OBJECTIVE AND PERCEIVED EXISTENCE OF HIGH PERFORMANCE WORK PRACTICES

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ABSTRACT

We investigated the effects of objective and perceived existence of high performance work practices (HPWP) on employee satisfaction in workplace with a Chinese sample. The data showed that perceived existence of high performance work practices moderated the relation between the objective existence of HPWP and employee satisfaction.

INTRODUCTION

The past ten years have witnessed an increasing interest in high performance work practices (HPWP), a set of human resource practices that increase employee involvement, commitment, and empowerment (Pfeffer, 1998), in both academia and practice because it is believed that HPWP can influence firm performance by enhancing employee outcomes such as employee performance (Scotti, Harmon, & Behson, 2007) and organization commitment (Macky & Boxall, 2007).

To achieve these goals of HPWP, it is important to study individual employees' perceptions of HPWP. It is because only by influencing individual employees' perceptions, can employees change their behaviors in accordance with HPWP's intentions. For example, according to Budd's study (2006) on "shared capitalism" (e.g. employee stock ownership plan (ESOP), individual-based and group-based incentive plans), there exist "significant amounts of employee ignorance in both under- and overstating the extent to which such plans (referring to various financial incentives) apply to them" (Budd, 2006, p.1). According to the same study, employee ignorance or false positive (i.e. employees' perceptions that they are covered by a certain practice while it is not true according to their companies) are related to their "willingness to work hard" and their loyalty to the firm with statistical significance (Budd, 2006).

With the purpose of providing a complete picture of how individual perceptions influence the relationship between the objective existence of HPWP and employee performance and satisfaction, we draw upon three alternative theoretical perspectives: the *ability-motivation-opportunity theory*, the *self-fulfilling theory*, and the *social information processing theory*. We see the application of these three alternative theoretical

frameworks to the role of perceptions of HPWP as a significant contribution to the area of HPWP, because it shifts the emphasis of such studies from how HPWP directly affect employee behaviors to the deeper question of how employee behaviors vary according to the differentiated levels of HPWP perceptions in the context of objective HPWP existence. Additionally, the use of three alternative theoretical approaches to answer this larger question follows the research philosophy of the "method of multiple hypotheses" (Platt, 1964, p. 350) and thus the answer is more useful to both researchers and practitioners (Platt, 1964; Shaw, Gupta, & Delery, 2005).

The major theoretical contribution of the present study is the application of the three alternative theoretical perspectives on investigating the question of how perceptions of HPWP influence the relation between objective existence HPWP and employee outcomes. It is worth noting that the predictions from each perspective are not exclusive but rather generally complementary of each other in explaining the relationship of objective existence of HPWP and perceived HPWP to employee outcomes with one exception: the predictions from the ability-motivation-opportunity perspective and the social information processing perspective are opposite when employees are ignorant about the implementation of HPWP. Specifically, the ability-motivation-opportunity theory predicts that HPWP perceptions mediate the HPWP-employee outcome relation; the self-fulfilling prophecy theory predicts that HPWP perceptions moderate the relation; the social information processing theory predicts that the fit between HPWP perceptions and the objective existence of HPWP relates to the most desired employee outcomes. The study thus contributes to the literature of HPWP by examining the validity of these three alternative theories in predicting how HPWP perceptions affect the effectiveness of HPWP's influence on employee outcomes.

THEORY AND HYPOTHESES

The Ability-Motivation-Opportunity Perspective

According to the ability-motivation-opportunity framework (the MOA framework), the three components of an individual's implicit information process are necessary conditions for an individual to behave in a certain way (Rothschild, 1999). In this framework, motivation is defined as willingness or desire to behave. Opportunity refers to the lack of the external restriction when an individual has motivation to behave and ability refers to an individual's internal capacity to behave. Although this information processing framework is heavily used in studies of consumer behavior (e.g. Gruen, Osmonbekov & Czaplewski, 2007; Poiesz & Robben, 1996) and social capital (e.g. Adler & Kwon, 2002), it is worthwhile to draw the distinct advantages of this framework into larger inquiry around the effectiveness of HPWP.

According to the HPWP literature, some of HPWP practices enhance employees' ability to accommodate their employers' goals, such as training and job rotation; some motivate employees, such as ESOP and gain sharing; and some provide employees opportunities to act, such as suggestion scheme and employee representatives in board meetings. Applying the MOA framework into the HPWP area, we argue that employee perceptions of HPWP directly influence the necessary conditions for employees to behave in the ways employers hope them to accomplish. In other words, if an employee is not aware of the existence of certain HPWP practices or thinks a practice is badly implemented, he or she will not accomplish the behaviors that the practice hope to promote.

> *Hypothesis1: Perceptions of HPWP mediate the relation between the objective implementation of HPWP and employee outcomes.*

The Self-fulfilling Prophecy Perspective

Self-fulfilling prophecy has been demonstrated to have extensive and large effects (e.g. Rosenthal, R. & Jacobson, 1968; McNatt, 2000) across different contexts (Davidson & Eden, 2000). Researchers explained the self-fulfilling prophecy process in this way: people inadvertently behave in a way that creates evidence in support of their beliefs (Merton, 1968, p.477). The implication from the self-fulfilling prophecy is that a person's beliefs are resistant to change, because a person tends to create a good deal of evidence that confirms his/her existent schemas. This process is not a deliberate attempt to confirm the person's schemas; it rather occurs inadvertently and unconsciously. Although usually this theory is applied in the case of supervisor's perceptions of employee performance rather than an employee's perception of HPWP, the empirical evidence suggests that the theory is valid in predicting employee outcomes (McNatt, 2000).

Following the theory's logic, in this study's setting, specifically, a person tends to unconsciously create evidence to support his/her perceptions regarding HPWP. The implication from this psychological process is that the perception of HPWP is related to the extent of effects of the objective HPWP's influence on employee outcomes. For example, if the employee believes that the suggestion scheme is very well implemented and in fact the practice exists, he/she is more likely to use the practice and thus has better employee outcomes. In the same case of the employee having high evaluation of the practice but the organization actually ignores suggestions, the employee will try to raise suggestions but no suggestions will be taken. In contrast, if an employee believes that his/her organization's suggestion scheme is badly implemented or he/she is not aware of the existence of such a practice, the employee will not be likely to take the chance to voice his suggestions regardless of the existence or effectiveness of the suggestion scheme.

Thus, the relation between the objective HPWP and employee outcomes depends on employee perceptions of HPWP. In the case of low perception (i.e. employees believe that a practice is badly implemented or they are not aware of its existence), the relation will be weak. Conversely, in the case of high perception (i.e. employees believe that a practice is very well implemented), the relation will be stronger.

> *Hypothesis2: HPWP perceptions moderate the relation between the objective existence of HPWP and employee outcomes in such a way: the relation is weaker when HPWP perception is low.*

The Social Information Processing Perspective

The social information-processing perspective argues that individuals encode and interpret the information of risks, costs and benefits of a particular action, and subsequently determine an appropriate response based on their information (Salancik & Pfeffer, 1977, 1978). In this process, judging one's own situation accurately is central to improving the quality of decision making (Klein, 1989), and the quality of decision making is positively related to the effective achievement of desirable outcomes (Kirschenbaum, 1992).

In the context of HPWP, according to the social information processing theory, if a person's perception of HPWP is not consistent with the objective existence, he or she has less desired outcomes.

> *Hypothesis3: Employee outcomes will be better when perceptions of HPWP and objective existence of HPWP are consistent.*

METHOD

Sample and Data Collection Procedure

Data were collected from employees and HR managers of multiple organizations in China. A total number of 50 organizations participated in the study. They are from a wide variety of industries. 42.86% of them are from the manufacturing industry; 38.78% from the service industry; 8.16% from the construction industry; 2.04% from the mining industry and 8.16% from the other industries. There are two versions of the surveys: surveys for human resource managers and surveys for employees. The companies' human resource managers were contacted first and they were asked to provide a list of potential participants. The survey for the HR managers included questions regarding the existence of HPWP practices and firm performance. The survey for the employees included

measures of their perceptions regarding their companies' HPWP and their job satisfaction and self-reported job performance.

Surveys were numbered prior to distribution, so that it is possible to match the corresponding HR managers and employees. The HR manager of the companies distributed employee versions of surveys via the company's internal mail system. Employees returned their completed surveys directly to the research team. Around 8 to 16 employees from each organization participated in the study. The employees' average age fell into the category of 26-35, and 55% of them were male. In terms of employees' educational profile, 1.4% had no degree, 15.4% had high school diploma, 70.1% had bachelor's degree, and 12.6% had master's degree or above. On average, employees had worked for their organizations for 7-10 years.

Measures

Perceptions of HPWP

The practices this study investigates include employee advisory meeting, board-level employee representative, information sharing, employee stock ownership plans (i.e. ESOP), regular training programs, and suggestion scheme rewards. The study measured the employees' perceptions about HPWP by asking according to their knowledge whether there is such a practice in the organization. Then the respondents were asked to rate the HPWP on a scale from 1 (very ineffective) to 9 (very effective), if they think there is such a practice. They were allowed to respond that they are not sure if there is such a practice. In such a case, the responses would be regarded as missing data.

Objective existence of HPWP

The objective existence of HPWP was obtained from the survey of HR managers. They were asked "Have your organization implemented the following practices?". They were instructed to choose the practices that had been implemented. The options are "employee advisory committee", "employee stock ownership plans", "regular employee training programs", "board-level employee representative", "information sharing", and "suggestion scheme rewards". The effectiveness of HPWP implementation was not asked, because of HR managers' social desirability tendency and responses of existence are more objective.

Self-Rated Performance

The employee outcomes we investigated include self-rated performance and perceived pay standing. A performance intention scale used in Shaw et al. (2003) was adapted for the scale of self-rated performance. Respondents were asked to consider the effort they give to their jobs currently, and choose a response from 1 (we give 0%-20% of my effort) to 5 (we give 81%-100% of my effort).

Job Satisfaction

The respondents were asked to indicate how satisfied they were with their jobs, and choose from 1 (very dissatisfied) to 5 (very satisfied).

Control variables

We controlled for employee age, tenure, and gender. In terms of the measurement of employee age and tenure, employees were asked to choose from categories. The categories of age are: (1) 18-25; (2) 26-35; (3) 36-45; (4). 46-55; and (5). above 56. The categories of tenure are: (1) below 1 year; (2) 1-3 years; (3) 4-6 years; (4) 7-10 years; (5) 11-15 years; and (6) above 16 years.

Analytical strategy

Because the objective existence of HPWP is on organizational level and the perception regarding HPWP is on individual level, the appropriate analytical strategy for the two-level analysis is hierarchical linear modeling (HLM) (Raudenbush & Bryk, 2002). The HLM represents a hierarchical two-level model by two equations estimated simultaneously: the within-unit and the between-unit equations. Here, level 1 is of individual level and level 2 is of organizational level. There are 50 organization groups in level 2.

Hypothesis 1:

The AOM framework predicts that HPWP perceptions mediate the relationship between objective existence of HPWP and employee outcomes (Hypothesis 1). Let "*P*" denote HPWP perceptions, and "*E*" denotes the objective existence of the HPWP. To establish mediation effect, the following condition must hold: first, the independent variable (i.e.

existence of HPWP, "*E*") must affect the mediator (i.e. perceptions of HPWP, "*P*"); second, the independent variable (i.e. existence of HPWP, "*E*") must be shown to affect the dependent variable (i.e. employee outcomes); and third, the mediator (i.e. perceptions of HPWP, "*P*") must affect the dependent variable, employee outcomes, with the independent variable being included (Baron & Kenny, 1986). The whole set of equation tested for this hypothesis is:

Step1:
$$P = \beta0 + \beta1 * age + \beta2 * gender + \beta3 * tenure + r$$
$$\beta0 = \gamma00 + \gamma01 * E + u0$$
$$\beta1 = \gamma10 + \gamma11 * E + u1$$
$$\beta2 = \gamma20 + \gamma21 * E + u2$$
$$\beta3 = \gamma30 + \gamma31 * E + u3$$

Step 2:
$$Employee\_outcome = \beta0 + \beta1 * age + \beta2 * gender + \beta3 * tenure + r$$
$$\beta0 = \gamma00 + \gamma01 * E + u0$$
$$\beta1 = \gamma10 + \gamma11 * E + u1$$
$$\beta2 = \gamma20 + \gamma21 * E + u2$$
$$\beta3 = \gamma30 + \gamma31 * E + u3$$

Step 3:
$$Employee\_outcome = \beta0 + \beta1 * age + \beta2 * gender + \beta3 * tenure + \beta4 * P + r$$
$$\beta0 = \gamma00 + \gamma01 * E + u0$$
$$\beta1 = \gamma10 + \gamma11 * E + u1$$
$$\beta2 = \gamma20 + \gamma21 * E + u2$$
$$\beta3 = \gamma30 + \gamma31 * E + u3$$
$$\beta4 = \gamma40 + \gamma41 * E + u4$$

Hypothesis 2:

The self-fulfilling prophecy perspective predicts that HPWP moderates the relationship between objective existence of HPWP and employee outcomes (Hypothesis 2). Since in the above equations, we included *E* (the existence of HPWP) as moderators for age, gender, tenure, and perceptions of HPWP, the last equation in step 3 will show the interaction effect between the existence and perceptions of HPWP. Specifically, if *$\gamma41$* is statistically significant, Hypothesis 2 will be supported.

Hypothesis 3:

The social information processing perspective predicts that the fit between the objective existence and perceived existence of HPWP results in the most desired employee outcomes (Hypothesis 3). Since both of the variables are dummy variables and thus they already have the same scales, we will not use the polynomial regression approach to test this hypothesis. In order to test this hypothesis, we coded a new variable (*F* in the equation) to represent the fit. When perceptions of HPWP existence and objective HPWP existence are consistent, *F* is coded as 1, otherwise, it is coded as 0. The final equation is:

Step 4

$$Employee\_outcomes = \beta0 + \beta1 * age + \beta2 * gender + \beta3 * tenure + \beta4 * A + \beta5 * F + r$$

$$\beta0 = \gamma00 + \gamma01 * B + u0$$

$$\beta1 = \gamma10 + \gamma11 * B + u1$$

$$\beta2 = \gamma20 + \gamma21 * B + u2$$

$$\beta3 = \gamma30 + \gamma31 * B + u3$$

$$\beta4 = \gamma40 + \gamma41 * B + u4$$

$$\beta5 = \gamma50 + \gamma51 * B + u5$$

RESULTS

Descriptive statistics and correlations for all variables are shown in Table 1. Table 2-Table 3 replicate the tables shown by Budd (2006) and consistent with his results, the tables show that there exists a noticeable percentage of ignorance or false positive in terms of perceived HPWP.

TABLE 1: CORRELATIONS AND DESCRIPTIVE STATISTICS

	M	SD	N	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. Age	2.42	.88	579	1															
2. Gender	.55	.50	576	.07	1														
3. Tenure	4.14	1.58	576	.75**	.01	1													
4. Objective HPWP-staff representative meeting	.96	.187	579	.10*	.01	.14**													
5. Objective HPWP-board level representative	.49	.50	579	-.05	.04	-.07	.19**												
6. Objective HPWP-information sharing	.69	.46	579	.15**	.00	.11**	.29**	.09*											
7. Objective HPWP-ESOP	.24	.43	579	.04	.02	.08	.11**	.28**	-.05										
8. Objective HPWP-regular training program	.82	.39	579	-.08	-.02	-.19**	-.09*	-.04	.05	-.33**									
9. Objective HPWP-suggestion scheme rewards	.68	.47	579	.04	.03	-.10*	-.13**	.03	.30**	-.25**	.46**								
10. HPWP perceptions-staff representative meeting	2.75	1.48	575	.16**	-.11*	.26**	.34**	-.02	.05	.09*	-.16**	-.27**							
11. HPWP perceptions-board level representative	1.98	1.72	551	.04	-.14**	.12*	.21**	.24**	-.02	.07	.01	-.10*	.59**						
12. HPWP perceptions-information sharing	2.47	1.57	567	.08	-.11*	.26**	.24**	.02	.13**	.04	-.10*	-.15**	.71**	.61**					
13. HPWP perceptions-ESOP	1.21	1.77	549	.04	-.06	.09*	.14**	.07	-.10**	.65**	-.24**	-.35**	.35**	.30**	.28**				
14. HPWP perceptions-regular training program	3.00	1.33	574	.03	-.13**	.08	.00	-.08	-.04	-.03	.13**	-.02	.41**	.46**	.49**	.18**			
15. HPWP perceptions-suggestion scheme rewards	2.46	1.54	549	.03	-.12**	.09	.05	-.13**	-.02	-.16**	.03	.08	.45**	.44**	.50**	.02	.58**		
16. Employee performance	4.38	.68	575	-.01	-.15**	.05	-0.01	.02	.06	-.17**	.13**	.09*	.11*	.16*	.26**	-.15**	.14**	.19**	
17. Job satisfaction	3.33	.66	575	-.07	-.04	-.04	-.10*	-.02	.03	-.05	.07	.02	.23**	.33**	.32**	.06	.32**	.30**	.33**

Note. * Correlation is significant at the 0.01 level. ** Correlation is significant at the 0.05 level (2-tailed).

TABLE 2: EMPLOYEE-LEVEL COVERAGE, PERCEIVED COVERAGE, AND IGNORANCE RATES OF HPWP

HPWP Practices	Coverage (company reported) (1)	Perceived Coverage (employee reported) (2)	Mismatches		
			Overall (3)	Ignorance [a] (4)	False Positive [b] (5)
Staff representative meeting	0.96 [50]	0.831 [575]	0.049 [28]	0.047 [27]	0.002 [1]
Board-level employee representative	0.52 [50]	0.487 [551]	0.205 [113]	0.040 [22]	0.165 [91]
Information sharing	0.68 [50]	0.739 [567]	0.224 [127]	0.049 [28]	0.175 [99]
Employee stock ownership plan (ESOP)	0.24 [50]	0.311 [549]	0.144 [79]	0.022 [12]	0.122 [67]
Periodic training	0.82 [50]	0.891 [574]	0.172 [99]	0.029 [16]	0.145 [83]
Suggestion scheme rewards	0.70 [50]	0.675 [549]	0.248 [136]	0.064 [35]	0.184 [101]

Notes: This table replicated the Table 1 in the article by Budd (2006).
Sample sizes are in brackets.
a Employees who do not perceive that they are covered when their employer says they are; sample limited to covered employees.
b Employees who perceive that they are covered when their employer says they are not; sample limited to employees reporting that they are covered.

TABLE 3: EMPLOYEES THAT DON'T KNOW ABOUT HPWP

	Fraction of Negative Responses that are "Don't Know"
Staff representative meeting	8.52 % (49 / 575)
Board-level employee representative	26.86 % (148 / 551)
Information sharing	11.99 % (68 / 567)
Employee stock ownership plan (ESOP)	13.66 % (75 / 549)
Periodic training	5.57 % (32 / 574)
Suggestion scheme rewards	16.58 % (91/549)
Collective bargaining	24.78 % (138/557)

Note: This table replicated the Table 2 in the article by Budd (2006).

Table 2- Table 7 show the HLM results for all hypotheses. The results from Step 1, Step 2 and Step 3 are related to Hypothesis 1, the result from Step 3 is related to the testing of Hypothesis 2, and Step 4 is for Hypothesis 3. Observations with missing values for either dependent variables or independent variables were eliminated in analyses so the sample size in the HLM analyses is reduced to 579 and the number of level 2 groups is 50.

TABLE 4: **EMPLOYEE ADVISORY COMMITTEE**

DV	Perceptions of Employee Advisory Committee		Self-Rated Performance					
	Step 1 Coefficient	P-Value	Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	1.94	0.20	4.36	.00	3.92	.00	N/A	
γ_{01}	.57	.71	.01	.98	.24	.79		
u0		.00		.15		.03		
b1	.23	0.67	.09	.76	.20	.49		
γ_{11}	-.37	.50	-.25	.37	-.38	.22		
u1		.06		>.50		.13		
b2	-.96	0.28	-.23	.63	.06	.90		
γ_{21}	1.18	.19	.21	.67	-.09	.86		
u2		.00		.05		.12		
b3	-0.00	1.00	.15	.42	.08	.66		
γ_{31}	-.07	.86	-.11	.56	-.03	.88		
u3		.02		>.50		.34		
b4					.11	.68		
γ_{41}					-.05	.85		
U4						.02		
b5								
γ_{51}								
u5								
DV	Perceptions of Employee Advisory Committee		Job Satisfaction					
	Step 1 Coefficient	P-Value	Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	1.94	0.20	4.16	.00	3.69	.00	N/A	
γ_{01}	.57	.71	-.83	.27	-.82	.34		
u0		.00		.39		.03		
b1	.23	0.67	-.09	.79	-.12	.72		
γ_{11}	-.37	.50	.13	.70	.20	.55		
u1		.06		.00		.04		
b2	-.96	0.28	-.37	.40	-.14	.78		
γ_{21}	1.18	.19	.34	.43	.11	.83		
u2		.00		>.50		>.50		
b3	-0.00	1.00	.09	.64	.10	.60		
γ_{31}	-.07	.86	-.08	.68	-.09	.64		
u3		.02		.40		.14		
b4					.24	.31		
γ_{41}					-.07	.77		
u4						.10		
b5								
γ_{51}								
u5								

Note. Degree of freedom for regression coefficients= 48; Degree of freedom for variance components=46
Step 4 results cannot be converged due to the high consistency between the objective existence of HPWP and HPWP perceptions

TABLE 5: BOARD-LEVEL EMPLOYEE REPRESENTATIVE

DV	*Perceptions of Board-Level Employee Representative*		*Self-Rated Performance*					
	Step 1 Coefficient	P-Value	Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	1.58	.00	4.42	.00	4.32	.00	4.30	.00
γ01	.81	.28	-.22	.34	-1.02	.03	-.98	.03
u0		.00		.17		.08		.24
b1	-.32	.12	-.16	.00	-.15	.00	-.14	.00
γ11	-.00	1.00	.05	.73	.23	.09	.21	.14
u1		.00		>.50		>.50		.16
b2	-.05	.70	-.02	.73	.01	.88	.02	.66
γ21	-.21	.49	-.20	.23	-.02	.89	-.06	.75
u2		.05		.06		.12		.00
b3	.14	.09	.04	.15	.03	.30	.03	.42
γ31	-.01	.96	.09	.18	.08	.30	.09	.23
u3		.02		>.50		.25		.01
b4					.00	.92	.01	.55
γ41					.17	.01	.18	.00
u4						.07		.06
b5							.02	.89
γ51							.03	.92
u5								.00
DV	*Perceptions of Board-Level Employee Representative*		*Job Satisfaction*					
	Step 1 Coefficient	P-Value	Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	1.58	.00	3.35	.00	3.14	.00	3.16	.00
γ01	.81	.28	.02	.93	-.62	.50	-.80	.01
u0		.00		.33		.01		.06
b1	-.32	.12	.01	.91	.06	.45	.03	.67
γ11	-.00	1.00	.11	.48	.18	.28	.23	.13
u1		.00		.00		.00		.04
b2	-.05	.70	-.02	.65	.02	.70	.03	.61
γ21	-.21	.49	-.02	.87	.07	.47	-.01	.94
u2		.05		>.50		.31		.17
b3	.14	.09	.02	.64	-.01	.75	-.02	.68
γ31	-.01	.96	-.03	.71	-.01	.89	.04	.63
u3		.02		.40		.16		.06
b4					.10	.00	.10	.00
γ41					.10	.04	.14	.01
u4						>.50		.20
b5							-.03	.77
γ51							.18	.44
u5								.11

Note. Degree of freedom for regression coefficients= 48; Degree of freedom for variance components=46

TABLE 6: INFORMATION SHARING

DV	Perceptions of Information Sharing Step 1 Coefficient	P-Value	Self-Rated Performance Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	1.93	.00	3.98	.00	3.58	.00	3.54	.00
γ01	.16	.73	.46	.03	.62	.02	.68	.03
u0		.00		.22		>.50		.00
b1	-.09	.79	-.08	.52	-.03	.79	-.05	.71
γ11	-.03	.93	-.10	.43	-.12	.38	-.11	.41
u1		.00		>.50		>.50		>.50
b2	-.28	.28	.00	.99	.01	.95	.01	.96
γ21	.15	.61	-.04	.64	-.06	.60	-.07	.55
u2		.04		.05		.47		.00
b3	.34	.02	.06	.22	.08	.29	.08	.25
γ31	-.20	.20	-.01	.87	-.03	.66	-.03	.65
u3		>.50		>.50		>.50		.00
b4					.09	.10	.10	.08
γ41					.02	.71	.02	.80
u4						>.50		.00
b5							.05	.72
γ51							-.13	.41
u5								.00

DV	Perceptions of Information Sharing Step 1 Coefficient	P-Value	Job Satisfaction Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	1.93	.00	3.16	.00	2.67	.00	2.51	.00
γ01	.16	.73	.22	.51	.44	.20	.62	.10
u0		.00		.35		.16		>.50
b1	-.09	.79	.00	1.00	-.03	.77	-.06	.54
γ11	-.03	.93	.05	.84	.08	.51	.10	.36
u1		.00		.00		.05		.21
b2	-.28	.28	-.02	.81	.01	.78	.02	.67
γ21	.15	.61	-.00	.96	-.03	.62	-.05	.43
u2		.04		>.50		>.50		>.50
b3	.34	.02	.03	.62	-.01	.93	.01	.92
γ31	-.20	.20	-.03	.69	.00	.98	-.01	.93
u3		>.50		.42		>.50		.17
b41					.24	.00	.23	.01
γ41					-.11	.13	-.10	.27
u4						.03		.00
b5							.24	.02
γ51							-.28	.05
u5								.08

Note. Degree of freedom for regression coefficients= 48; Degree of freedom for variance components=46

TABLE 7: EMPLOYEE STOCK OWNERSHIP PLANS (ESOP)

DV	Perceptions of ESOP Step 1 Coefficient	P-Value	Self-Rated Performance Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	1.07	.00	4.40	.00	4.32	.00	4.34	.00
$\gamma 01$	.77	.13	-.03	.87	.28	.16	.20	.34
u0		.00		.14		.00		.00
b1	.12	.38	-.09	.18	-.06	.42	-.06	.42
$\gamma 11$	-.12	.53	-.13	.17	-.17	.14	-.18	.14
u1		.40		>.50		.02		.00
b2	-.03	.76	-.07	.15	-.09	.09	-.08	.15
$\gamma 21$	-.16	.24	.08	.43	.05	.64	.07	.55
u2		>.50		.05		.22		.31
b3	-.01	.88	.05	.16	.08	.00	.07	.02
$\gamma 31$	-.04	.66	-.02	.77	-.06	.23	-.06	.26
u3		.21		>.05		>.50		.36
b4					-.03	.37	-.05	.28
$\gamma 41$					-.04	.54	-.01	.82
u4						.01		.20
b5							.01	.95
$\gamma 51$							.06	.39
u5								.28

DV	Perceptions of ESOP Step 1 Coefficient	P-Value	Job Satisfaction Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	1.07	.00	3.43	.00	3.36	.00	3.37	.00
$\gamma 01$	.77	.13	-.14	.44	-.25	.21	-.28	.16
u0		.00		.36		.02		.04
b1	.12	.38	.03	.75	.00	.97	.02	.85
$\gamma 11$	-.12	.53	.02	.90	.01	.95	-.02	.88
u1		.40		.00		.00		.01
b2	-.03	.76	-.02	.76	-.02	.75	-.03	.66
$\gamma 21$	-.16	.24	-.02	.84	.05	.52	.07	.37
u2		>.50		>.50		>.50		.22
b3	-.01	.88	-.01	.77	.01	.78	.02	.70
$\gamma 31$	-.04	.66	.04	.54	.01	.93	-.00	.97
u3		.21		.40		>.50		.55
b4					.03	.38	.05	.25
$\gamma 41$					.04	.45	.01	.86
u4						.03		.09
b5							-.05	.78
$\gamma 51$							.15	.52
u5								.05

Note. Degree of freedom for regression coefficients= 48; Degree of freedom for variance components=46

TABLE 8: REGULAR TRAINING PROGRAMS

DV	Perceptions of Regular Training Programs		Self-Rated Performance					
	Step 1		Step 2		Step 3		Step 4	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
b0	3.16	.00	4.10	.00	4.05	.00	4.07	.00
$\gamma 01$	-.04	.34	.41	.03	.23	.38	.20	.44
u0		.03		.21		.01		.03
b1	-.16	.38	-.26	.02	-.28	.03	-.28	.03
$\gamma 11$	.01	.96	.15	.21	.20	.14	.21	.13
u1		.00		>.50		.08		>.50
b2	-.05	.79	.17	.07	.20	.07	.19	.10
$\gamma 21$	.06	.79	-.26	.02	-.29	.02	-.27	.04
u2		.43		.10		.00		>.50
b3	.03	.81	-.00	.99	.00	.97	.01	.87
$\gamma 31$	.02	.89	.05	.37	.05	.37	.04	.55
u3		.08		>.50		.05		>.50
b4					.01	.92	.01	.90
$\gamma 41$					.06	.32	.07	.33
u4						.00		.14
b5							-.06	.69
$\gamma 51$							.08	.64
u5								.27
DV	Perceptions of Regular Training Programs		Job Satisfaction					
	Step 1		Step 2		Step 3		Step 4	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
b0	3.16	.00	3.25	.00	2.83	.00	2.78	.00
$\gamma 01$	-.04	.34	.16	.39	.14	.63	.19	.51
u0		.03		.32		.06		.10
b1	-.16	.38	.07	.45	.10	.25	.10	.23
$\gamma 11$	.01	.96	-.05	.69	-.04	.72	-.04	.71
u1		.00		.00		.27		.05
b2	-.05	.79	.04	.60	.05	.61	.04	.60
$\gamma 21$	.06	.79	-.09	.34	-.11	.28	-.10	.32
u2		.43		>.50		.44		>.50
b3	.03	.81	-.02	.77	-.03	.60	-.02	.68
$\gamma 31$	.02	.89	.03	.64	.05	.43	.03	.55
u3		.08		.40		>.50		.19
b4					.14	.01	.16	.00
$\gamma 41$					-.00	.96	-.02	.74
u4						.03		.20
b5							.05	.75
$\gamma 51$							-.11	.59
u5								>.50

Note. Degree of freedom for regression coefficients= 48; Degree of freedom for variance components=46

TABLE 9: SUGGESTION SCHEME REWARDS

DV	Perceptions of Suggestion Scheme Rewards		Self-Rated Performance					
	Step 1 Coefficient	P-Value	Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	2.82	.00	4.15	.00	3.73	.00	4.08	.00
$\gamma01$	-.48	.44	.31	.12	.65	.03	.28	.36
u0		.00		.21		>.50		>.50
b1	-.30	.12	-.29	.02	-.61	.32	-.19	.24
$\gamma11$	.18	.44	.19	.15	.07	.70	.09	.58
u1		.34		>.50		>.50		>.50
b2	-.04	.82	.10	.29	.13	.29	.15	.21
$\gamma21$	.05	.84	.19	.09	-.23	.10	-.25	.07
u2		>.50		.10		.38		>.50
b3	-.02	.93	.01	.75	.02	.77	-.01	.87
$\gamma31$	.03	.87	.04	.42	.04	.56	.07	.34
u3		.08		>.50		>.50		.31
b4					.09	.01	.16	.01
$\gamma41$					-.05	.29	-.10	.13
u4						>.50		.08
b5							-.46	.13
$\gamma51$							.47	.16
u5								.10
DV	Perceptions of Suggestion Scheme Rewards		Job Satisfaction					
	Step 1 Coefficient	P-Value	Step 2 Coefficient	P-Value	Step 3 Coefficient	P-Value	Step 4 Coefficient	P-Value
b0	2.82	.00	3.32	.00	2.48	.00	2.74	.00
$\gamma01$	-.48	.44	.06	.80	.61	.03	.17	.57
u0		.00		.32		.00		.09
b1	-.30	.12	-.00	.97	.19	.09	.18	.08
$\gamma11$	.18	.44	.06	.70	-.12	.34	-.10	.43
u1		.34		.00		.00		>.50
b2	-.04	.82	.03	.69	.10	.15	.10	.13
$\gamma21$	.05	.84	-.08	.36	-.13	.13	-.14	.11
u2		>.50		>.50		.28		>.50
b3	-.02	.93	-.01	.80	-.02	.65	-.04	.38
$\gamma31$	.03	.87	.03	.62	.04	.47	.06	.28
u3		.08		.47		.21		.19
b4					.22	.00	.28	.00
$\gamma41$					-.12	.02	.12	.07
u4						.01		.23
b5							-.40	.08
$\gamma51$							.72	.01
u5								>.50

Note. Degree of freedom for regression coefficients= 48; Degree of freedom for variance components=46

Step 1, step 2 and step 3 are the test results of the mediation effect (Hypothesis 1). The results showed that the mediation effect is not supported because in most of the regressions, the objective existence of HPWP is not related to the HPWP perceptions: this is shown in Step 1, *γ01*

is almost always not significant. However, as shown in the Step 3 ($\gamma01$), the objective existence of HPWP is related to employee outcomes for "board level representatives," "information sharing," and "suggestion scheme rewards." And the HPWP perceptions are related to employee outcomes (Step 3, $b4$) for "board level representative," "information sharing," "regular training programs" and "suggestion scheme rewards." The result of Step 3 ($\gamma41$) shows that the moderation effect (Hypothesis 2) is supported for "board level representatives," "information sharing" and "suggestion scheme rewards. The result of Step 4 ($b5$) shows that Hypothesis 3 is supported for "information sharing" and "suggestion scheme rewards."

DISCUSSION

Theoretical Implication

The results of this study provide important insights into the high performance work practices and demonstrate the interesting role of employee perceptions regarding the relation of HPWP-employee outcomes in the workplace.

In this study, Hypothesis 1 which states that HPWP perceptions mediate the objective existence of HPWP-employee outcomes relation was not supported.

Hypothesis 2, moderation effect of the HPWP perceptions in the objective HPWP-employee outcomes relation, received strong support for three related HPWPs: "board-level employee representative," "information sharing" and "suggestion scheme rewards." All of these three HPWPs are relevant to employee participation practices. As suggested by the self-prophecy theory, when employees evaluated HPWPs implementation highly, there is stronger relation between the objective existence of HPWP and employee outcomes. But it is not supported for the other HPWPs such as "regular training program," "ESOP" and "staff meeting."

The prediction from the information processing perspective (Hypothesis 3), i.e. the misfit between objective and perceived HPWP results in less desired employee outcomes, received mixed support. The results of "information sharing" and "suggestion scheme rewards" yielded somewhat strong support for this hypothesis, while the results of other HPWPs, provided no support for this prediction.

Practical Implication

The results of this study have many practical implications. In particular, we provided a nuanced picture of the HPWP-employee outcomes relation: employee perceptions regarding HPWP matter for HPWP to be effective. With the actual existence of HPWP being held constant, there

is an optimal level of HPWP perceptions in terms of maximizing HPWP's outcomes. Attempts to enhance employee perceptions to HPWP, especially those related to decision participation produce more desired results. On the other hand, attempts to adjust employee perceptions regarding the decision participation practices to the actual implementation of these practices may make them more effective. These two conclusions are complement rather than exclusive to each other, although the hypotheses were derived from different theories.

Limitations and Future Research Direction

Several limitations exist in this research. The human resource managers were just asked about the existence of the HPWP rather than how much effort they devote into the practices. However, due to the reason of social desirability, simple answers to existence of HPWP would be more objective. Another limitation is that, in this study, we only investigated self-report employee performance. But this measure seems to have satisfactory validity since it is positively related to the objective measure of "regular training program" and all other decision participation programs. The measures for these items were obtained from the HR managers and hence the significant positive relation between them proved the scale's validity to some extent. However, future studies with supervisor-rated performance or performance evaluation from other resources are encouraged. Finally, only two employee outcomes were studied. We therefore encourage future research to include more employee outcome variables such as commitment and organizational citizenship behavior in the further investigation of this topic.

Conclusion

The most important contribution of this paper is that we compared three alternative theoretical perspectives that provide insights into the same topic and empirically tested the predictions derived from them. The results lent most support to self-prophecy theory, little support to the MOA theory, and partial support to the social information processing theory. Also, the validity of these theories is different when they are applied to different types of HPWP. The employee participation practices including "information sharing" and "suggestion scheme rewards" are most consistent with the theories. The results thus offered a nuanced picture of the effects of objective existence of HPWP and HPWP perceptions on employee outcomes and make substantive theoretical clarification in the area of HPWP.

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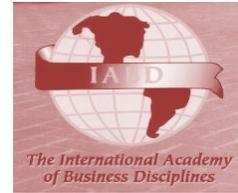
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