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Research on Person-Organization Fit Evaluation for Enterprise manager

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Abstract: This article identified an evaluation index system of person-organization fit for enterprise manager on the basis of investigation and data analysis. And then we applied the Analytic Hierarchy Process, comprehensive index, clustering analysis and other comprehensive evaluation methods to evaluate and analyze a particular enterprise's managers on person-organization fit

Keywords: enterprise manager, person-organization fit, evaluation index system, evaluation methodology

1. INTRODUCTION

Person-organization (P-O) fit is a topic that has attracted the attention of both scholars and managers during the recent years. In essence, research on P-O fit concerns the antecedents and consequences of compatibility between people and the organizations in which they work (Kristof,1996)^[1]. P-O fit be valued, part of the reason is from the speed of change in the nature of work will lead to work duties change. Simply to seek work adaptation has couldn't cope with the predicament for adapting work transfer or re-learn after work content changed, so organizations pay more attention and seek to the employees fit with organization. In human resource management practices, not only to examine if individual capabilities fit with job requirements, more important is to consider individual characteristics(values, goals, personality ,attitude) whether fit with organizational characteristics(culture, climate, values, goals, norms). P-O fit produces an important influence on the decisions of individual work choice or organization staff recruitment and some long-term outcome variables, such as working attitude, job satisfaction, organizational commitment, quit intention and separation, flow, working performance and organizational performance, etc. As an important part of the organization, the performance of manager is directly related to the organization success, and then the scientific and reasonable evaluation of manager P-O fit condition is especially important. The purpose of this article is based on the investigation and study, to construct enterprise manager P-O fit evaluation index system, and determine a comprehensive evaluation method.

2. CONSTRUCTION OF P-O FIT EVALUATION INDEX SYSTEM OF MANAGER

Many scholars have broadly defined the P-O fit as compatibility between individuals and organizations. P-O fit evaluation is for the compatibility between staff and their organizations, refers to using mathematical statistics and operational research theory, using specific evaluation index system and uniform standards, according to certain programs, through qualitative and quantitative comparative analysis, we can make an objective, impartial and accurate comprehensive judgment for the compatibility between staff and their organizations in period of time.

2.1 Content of P-O fit evaluation index system of manager

As a complicated and multidimensional concept, P-O fit could be defined as three sets of concept and operation: (1)putting P-O fit into one dimension model, which includes single or two specific content and criteria, e.g. , define P-O fit as supplementary fit(e.g.,Chatman,1989,1991), complementary fit, needs-supplies

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and demands-abilities. Nowadays supplementary fit is used most to define P-O fit. Single standard is often used in the one dimension model, e.g., supplementary fit contains some single standards such as the congruence of values, the similarity of goals and so on, and demands-abilities fit uses KSAs indicators. What's more , supplementary fit uses values and personality criteria or values and goals.(2) putting P-O fit into two dimensions , which are the supplementary fit and complementary fit (e.g., Muchinsky & Monahan,1987; Kristof,1996;Lauver & Kristof-Brown,2001;Kristof-Brown,2000;etc).(3)putting P-O fit into three dimensions (e.g., Cable & DeRue,2002; Tomoki Sekiguchi,2004; Chen Zhiyuan,2004), those are supplementary fit, needs-supplies and demands-abilities. It divides complementary fit into needs-supplies and demands-abilities^[2].

This article will be based on an influential P-O fit concept model proposed by Kristof (1996), applying two dimension model both supplementary and complementary fit to explore P-O fit evaluation indicator system of enterprise manager. Kristof argued that supplementary fit occurs when a person's characteristics are similar to an organization. The characteristics of organizational include culture, climate, values, goals, and norms, individual characteristics include values, goals, personality and attitude, etc. In addition, complementary fit contains two types: organizations provide financial, physical and psychological resources, as well as the task-related, interpersonal, and growth opportunities that are demanded by employees. Similarly, organizations demand contributions from their employees in terms of time, effort, commitment, knowledge, skills, and abilities^[3].

In the pre-study, we took 122 employees of different enterprises to finished questionnaire survey, through the factor analysis, reliability and validity test, seven components were exacted which under two dimensions of P-O fit, including organizational value, organizational cultural atmosphere, goals, job attitude and personality within supplementary fit, Complementary fit include two indexes: demands - abilities and resources - opportunity^[3]. Based on this result and the compatible characteristic between manager and organization, we determined 15 specific indicators underlying 7 indicators through the primary data analysis, expert investigation and the staff questionnaire. (See Table 1)

Table 1. The P-O fit evaluation index system of manager

General goal	Secondary index	Third index	Fourth index
P-O fit A	Supplementary fit B ₁	Personality C ₁	Responsibility D ₁
			Self-control D ₂
		Value C ₂	Enterprise mission D ₃
			Management concept D ₄
		Culture C ₃	Participatory D ₅
			Consistency D ₆
			Adaptability D ₇
		Goal C ₄	Management goal D ₈
			Market goal D ₉
		Attitude C ₅	Implementation D ₁₀
	Cooperation D ₁₁		
	Complementary fit B ₂	Demands-abilities C ₆	Operational skill D ₁₂
			Human skill D ₁₃
			Experience and Knowledge D ₁₄
		Resources-opportunity C ₇	Management satisfaction D ₁₅
			Development opportunity D ₁₆

2.2 Analysis of P-O fit evaluation index system of manager

By combining above-mentioned evaluation indicators, 43 items were compiled with 5-point Likert scale ranging from 1-strongly disagrees to 5-strongly agree. The questionnaire was designed to measure subjective fit from employee's point, which directly asks subjects whether they consider their own characteristics fit those organizational characteristics. For example, "I believe my participation can have a positive impact for development of the company." In the pre-study, we took 100 managers from different enterprises and got 90 valid questionnaires finally.

First, Cronbach's alpha consistency coefficient was used to inspect the reliability of questionnaire and index, and then used product-moment correlation coefficient as a distinction index to filter indicators and items. Through the SPSS 16.0 software, in the initial measurement overall coefficient of enterprises manager P-O fit evaluation was 0.975, sub-dimensions of coefficients respectively were 0.966 and 0.935, the questionnaire's reliability was very good. Similarly, the 16 indicators were used reliability testing, coefficient could be retained 0.75 or above. Then, 0.5 as the boundaries of statistical analysis, the correlation analysis was used to select the evaluation indicators and items, among 16 evaluation indicators, all of the indicators were between 0.589 ~ 0.831. Just items 1, 12, their correlation coefficient with total score less than 0.5, correlation is relatively low, so it is deleted. Finally, we determined 16 indicators and 41 items for the P-O fit evaluation of enterprise manager.

3. COMPREHENSIVE EVALUATION METHOD OF P-O FIT FOR MANAGER

This article will apply AHP and comprehensive index method to finish comprehensive evaluation layer by layer, and use cluster analytic method to divide grade. These methods are combined together to evaluate the enterprise P-O fit.

3.1 Analytic Hierarchy Process (AHP)

3.1.1 Construction of P-O fit hierarchical analysis structure model

Through the analysis of the influence factor on P-O fit, and considering the operation of evaluation and the availability and authority of the data, this article will form the P-O fit evaluation model of manager into 4 levels; each one has its relations. (Table 1)

3.1.2 Building the judgment matrix

The basic of AHP is to judge the relative importance of the indicators in all levels, which can be expressed by numerical value through inducting suitable scale. In order to quantify the decision-making in AHP, the 1-9 scaling method proposed by Saaty is often quoted^[4].

3.1.3 Single-level sorting and consistency test

Single-level sorting is according to the established pair wise comparison matrix, use the square-root method to determine the maximum eigenvalue matrix and eigenvectors, finally reached a level of factors are at a level of a factor in the relative importance weights.

$$BW = \lambda_{max} \times W \quad (1)$$

As shown in equation (1) λ_{max} for judging the matrix B , the largest eigenvalue, W is the largest eigenvalue λ_{max} corresponds to the regularization of feature vectors, while the W is the weight of the corresponding elements in a single W_i sort weights.^[5]In order to test the consistency of the matrix, the consistency index calculated according to its definition of CI , $CI = (\lambda_{max} - n) / (n - 1)$, obviously, when the judgment matrix is entirely consistency, $CI = 0$. $\lambda_{max} - n$ and CI and the consistency of the matrix. To test whether the satisfactory judgment matrix, need to be consistency with the CI consistency index comparison. The rate of CI and RI is the consistency ratio, that is $CR = CI / RI$ 'when CR is less than 0.1 'the judgment matrix has the satisfied consistency, otherwise we need to adjust the judgment matrix.

3.1.4 Overall-level sorting and consistency test

Although the decision-making system at all levels has been carried out the consistency test for Single-level sorting, the overall-level sorting also required, as a single order from on high to the low-level step by step in consistency test.

3.2 Comprehensive index method

Comprehensive index method is determined in a reasonable evaluation index system, on the basis of individual index, calculating the weighted average index evaluation value of evaluation objects, the comprehensive evaluation method of analysis. It's a group of same or different values through statistical processing, make different measurement unit, nature, and finally index standardization is transformed into a comprehensive index, the comprehensive evaluation to accurately. The basic idea is calculated using the AHP and fuzzy evaluation method of weighting of numerical on multiplicative, then add, finally calculated the comprehensive evaluation index of evaluation indexes. The general evaluation model is as follows:

$$M = W_i \times S_i \quad \sim 2 \sim$$

As shown in equation (2), M indicated that the appraisal goal's quality comprehensive evaluation value, W_i is the i th evaluating indicator comprehensive weight, S_i is a i th evaluating indicator minute value. The M value which obtains through the computation is bigger, the showing appraisal is higher.

3.3 Cluster analytic method

Cluster analytic method is reasonably using the rational known information to replace the unknown or and non-determined information, classify and identify the essential attribute of gray system, and give objective and reliable results of quantitative analysis. Cluster analysis can be applied to evaluate individuals or to divide P-O fit grade of enterprise staff, also can combine other evaluation method to give a second evaluation for determination P-O fit grade. Therefore, cluster analysis and other methods are usually combined. Because of the uncertainty of hierarchical analysis in comprehensive score classification, this study introduces the cluster analysis, classifying and identifying the comprehensive score of hierarchy analysis to make the evaluation results more objective.

4. EMPIRICAL STUDAY—HANJIANG GROUP

Hanjiang group is a large enterprise group, Hanjiang water hydropower(group)Co.,LTD.as its core enterprise, comprised of 10 member enterprises, as Hanjiang river hydropower development company, Wangfuzhou hydropower company, SHP limited, Danjiangkou aluminum industry company, Kunshan aluminum industry company,Dan source carbon company, Danjiangkou electrochemical company, Jiuxin electrochemical company and Danjiangkou real estate company.We will use the established P-O fit evaluation system, and randomly selected 112 managers from Hanjiang group conducted a questionnaire survey, 93 valid questionnaires were received and the application of the above-mentioned methods of evaluation of the empirical analysis of survey results.

4.1 Evaluation Result of AHP

According to the P-O fit hierarchical analysis structure model of enterprise manager above, we used AHP to analyze the survey results, and got the overall-level sorting and consistency test results of P-O fit evaluation index for manager. (Table 2, 3)

Table 2. The overall--layer sorting of P-O fit evaluation indicators for manager

General goal	Criterion layer	Weight	Element layer	Weight	Index layer	Weight	Comprehensive weight
P-O fit	Supplementary fit	0.75	Personality	0.05	Responsibility	0.8	0.03
					Self-control	0.2	0.01
			Value	0.27	Enterprise mission	0.83	0.17
					Management concept	0.17	0.04
			Culture	0.12	Participatory	0.17	0.02
					Consistency	0.35	0.03
					Adaptability	0.48	0.04
			Goal	0.42	Management goal	0.17	0.05
					Market goal	0.83	0.26
			Attitude	0.14	Implementation	0.86	0.09
					Cooperation	0.14	0.01
			Complementary fit	0.25	Demands-abilities	0.75	Operational skill
	Human skill	0.30				0.06	
	Experience and Knowledge	0.16				0.03	
	Resources-opportunity	0.25			Management satisfaction	0.17	0.01
			Development opportunity	0.83	0.05		

Table3. The consistency test of overall--layer sorting on P-O fit evaluation indicators for manager

Goal layer	CI	RI	CR
P-O fit	0.0158	0.67	0.03
Criterion layer	CI	RI	CR
Supplementary fit	0	0	0
Complementary fit	0.0074	0.435	0.02

4.2 Evaluation result of the comprehensive index evaluation method

Applying the comprehensive index evaluation method introduced above, we established P-O fit evaluation model as follows:

$$POF = W_i \times S_i \quad \sim 3 \sim$$

$$POF = 0.03 \times S_1 + 0.01 \times S_2 + 0.17 \times S_3 + 0.04 \times S_4 + 0.02 \times S_5 + 0.03 \times S_6 + 0.04 \times S_7 + 0.05 \times S_8 + 0.26 \times S_9 + 0.09 \times S_{10} + 0.01 \times S_{11} + 0.10 \times S_{12} + 0.06 \times S_{13} + 0.03 \times S_{14} + 0.01 \times S_{15} + 0.05 \times S_{16} \quad \sim 4 \sim$$

Using the evaluation model $\sim 4 \sim$ to calculate the enterprise every employee POF , then by calculating the average, we can get the comprehensive evaluation value of P-O fit for managers of Hanjiang group, is 3.43.

4.3 Evaluation result of cluster analytic method

For the division of fit grades, we have proposed three grades: the optimal fit, qualified fit and failed fit. And the optimal fit is reflected that the P-O fit the degree to be highest, appraise the best grade. This study used hierarchical clustering to classification of the grade specific. Taking the P-O fit comprehensive scores for 93 managers of Hanjiang group into SPSS16.0 software, to retain staff numbers and overall scoring two variables, using gather method clustering \sim Table 3 \sim . As shown in Table 4, the three categories of scores range of managers are: $3.3 \sim 5$ optimal fit, $2.5 \sim 3.3$ qualified fit, $0 \sim 2.5$ failed fit.

Table 4. The classification result of P-O fit for manager

Clu1				Clu2		Clu3
4.12	3.94	3.71	3.47	3.01	2.73	2.09
3.49	4.21	3.71	3.67	3.03	2.86	1.56
3.51	4.45	3.44	3.55	2.74	2.7	2.15
3.7	4.16	4.08	3.77	2.92	2.9	2.33
4.42	4.36	3.67	3.97	2.86	3.13	2.44
3.68	4.2	3.66	3.78	2.58	2.94	2.28
3.83	4.06	3.34	4.12	2.89	3.07	2.19
4.84	4.36	4.04	3.67	2.89	3.19	1.46
4.77	4.28	3.7	3.3	3.14	2.69	2.32
3.97	3.6	3.97	3.55	3.2	3.01	
3.94	3.35	3.88	3.39	3	2.7	
3.98	4.22	4.26	4.58	3.18		
3.94	3.36	3.85	3.93	2.77		
3.78	3.35	3.44		3		
3.95	4.13	3.3		3.07		

Table 5. The grade, regional and distribution of P-O fit for manager

Fit grade	Optimal fit	Qualified fit	Failed fit
Score	[3.3,5)	[2.5,3.3)	[0,2.5)
Category Percentage	62.4%	27.9%	9.7%

5. CONCLUSIONS

Using this study determined P-O fit evaluation index system and evaluation method, evaluation result is: the P-O fit status of Hanjiang group's managers is optimal. That means that the P-O fit of enterprise manager within the organization, there are the strong consistency, employee satisfaction and strong sense. At the same time, the importance of individual indexes were found: (1) managers think supplementary fit is more important than complementary fit, (2) under the two dimensions of about seven factors index relative importance: goal, needs - ability, values, attitude, culture atmosphere, resources - opportunity, character, (3) for 16 evaluation index, focus on the character of the responsibility evaluation. In the value evaluation, enterprise mission is more important than the management concept. In the cultural atmosphere, adaptability is the most important. In goal evaluation, the market than management is an important goal. In working attitude, people pay attention to implementation. On the demand of the evaluation, operational skill is the most important thing for managers. In evaluating resources-opportunity, development opportunity is more important prefer to management satisfaction. Additionally, the age, sex and education of manager are related not significant with P-O fit. Just working years has a significant positive correlation with P-O fit. This means that as the working time of manager in the enterprise increases, the subjective consciousness P-O fit degree is higher.

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