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# Hypothetical Analysis of Employees' Work Performance based on HPHRP

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## Abstract

Through the questionnaire survey of 400 employees and their leaders in 87 enterprises, the influence of high performance human resource practices (HPHRP) on employees' work performance is verified. The research results show that HPHRP imposes significant positive impacts on employees' competency, in-role performance and organizational citizenship behavior (OCB). By designing and compiling HPHRP that conforms to development strategy and management status, enterprises can effectively improve employees' competency, affect and improve their work performance, and finally improve enterprises' organizational performance and continuous competitive advantages.

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*Keywords:* HPHRP; In-role performance; Organizational citizenship behavior; Competency

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HPHRP refers to the human resource management practices that manage, motivate and mobilize employees by organizations, including post placement, training, internal turnover, job safety, job description, objective evaluation, incentive pay, wide participation and other contents, which coordinate and influence with each other and make contributions to the high-performance and continuous competitive advantages of organizations. Under this background, this paper further discusses the influence of HPHRP on employees' work performance through the proposal of theoretical hypothesis.

## 1. Theory and hypothesis

### 1.1. Influence of HPHRP on employees' work performance

According to the opinions of foreign scholars, including Williams and Organ, the employees' work performance mainly consists of in-role performance and organizational citizenship behavior (OCB), in which the in-role performance refers to 'code of conduct approved by the formal pay system and embodied in post requirements and rules and regulations', and OCB refers to 'the active voluntary behavior of individuals'. At present, the existing research results show that HPHRP is of positive correlation with employees' in-role performance, service performance and OCB. Given this, this research predicts that HPHRP of enterprises in China is of positive correlation with employees' in-role performance and OCB. Competency is the work-related knowledge, skills or abilities of an individual. Therefore, the following hypotheses are proposed:

Hypothesis 1: HPHRP is of positive correlation with employees' in-role performance.

Hypothesis 2: HPHRP is of positive correlation with employees' OCB.

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Hypothesis 3: HPHRP is of positive correlation with employees' competency.

## 2. Research design

### 2.1. Research sample and sampling procedure

There are 400 HPHRP Questionnaires in this research, in which 396 questionnaires are successfully withdrawn. After removing the invalid questionnaires and unmatched questionnaires, the research samples are basically in line with the expectations. Among the 400 respondents who come from different enterprises, the male respondents account for 80%, with an average age of 30.12.

### 2.2. Variable measurement

The design of HPHRP Questionnaire mainly includes: in-role performance, OCB and competency. The variable measurement adopts likert 5-point scale, in which 1-5 represent 'strongly disagreed' to 'strongly agreed' respectively.

(1) The measurement of HPHRP measurement takes example from the scale developed by SUN (its Cronbach's  $\alpha$  is 0.912). The scale consists of employees' post placement, training, internal turnover, job safety, job description, objective evaluation, incentive pay, and wide participation and includes 27 options.

(2) The variable of competency is measured with the scale developed by PODSAKOFF (its Cronbach's  $\alpha$  is 0.706) and employees' competency is evaluated by themselves. The scale includes two options: 'my working skills and abilities and I'm very competent'.

(3) The variable of in-role performance is measured with the scale developed by WIL-LIAMS (its Cronbach's  $\alpha$  is 0.856), which includes 5 items of positive scores. The employees' in-role performance is evaluated by their immediate leader.

(4) The variable of OCB is measured with the scale developed by TURNLEY (its Cronbach's  $\alpha$  is 0.938), which includes 2 subscales. Such subscales are used to measure the 2 dimensions of OCB: organizational citizenship behavior organization (OCBO) and organization citizenship behavior individual (OCBI). The employees' in-role performance is evaluated by their immediate leader.

(5) The control variable in this research includes: sex, age and education background. For sex, '1' means male and '2' means female; for education background, '1' means primary school, '2' means middle school, '3' means high school or secondary specialized school, '4' means junior college, '5' means undergraduate and '6' means postgraduate.

### 2.3. Statistical analysis

The data processing in this research adopts SPSS 19.0 and LISREL 8.70 for statistical analysis. The specific statistical analysis includes: Questionnaire reliability and validity analysis; Descriptive statistics and relevant analysis; Hierarchical regression analysis to study the relation of competency in HPHRP and employees' in-role performance and OCB.

## 3. Data analysis and results

### 3.1. Descriptive statistics of research variables

The mean, standard deviation and relevant coefficient of all research variables and control variables in this research are shown in table 1. It can be seen from table 1 that the Cronbach's  $\alpha$  of the measurement scale of all research variables meets the standard requirements of less than 0.70. HPHRP is of significant positive correlation with employees competency ( $r=0.182$ ,  $p < 0.05$ ), in-role performance ( $r=0.173$ ,  $p < 0.05$ ) and OCB. The employees competency is of significant positive correlation with their in-role performance ( $r=0.204$ ,  $p < 0.01$ ) and OCB ( $r=0.216$ ,  $p < 0.01$ ). These analysis results preliminarily support the hypothesis 1-3. This research will further verify the hypotheses in this research with a series of structural equation and hierarchical regression analysis.

Table 1. Mean, standard deviation and relevant coefficient of research variable

Variable	Mean	Standard deviation	1	2	3	4	5	6	7
1.Sex	1.67	0.47	1						
2.Age	30.12	7.74	-0.059	1					

3.Education background	5.03	0.49	0.047	-0.332*	1			
4.Human resource practices	3.47	0.57	-0.126	0.033	-0.088	1		
5.Competency	4.27	0.53	-0.103	-0.056	0.059	0.182*	1	
6.In-role performance	4.12	0.55	0.003	-0.131	0.106	0.173*	0.204	1
7.OCB	4.55	1.09	-0.110	-0.094	0.106	0.212**	0.216	0.576* 1

Note: \*\* and \* mean  $\rho < 0.01$  and  $\rho < 0.05$  (two-tailed test), same below.

### 3.2. Validity analysis of questionnaire

Before verifying the research hypothesis, this research adopts LIS-REL 8.70 statistical analysis software and the biggest approximate estimation and verifies the construct validity of HPHRP, competency, in-role performance and OCB with CFA. Model 1 is the 4-factor (HPHRP, competency, in-role performance and OCB) model and its fitting index is shown in table 2. It can be seen from table 2 that this model better fits the survey data.

Table 2. CFA results of measurement model

Measurement model	$\chi^2$	df	CFI	NNFI	SRMR	RMSEA
Model 1: 4-factor model	117.47	60	0.90	0.95	0.063	0.072
Model 2: 1-factor model	409.22	65	0.73	0.67	0.13	0.169

In table 2, the fitting index of model 2 (the 4 factors are regarded as 1 factor) shows that the fitting of 1-factor model and survey data is poor. The above results comprehensively verify the validity and good quality of 4-variable measurement scale in this research.

## 4. Conclusion and analysis

This research proposes hypotheses mainly according to the influence of HPHRP on employees' work performance and verifies such hypotheses with theoretical model, finally two effective conclusions are made: ① HPHRP will effectively affect employees' work performance, so more attention should be paid to employees' attitude and behaviors and proper performance tracking and evaluation mechanism should be established; ② the research results show that HPHRP can effectively affect the employees' competency and the management performance can be better realized by improving employees' competency.

## References

- [1] SUN.L.Y, ARYEE.S Lawks. High-Performance Human Resource Practices, Citizenship Behavior, and Organizational Performance: A Relational Perspective [J]. *Academy of Management Journal*, 2007, 50 (3):558-577.
- [2] PODSAKOFF N P, WHIGING S W, PODSAKOFF P M, et al. Effects of Organizational Citizenship Behaviors on Selection Decisions in Employment Inter-views [J]. *Journal of Applied Psychology*, 2011, 96: 310-326 [3] Quintiere, James G. 2006. *Fundamentals of Fire Phenomena*, John Wiley & Sons, Ltd, Chichester, U. K .
- [3] WILLIAMS L J, ANDERSON S E. Job Satisfaction and Organizational Commitment as Predictors of Organizational Citizenship and in-Role Behaviors [J]. *Journal of Management*, 1991, 17(3) : 601-617.
- [4] TURNLEY W H, BOLINO M C, LESTER S W, et al. The Impact of Psychological Contract Fulfillment on the Performance of in-Role and Organizational Citizenship Behaviors [J], *Journal of Management*, 2003, 29 (2) : 187-206.
- [5] Wright, P.M., McMahan, G.C. Theoretical Perspectives for Strategic Human Resource Management [J]. *Journal of Management*, 1992, 18(2):295-320.
- [6] Becker, B. E., Huselid. M.A. Strategic Human Resources Management: Where do We Go from Here [J]. *Journal of management*, 2006,32(6): 898-925.
- [7] Kirca, A. H., Jayachandran, S., Bearden, W. O.. Market Orientation: A Meta-analytic Review and Assessment of its Antecedents and Impact on Performance [J]. *The Journal of Marketing*, 2005, 69(2):24-41.
- [8] Wright P. M., Dunford, B. B., Snell S. A.. Human Resources and the Resource Based View of the Firm [J]. *Journal of Management*, 2001, 27(6):701-721.
- [9] Guest, D. E..Human Resource Management: When Research Confronts Theory [J]. *The International Journal of Human Resource Management*, 2001, 12(7):1092-1106.

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