Relationship of strategic human resource practices and organizational innovation in one of the military centers

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Abstract
Aims: Strategic human resource practices play a crucial role in conducting individuals towards the development of innovational activities. Strategic human resource practices and organizational innovation are two important factors and primary means by which the organization can achieve organizational goals. This study was conducted to investigate the relationships between strategic human resource practices (staffing, training, participation, performance appraisal and reward) and organizational innovation in a military center.

Methods: This descriptive correlation study was performed on 220 military personnel of a military center who were selected by simple random sampling in year 1388. Data were collected by a researcher-made strategic human resource practices questionnaire and organizational innovation Martin Patchen’s questionnaire. Data were analyzed using Pearson correlation and regression technique by SPSS 14 software.

Results: There was a significant positive correlation between strategic human resource practices and organizational innovation. Also there was significant relationship between the dimensions of strategic human resource practices and organizational innovation (p<0.05). The multiple regression analysis indicated that staffing and participation are significant predictors of organizational innovation.

Conclusion: Strategic human resource practices including staffing, training, participation, performance appraisal and reward, positively explains the organizational innovation and can influence the attitudes and behaviors of employees and create organizational innovation.

Keywords: Strategic Human Resources Practices, Organizational Innovation, Military Center

Introduction

Human resources are the major capital of new age in the organizations. In fact, the efficiency and productivity of any organization depends on the behavior and performance of its human resources and employees working in organizations are among the indicators for measuring the superiority of an organization [1]. The concept of innovation as a vital tool of empowerment for value creation and sustainability is known as a competitive advantage of organizations in highly variable environments with increasing complexity [2]. Organizations have more power of innovation are more successful in response to changing environments and create new capabilities that allow them to achieve better innovation [3]. The start point of innovation is strongly dependent on the knowledge, expertise and commitment of human resources as the main input in the process of value creation and innovation is dependent [4]. Strategic human resource practices is the main tool of organizations for giving shape and influencing skills, and attitudes and behavior of people in performing their job duties and therefore, to achieve organizational goals and innovation [6, 5]. In order to develop innovation, organizations can use human force for developing organizational expertise to create new services and products to use, although, expertise is conceptually more complex and is mainly due to quest on the specific objectives and tasks in a given environment [7]. This purposeful quest improves efficiency in the performance of the operators who perform duties and organizations can increase the tendency and incentives of the individuals to perform these sensitive practices by determining and applying a set of strategic human resource practices in order to arrive to organizational innovation. Thus, the strategic human resources practices can lead innovative activities because it provides the possibility of discovery and use of knowledge and expertise in the organization [8, 9]. After improving management processes, organizations need incentive and capability of human resource for creating innovative ideas, developing innovative methods and creating new opportunities for their progress [10]. Strategic human resource practices can influence on options, capacities and employees’ behavior towards organizational goals and change them [5, 6] and play vital role on providing necessary conditions for accelerating and grouping and leading of individuals toward developing
innovative activities [11, 13]. Tannenbaum and Dupree-Bruno examined relationships between organizational and environmental factors and use of strategic human resource functions. Items in the strategic human resource included training, recruitment, selection and the role play in employees. The results reveal a linear relationship between external variables such as availability of labor and general review has non-linear relationship with the practical application of strategic human resources. In terms of organizational factors, representative dimensions exert stronger linear effect than a formal orientation and centralization and the application of strategic human resource [14]. McDuffie in studying the effects of innovative management of human resources on production efficiency applied four criteria of recurrent, reward and training to show the strategic human resource practices. He showed that integration of different kinds of strategic human resource procedures is accompanied with improvement of production rate [15]. Ichniowski et al. examined the production effects of strategic human resource abilities in a similar study. They used different criteria in the strategic human resource including the incentive pay, recruitment and selection, teamwork, job duties, flexibility, job security, communication and education and proposed that the strategic human resource causes to achieve higher level of production than the conventional methods such as defining the scope of work, hard work rules and hourly pay with close supervision [16]. In addition, Youndt et al. using four dimensions of strategic human resource practices including staffing, training, performance appraisal and reward show that the system of strategic human resource directly relate to innovation dimensions [4]. Delery and Doty determined 7 key functions in the system of strategic human resource practices including ladder of work progress, training, performance appraisal, and reward, job security of employees and enrichment of the job content and using them to develop innovation. The results reveal that the each one can be used as an important level of innovation [17]. Moreover, Collins and Clark investigated on strategic human resource practices including training, performance appraisal and reward on 73 subjects by a field study. Results indicated that these operations play important role on innovation [5]. Marling in “Effective military innovation: Technological and organizational dimensions” studied the innovation in organizations and military forces and arrive to this conclusion that organizational innovation among military persons play important role on the effectiveness and increase military power [18]. Aaron and Zook in the study of strategic human resource practices in military centers from military officials’ perspective pointed out to the important role of employees’ recruitment and selection based on their skills and knowledge in developing organization’s goals [19]. Miao arrive to this conclusion via study of strategic human resource practices in military nursing that education of the nurses is at the medium level and they are employed based on their professional competency and there are not satisfied from their wages. Performance appraisal is down irregularly and generally, the structure of strategic operation of human resources is in medium level [20]. Yang et al. in “Construction of innovation system of military hospital management” stated that training and teaching models and methods of military hospitals in Shanghai, China results to development of organizational innovation and provide a situation for organizational improvement [21]. Shkaratan and Galchin studied facilities and complexity of military industry and human resources to provide technical innovation in Russia and arrive to this conclusion that evaluation of the quality of human resources is the most determinant factor in innovation [22]. In the case of development of innovative activities, organizations face with more uncertainty and variability in the innovation process [23] and need of creative staff that are flexible, risky and resistant against uncertainty and ambiguity [24]. Therefore, it should be more emphasis on these characteristics. If innovative characteristics and creative capabilities are exerted on staffing and selection criteria, employees will tend to create variety in ideas and innovative behaviors [23, 25]. If you use effective methods of staffing, employees will change to important sources of new ideas in the creative process of the organization. Application of these methods in education facilitates the exposure of personnel with a wide range of information and knowledge and increases their enthusiasm for innovative ideas [25, 26]. Wide and varied educational programs increase the knowledge, skills and required creative abilities of employees to perform their functions [25, 27]. Education promotes level of expertise in terms of demand and content of innovation [28]. Investment in the training of personnel promotes level of expertise in all level of organization and provides endless potential source of ideas for more innovation [29]. Moreover, innovation increases continuous cooperation and collectivity of employees [30, 13]. Cooperation and collectivity among employees can be created by engaging them in problem solving and involvement in
decision making effective in their work [13, 31]. Increased cooperation provides conditions to encourage employees for rendering new ideas and communicating information in their work and this in turn empowers innovative achievements [32]. Due to characteristics of the length of time, uncertainty and multidisciplinary nature of the innovation process, importance and value of innovation should be introduced as the organization's first priority and mechanisms should be developed to measure behaviors and achievements of the innovations [25]. Performance appraisal can stimulate employees to pledge to support innovative activities and help organizations in achieving the innovative desired results [32]. Also compensation of the individual and team positions by way of material reward is one of the ways to encourage innovation. Both regular and random bonuses are essential for motivating employees to perform challenging tasks and develop the motivation necessary for them to present new ideas and creating new and successful products [25,27]. In conducted searches, each of these variables has been studied separately in military centers, but no research was found regarding the relationship between these two variables in military centers. Then current study has been done due to the importance of human resources and strategic human resource practices and the importance of innovation in military centers and the necessity to determine the share of each of the dimensions of strategic human resources and organizational innovation in military centers.

The purpose of this study is to study the relationship between strategic human resource practices (staffing, education, participation, performance appraisal and reward) and organizational innovation in one of the military centers.

Methods

This was a descriptive correlation study. The population included all military forces in a military center numbered 527 subjects. Sample size was determined based on Krejcie and Morgan [33]. 220 individuals were selected using random sampling and the numbers table, based on the list of personnel of the center. The age range of the subjects was 19 to 51 years old. Data collection tools included two scales: the first scale was a researcher-made strategic human resource practices which was made based on the information and resources and scientific and with the opinion of a statistical consultant in relation to the objectives of the research. In this scale staffing, training, participation, performance and rewards are measured which each item has 3 items and totally 15 items and had been arranged by Likert range. Questions were scored from 1 (completely disagree) to 5 (completely agree) and obtaining higher scores indicating the score in the strategic human resource practices was higher. The second scale, the scale of organizational innovation was developed by Martin Patchen [34]. This scale was arranged by asking opinions of professionals and specialists and exerts required changes in questionnaires in accordance with the subject of the research and necessary information. Mentioned scale was consisted of 6 items each included statements that the response should answer to one of the options with “×” sign. To interpret the results, the answers were added together according to standard scoring. The maximum and minimum possible score was 31 and 7 respectively. Higher scores indicate more innovation. For determining the validity of the tool, content validity was used. In the way that after preparation of the questionnaire, they passed to the 10 related experts and were used after the necessary amendments and final approval. To determine the reliability of the questionnaire, Cronbach's alpha coefficient was used. The mentioned coefficient were reported 89% for the scale of organizational innovation and 97% for the scale of strategic human resources practices respectively which confirm the appropriateness of reliability of measurement instruments. The data obtained from completed questionnaires were analyzed by SPSS 14 software and Pearson and regression correlation coefficient.

Results

Significant positive correlation was seen between strategic human resource practices and organizational innovation in subject military center (Table 1).

Table 1- The result of multiple Pearson correlation test between strategic human resources practices and organizational innovation

<table>
<thead>
<tr>
<th>First variable</th>
<th>Second variable</th>
<th>Correlation coefficient</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic human resources practices</td>
<td>organizational innovation</td>
<td>0.0001</td>
<td>0.409</td>
</tr>
</tbody>
</table>

Also significant positive correlation was observed between each of the dimensions of strategic human resource practices and organizational innovation (Table 2).

The significant multiple correlations were found between the dimensions of strategic human resource practices and organizational innovation. The variable
of strategic human resources practices, accounting for 31% of organizational innovation (Table 3).

Table 2- The result of Pearson correlation coefficient test regarding the relationship of each of the dimensions of strategic human resources and organizational innovation

<table>
<thead>
<tr>
<th>Dimensions of strategic human resource practices</th>
<th>Significance level</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staffing</td>
<td>0.0001</td>
<td>0.454</td>
</tr>
<tr>
<td>Training</td>
<td>0.0004</td>
<td>0.323</td>
</tr>
<tr>
<td>Participation</td>
<td>0.0001</td>
<td>0.402</td>
</tr>
<tr>
<td>Performance appraisal</td>
<td>0.002</td>
<td>0.348</td>
</tr>
<tr>
<td>Reward</td>
<td>0.002</td>
<td>0.344</td>
</tr>
</tbody>
</table>

Among the dimensions of strategic human resource practices, two dimensions of staffing and participation were anticipant of significance for organizational innovation (Table 4).

Table 3- The result of multiple correlation coefficient test between the strategic human resources practices and organizational innovation

<table>
<thead>
<tr>
<th>R squared</th>
<th>Amended R squared</th>
<th>Standard error of estimate</th>
<th>F</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.012</td>
<td>2.575</td>
<td>4.92</td>
<td>0.195</td>
<td>0.319</td>
</tr>
</tbody>
</table>

Table 4- Coefficients of regression model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Non-standardized coefficients</th>
<th>Standardized coefficients</th>
<th>t</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staffing</td>
<td>1.645</td>
<td>0.804</td>
<td>0.369</td>
<td>0.046</td>
</tr>
<tr>
<td>Training</td>
<td>0.037</td>
<td>0.792</td>
<td>0.008</td>
<td>0.047</td>
</tr>
<tr>
<td>Participation</td>
<td>1.437</td>
<td>0.712</td>
<td>0.252</td>
<td>2.194</td>
</tr>
<tr>
<td>Performance appraisal</td>
<td>0.478</td>
<td>0.864</td>
<td>0.093</td>
<td>0.553</td>
</tr>
<tr>
<td>Reward</td>
<td>0.309</td>
<td>0.670</td>
<td>0.095</td>
<td>0.455</td>
</tr>
</tbody>
</table>

Discussion

The results showed that the total score of the strategic human resources practices has a significant positive correlation with organizational innovation. In other words, by increasing the strategic human resources, organizational innovation will also increase. Also there is a significant positive correlation between each of the dimensions of strategic human resources practices and organizational innovation. It means that by increasing each of the dimensions of strategic human resources, organizational innovation increases too and vice versa. Current results confirm the results of other studies such as Youndt et al. [4], Collins and Clark [5], Laursen and Foss [11], Damanpour [13], Tannenbaum and Dupuree-Bruno [14], MacDuffie [15], Ichniowskiet al. [16], Delery and Doty [17]. Results of regression analysis showed that there is a significant positive correlation between each of the dimensions of strategic human resources and organizational innovation. The results obtained in this study are consistent with the results of previous research [9, 8]. But it seems that despite the significant positive correlation between the strategic human resources and organizational innovation, aspects of training, performance evaluation and reward are not significant predictors for organizational innovation and only staffing and participation are significant predictors for organizational innovation. Totally, these findings highlight the vital role of strategic human resource practices in the process of organizational innovation. The use of strategic human resource practices including staffing, training, participation, performance appraisal and reward, revealed a positive effect on organizational innovation. Therefore, managers should actively employ human resource capital of organization through the strategic human resources practices to stimulate creative thinking this eventually led to desired innovative achievements innovations in the organization.

This study had also some limitations. The first limitation was the common problem in organizational studies which includes the correct attribution of the answer of each person as the reply to organization. To solve the problem in this study, officials familiar with the topic of the study were asked to complete the questionnaire. Of course, this method cannot completely solve the problem. In addition this study benefits from information comes from personal reports that the common method variance may occurs. Also, because in this study there was purely a military center, there was also the possibility of security restrictions and conservative spirit of the subjects.

Conclusion

Human resource practices including the dimensions of staffing, training, participation, appraisal and reward have positive effect on organizational innovation. By increasing strategic human resources practices, organizational innovation also increases. Through the use of strategic human resource practices, especially take in to account the staffing and participation dimensions capable organizations to develop creative new ideas and ultimately gain better achievements in organizational innovation in military centers.

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