice.

Distributive justice and procedural justice have high correlation with job satisfaction, performance appraisal satisfaction and organization commitment.

TABLE V. VARIABLES' MEAN, SD AND CORRELATION COEFFICIENTS

Variable	M	SD	1	2	3	4	5
Distributive Justice	3.1067	0.454	1				
Procedural Justice	3.2288	0.517	0.197*	1			
Job Satisfaction	7.8064	0.417	0.534**	0.612**	1		
Performance appraisal satisfaction	6.9378	0.559	0.489**	0.378**	0.367*	1	
Organization commitment	3.4043	0.324	0.463**	0.501**	0.402**	0.382*	1

C. Regression result analysis

Regression analysis is applied to test the effect of distributive justice and procedural justice on job satisfaction, performance appraisal satisfaction and organization commitment seen in table 6. Regression result shows that distributive justice has significant and positive effect on job satisfaction ($R^2=0.462, p<0.05$), performance appraisal

satisfaction ($R^2=0.584, p<0.01$) and organization commitment ($R^2=0.604, p<0.05$). Meanwhile, Procedural justice has significant and positive effect on job satisfaction ($R^2=0.563, p<0.01$), performance appraisal satisfaction ($R^2=0.674, p<0.01$) and organization commitment ($R^2=0.618, p<0.01$). Therefore, Hypothesis1, Hypothesis2, Hypothesis3, Hypothesis4, Hypothesis5, Hypothesis6 are valid.

TABLE VI. REGRESSION RESULT

Variable	Job Satisfaction		Performance appraisal satisfaction		Organization commitment	
	β	t	β	t	β	t
Distributive Justice	0.615*	2.433	0.235**	3.467	0.184*	2.744
R^2	0.462		0.584		0.604	
Procedural Justice	0.238**	3.126	0.352**	3.396	0.226**	3.652
R^2	0.563		0.674		0.618	

*p<0.05, ** p<0.01

V. CONCLUSION

From the empirical study result, it's concluded that organization justice can be measured by distributive justice and procedural justice, job satisfaction can be measured by pay, promotion and manager and organization commitment can be measured by continuance commitment, affective commitment and normative commitment.

This study also proves that in manufacture enterprises, distributive justice and procedural justice have significant and positive correlation with technicians' performance appraisal satisfaction, job satisfaction and organization commitment. Therefore, fair and clear distributive system can be established in the process of technicians' management. In terms of benefit distribution, the procedure process must be open to put an end to bureaucracy [10]. What's more, technicians' development policy can be strengthened to change the current condition that pays attention to technicians' utilization and ignores the technicians' capability enhancement. Lastly, technicians' motivation system must be established such as material motivation, promotion motivation, training and study motivation to improve their perception of organization justice and work attitude [11].

The research objective of this article is technicians in China. But the sample collection only focuses on part small and medium sized manufacture enterprises in Henan. Therefore, the research result has some limitations.

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