

Investigate and Prioritize Human Resources Strategic Planning Prerequisites with Analytic Hierarchy Process Method (Case Study: Fars Province Iranian Health Insurance Organization Office)

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Abstract

The aim of the present research work is to identify the human resources strategic planning prerequisites and prioritizing them from Iranian Health Insurance Organization office managers and deputies' viewpoints in Fars Province with analytic hierarchy process (AHP) method. The statistical population in this research included 17 office managers and deputies who were available during the data collection. In order to collect data, a questionnaire which its validity was approved by the related experts and its reliability was calculated to be 0.053 by inconsistency rate. The results from analytic hierarchy shows that cultural prerequisites with 48.2 percent, out of which 32.1 percent is related to strategic cultural and the other 16.1 percent is related to strategic thinking, had the first priority. The second priority is the structural prerequisites with 35.4 percent, in which 18 percent of that is related to presence of human resources accounting mechanisms, 9 percent is related to the presence of human resources databases, 6.8 percent is related to flexible technology and 1.6 percent is related to the flexible human resources structure. Ultimately, the third priority is the human prerequisite with 16.4 percent, in which 7 percent is related to development motivation in human resources, 4.8 percent is related to presence of strategic human resources and finally 4.6 percent is related to presence of professional human resources.

Key Words: human resources strategic planning, human resources strategic planning prerequisites, AHP, Fars Province Iranian Health Insurance Organization office

Introduction

Management science has always been trying to study the relationship between organizations and humans; in other words, increase in human efficiency in organizations is among the main objectives of management science. Development of any organization is highly dependent on the correct application of human resources. The larger the companies and organizations, the greater their

human resources problems grow (Yongmei et al., 2007).

Undoubtedly, today's business world is the world of organizations and it is clear that humans are organizations' main creators, administrators and developers. Organizations not only could not exist without presence of humans, their administrations would not be possible, either. Even by the development and growth in modern technologies and their transformation to a mass of hardware in the future, the role of humans, as the vital and strategic factor in the survival of organizations, not only will not deteriorate, but considering the speed of changes and increase in the complexity and lack of environmental stability, this role will be greater. In fact, organizations are formed with special goals and their success in reaching the organizational goals is directly related to the human resources performance (Arif, 2007).

Since human resources is considered as the most significant and most valuable capital in organizations and realization of organizations' goals depends on the commitment and experience of its human capitals. Identifying and analyzing issues of human resources, as the main resource in organization, is of great value and significance. This leads to fundamental changes and developments in all organizational aspects (Teymuri, 2011).

Plans and contemplation are needed in order to effectively cope with changes. Considering the significance of human resources, human resources strategic planning is important for the survival and development of the organizations in unstable environments. With more effective use of corporate resources, creating a sense of participation in staff, focusing on the priorities to job satisfaction and reducing transfers of human resources and organizational goals can best be achieved (Kerstin, 2006; Beykzade and Seyed Mofid, 2014).

In today's competitive world, rapid changes take place in the markets which forces organizations to run towards competitiveness or stay competitive. Based on this hypothesis, the main cost of most organizations is the workforce costs; any measure which could decrease these costs, could assist with reaching the competitive advantage (Silverstone,

2004). Recent studies in business strategy has shown that competitive advantage for the organizations could be reached through focusing on human resources as the most significant strategic resource in the organization; to put it another way, human resources is a form of invisible property which could lead to formation of values for the organization through increasing the capabilities of the organization in confronting with today's unstable environments (April and Huang, 2005).

Theoretical Framework

Human Resources Strategic Planning

According to DeCenzo and Robbins, human resources planning is a process through which, the organization determines how many personnel with what sort of specialty and skill for what jobs and what duration is needed in order to reach its goals (Beykzade and SeyedMofid, 2014).

The objective of human resources planning is analysis and study of the balance between supply and demand by an organized method. Strategic human resources planning is a process that is planned by the executive and operational senior managers considering the nature of human resources and the organizational goals. The main feature of this process is the teamwork nature which is hidden in-it, since it is through such process and teamwork that the belief in strategy is formed and the individuals develop a sense of belonging and ownership towards it (Yongmei et al., 2007). Strategic human resources planning is a dynamic process which proposes effective strategies and tactics for reaching a better tomorrow with an insight towards the current facts and realities. This type of planning is not a linear process to be executed in a step-by-step manner in a certain framework, but, strategic human resources planning could be viewed as a form of view of philosophy in planning for solving the organization problems in regards with the environment. The main feature of this type of planning includes navigating the future path for the whole organization in regards with the external environment (Seyejavadin, 1996).

Strategic Human Resources Planning Prerequisites

Strategic human resources planning includes some prerequisites such as: philosophical view of the human resources, comprehensive attitude towards human resources, effective application of all human resources capabilities, planning for human resources capacities in the future, studying the human resources external changes, investing for organizational creativity, planning for continuous

human resources training, determining the starting point of human resources movement, predicting human resources capacities and contemplating for organization survival (Soltani, 2000). These prerequisites could be generally divided into several categories:

A: Structural Prerequisites

These prerequisites include presence of human resources databases for better design and execution of plans (Karbasian, 2013), flexible communicative technologies for quick response to the environmental changes (Dessler, 2003), flexible structure for supplying, maintaining, applying and training flexible human resources (Soltani, 2003), and presence of human resources accounting mechanisms for better valuation of services provided by the individuals (Yongmei et al., 2007).

B: Cultural Prerequisites

Cultural prerequisites in strategic human resources management include presence of strategic thinking and strategic culture in the organization. The significance of strategic thinking in organization is for stable determination, execution and application of strategic human resources planning in the whole organization. Strategic thinking includes seeing the effective factors on the organization and providing solutions for the problems, through understanding the vague and unstable future and the effective factors dependence (Pears and Robinson, 2001). Generally speaking, strategic thinking requires intellectual insight, subjective analysis, social vision and scientific insight (Amin et al, 2014).

Presence of strategic culture is for creating appropriate and timely response capability towards environmental changes. Generally put, strategic culture means the value of concepts such as: customer orientation, long-term insight, pluralist spirit, synthesizing theory and practice, domination spirit, continuous improvement of quality, taking actions based on thoughts and plans and creating balance between inside and outside of the organization in the culture of the organization (Talebiyan, 2006).

C: Human Prerequisites

Human prerequisites for strategic planning in organization includes presence of expert human resources – a force which could gather new experiences, identify new problems, determine new prospects and propose new solutions – (Soltani, 2000), professional human resources – a force which retains the specialties required by the organization currently, and is able to acquire the needed specialties in the future – (Dessler, 2003), and

presence of development motivation in human resources (Soltani, 2000).

Conceptual Model

Through library study, the strategic human resources prerequisites in organizations were summarized in 3 main categories (criteria). These categories included: human prerequisites, structural prerequisites and cultural prerequisites, which are presented in Figure 1.

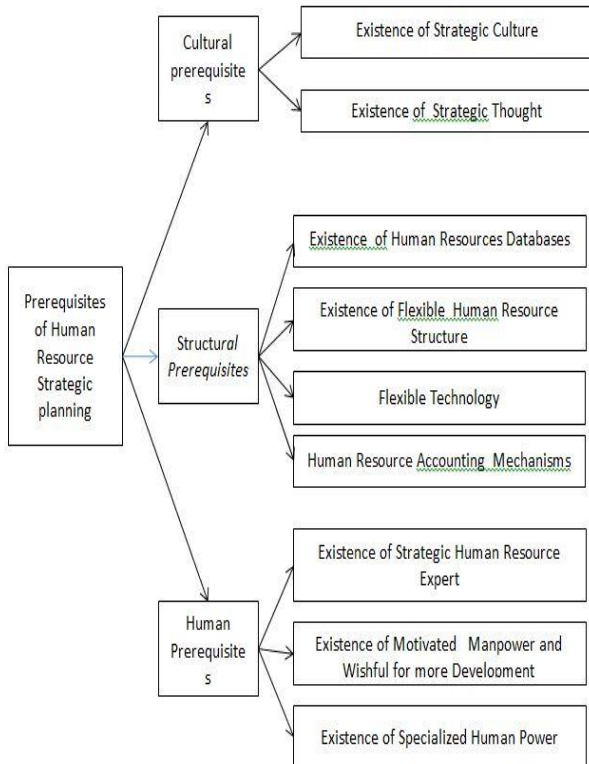


Figure 1. Research Conceptual Model

Analytic Hierarchy Process

This method is based on pair wise comparison. Decision-making begins by providing hierarchical decision tree. Hierarchical decision tree shows the compared factors and assessed competitive options in the decision. Subsequently, a series of pair wise comparisons are carried out. This comparison determines the weight of each of the factors in regards with the competitive options. Ultimately, the logic of AHP process synthesizes the matrices derived from pair wise comparisons so that the optimal decision is reached (Qodsipur, 2006). Considering the theoretical framework of AHP, it could be said that the process of prioritizing strategic human resources planning prerequisites in

Fars Province Iranian Health Insurance Organization office is easily modeled in AHP.

Multi-criteria decision-making patterns are diverse and one of the most efficient of these techniques is AHP which was first introduced by Saaty in 1980 (Saaty and Vergas, 1987). This technique is based on pair wise comparison and provides the opportunity for the managers to test various scenarios. Due to its simplistic and at the same time comprehensive nature, AHP has been used by managers and various users. Carrying out this process in any problem is based on the following stages (Qodsipur, 2006).

1. Pair wise Comparison Table

This stage includes designing a questionnaire which contains the desired criteria pairwise comparison (expert questionnaire). In this questionnaire, all of Fars Province Iranian Health Insurance Organization office managers and deputies were required to compare the priority of all criteria and sub-criteria.

Scoring processes is presented in the following figure:

Table 1. Pairwise Comparison Scale

1	Equally Preferred	Equal Importance
3	Moderately Preferred	Moderate Importance
5	Strongly Preferred	Strong Importance
7	Very Strongly Preferred	Very strong Importance
9	Extremely Preferred	Extreme Importance
2, 4, 6, 8	-	The intermediate scores show the intermediate conditions between the above-mentioned conditions

2. Forming Pairwise Comparison Matrix

After filling out the questionnaires, various opinions are reached and in order to solve this problem, the comparison tables must be combined together. Geometric mean calculation could be used in AHP method (Saaty and Vergas, 1987). Semeti et al., and Shakeri and Salimi used geometric mean in combining the judgments in AHP technique.

$$R^K = [r_{ij}]^K$$

In which, R^K is a judgment matrix for the K^{th} assessor, r_{ij} is the assessment of K^{th} assessor between the i^{th} and j^{th} criteria and n is the number of related criteria in that level of decision-making.

$$r_{ij} = 1, \forall i = j; \quad \text{and } r_{ij} = 1/r_{ji} \quad \forall i, j = 1, 2, \dots, n$$

3. Calculation of Relative Weight for Criteria and Options

After preparing the hierarchical tree and calculating the geometric mean, the mathematical operations were conducted in Expert Choice software in order to prioritize the factors impacting job satisfaction and lack of turnover. Initially, the criteria were compared in pairs considering the goals and the relative weight of each criterion was estimated considering the goal. In the next stage, options were compared in pairs considering the goals and the relative weight of each option was estimated considering the goal. In this part, arithmetic mean formula is used for calculating the total value: In which, r_{ij}^* is the true value of K assessor between i and j criteria.

$$r_{ij}^* = \frac{(r_{ij}^{*1} + r_{ij}^{*2} + r_{ij}^{*3} + \dots + r_{ij}^{*k})}{k}$$

4. Improving the Decision Inconsistency

There are inconsistencies in the real world and these inconsistencies might enter the model. When the inconsistencies are zero, the objective is consistent and by the increase in inconsistency, the inconsistency rate in the objective increases. Generally, if the inconsistency rate is lower than 0.1, the inconsistency is acceptable. Otherwise, the judgement must be reviewed. (Qodsipur, 2006) Also, consistency should be calculated separately for all pairwise comparison matrices. If the consistency is not acceptable, (higher than 0.1), the pairwise comparison values in the primary matrix must be reviewed by the studied assessor.

The consistency index for determining any form of inconsistency in pairwise

comparison matrices is calculated as the following:

$$CI = \frac{-n + \lambda_{max}}{n-1}$$

In which, λ_{max} is the maximum characteristic value and n is the matrix aspect size.

Accordingly, the consistency rate (CR) is calculated from the following formula:

$$CR = \frac{CI}{RI}$$

Integration

After pairwise comparison and calculating the options and criteria weights, it is required to calculate the final weight. In order to do this, integration is used and the final answer for the problem is derived. Here, the overall judgment matrix is used which is represented by R^* . To reach more accurate results, Expert Choice software was used.

$$R^* = [r_{ij}^*]$$

In which, R^* is an overall judgement matrix of K assessor and r_{ij}^* is a combination of assessments of K assessors between i and j criteria. The weight vector for R^* judgment matrix is calculated from the following formula and subsequently, criteria ranking is carried out through using the derived weights.

$$w_i = \frac{(\prod_{j=1}^n a_{ij})^{\frac{1}{n}}}{\sum_{j=1}^n (\prod_{j=1}^n a_{ij})^{\frac{1}{n}}} \quad i, j = 1, 2, \dots, n$$

Methodology

This study is an analytic-descriptive research and of applied type, which focuses on prioritizing strategic human resources prerequisites, using AHP. The statistical population in this research included all 24 Fars Province Iranian Health Insurance Organization office managers and deputies and among whom, 17 agreed to cooperate and fill out the questionnaire.

In order to collect data, initially, the sources of knowledge in organization were identified through library method. Subsequently, these factors were categorized in 3 categories and a series of sun-criteria were specified for each category or criterion.

Additionally, in order to achieve the required validity, the selected questionnaire was distributed among some professors and considering the research subject, it was concluded proper. Subsequently, by using pairwise comparison questionnaire and through field study, the data related to the prioritization of these factors was collected and analyzed. The reliability assessment method of the research tool and the inconsistency rate in AHP model was proposed by Saaty. Considering the fact that the total inconsistency rate was 0.053 and lower than 0.1, it could be claimed that questionnaires have the required consistency. In order to analyze the data in this research and to answer the research questions, AHP technique is used.

Discussion and Conclusion:

In this part of the research initially, using the collected data from the research tool (questionnaire), some properties of the sample will be studied. Table 3 presents the studied samples frequency based on their age and academic degree.

Table 2. Sample Demographic Properties

Education	Bachelor's	Master's		Ph.D.
	14%	59%		27%
Age	30-40	40-50	50-60	Over 60
	12%	51%	28%	9%

Using the software and conducting related mathematic calculations, the scores each criterion or sub-criterion has gained is calculated and the weight of each criterion is determined for each of the sub-criteria. The weights of calculated criteria are presented in the following table.

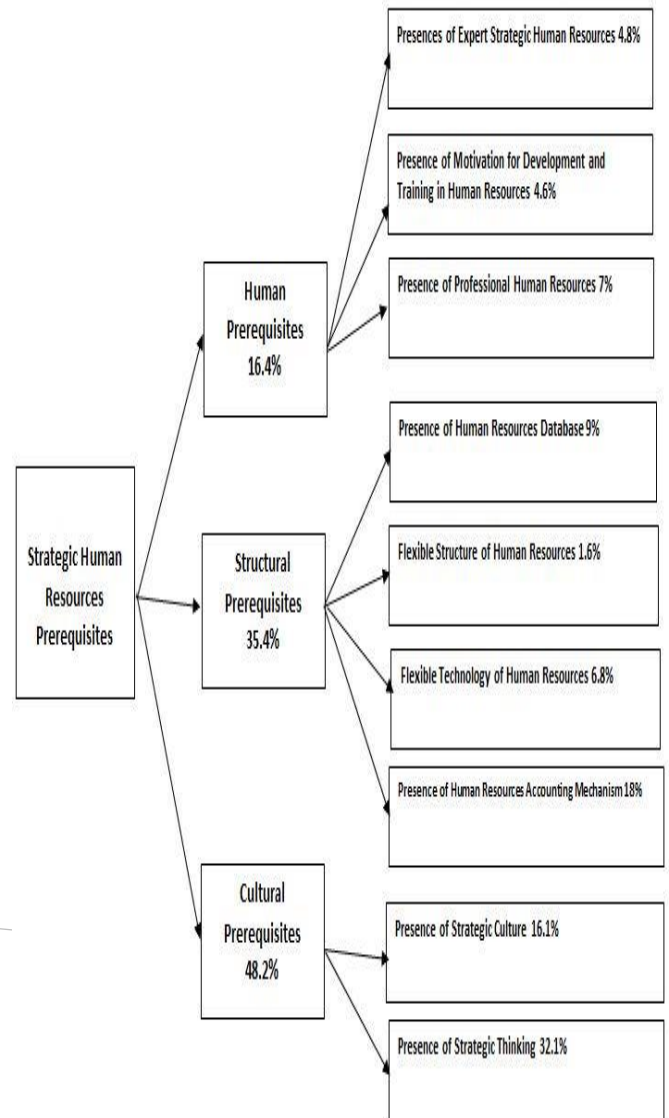


Figure 2. Calculated Scores for each Criterion and Sub-Criterion

Figure 2 presents the scores Fars Province Iranian Health Insurance Organization office managers and deputies gave each criterion and sub-criterion and the scores are transformed into percentages. Considering Figure 2, it is clear that among the criteria (human prerequisites, structural prerequisites and cultural prerequisites), the managers and deputies dedicated the highest scores to the cultural prerequisites (48.2%) and after that, to structural prerequisites (35.4%) and human prerequisites (16.4%), respectively. Results from the analysis related to the sub-criteria suggest that scores Fars Province Iranian Health Insurance Organization office managers and deputies dedicated the highest scores to the presence of strategic culture (16.1%), and after that presence of human resources accounting mechanism (18%), presence of strategic

thinking (16.1%), presence of human resources database (9%), presence of motivation for development in human resources (7%), flexible technology of human resources (6.8%), presences of expert strategic human resources (4.8%), presence of professional human resources (4.6%), and flexible structure of human resources (1.6%). Table 3 presents the ultimate result of sub-criteria prioritization.

Table 3. The Ultimate Result of Sub-Criteria Prioritization

Priority	Sub-Criterion	Score	Related Criterion
1	Presence of Strategic Culture	32.1	Cultural Prerequisites
2	Presence of Human Resources Accounting Mechanism	18	Structural Prerequisites
3	Presence of Strategic Thinking	16.1	Cultural Prerequisites
4	Presence of Human Resources Database	9	Structural Prerequisites
5	Presence of Motivation for Development in Human Resources	7	Human Prerequisites
6	Flexible Technology of Human Resources	6.8	Structural Prerequisites
7	Presences of Expert Strategic Human Resources	4.8	Human Prerequisites
8	Presence of Professional Human Resources	4.6	Human Prerequisites
9	Flexible Structure of Human Resources	1.6	Structural Prerequisites

Discussion and Conclusion

In today’s competitive world, the organizations have to try compulsively for their growth and stability and they need to benefit from proper strategies for their improvement and survival. The environment surrounding the organizations is rapidly changing and among these changes could be referred to the variety of customers’ demands. Another important limitation which constrains the organizations is the scarcity and limitation of resources and facilities. Hence, in order to overcome these problems and constantly stay on top, organizations need to expand their capabilities and remain flexible. Also, the environment surrounding the organizations is constantly changing and these changes lead to variety of expectations in the personnel, customers and also the suppliers of the organization. The requirement for quick and effective response to these needs is a long-term planning and creating effectiveness in organizations resources. Hence, organizations should be able to adapt with their surroundings and become highly flexible.

Today, most organizations try to plan their future though using strategic planning and preparing proper strategies and in order to stay in accord with competitive advantages and preserving and developing them, the organization tendency should be towards strategic organization; since the speed of changes are so high that by operational and short-term planning, the changes could not be responded and the self-sufficient and skilled human resources is considered as the main factor in social dynamicity. In order to reach this, the strategic planning prerequisites should be provided.

Results from AHP analysis shows that the managers and deputies of dedicated the highest scores to the cultural prerequisites (48.2%) and after that, to structural prerequisites (35.4%) and human prerequisites (16.4%), respectively. Results from the analysis related to the sub-criteria suggest that scores Fars Province Iranian Health Insurance Organization office managers and deputies dedicated the highest scores to the presence of strategic culture (16.1%), and after that presence of human resources accounting mechanism (18%), presence of strategic thinking (16.1%), presence of human resources database (9%), presence of motivation for development in human resources (7%), flexible technology of human resources (6.8%), presences of expert strategic human resources (4.8%), presence of professional human resources (4.6%), and flexible structure of human resources (1.6%).

Considering the results of this research, the organizations are recommended to provide cultural prerequisites of strategic culture in the organization for strategic human resources planning and after

that, spend the majority of their capital in order to create the human resources accounting mechanism, strategic thinking, proper database, creating motivation for human resources growth and development. Also, organizations are recommended to involve the individual in strategic human resources planning. Accordingly, the probability of conducting a comprehensive planning will be higher and the practical commitment of individuals will be higher in correct implementation of these programs. Also, the dear and resistance of individuals regarding with the programs could be prevented by expressing the reasons and the importance and advantages of strategic human resources planning.

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