Effect of Different Levels of Organizational Structure on The Productivity of Human Resource Management

(A Case Study: Electricity Distribution Company in Ardabil Province)

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ABSTRACT

The most important factor to reduce or increase the productivity of an organization is its human resources, so one of the issues that managers of the leading organizations will be involved with in the coming decades is trying to increase employees’ productivity. In this study research method is cause-comparison which aims to measure the impact of organizational structure (complexity, formality, and concentration) on human resource management efficiency in Electricity Distribution Company in Ardabil province. The research population in focus is all employees of Electricity Distribution Company of Ardabil province distributed in different cities of the province cities from which 210 people have been chosen using random sampling in accordance with Morgan table. In order to collect data a standard questionnaire form (organizational structure), and productivity have been used. Data collected were analyzed in both descriptive and inferential methods (F test) using SPSS18 software. The results showed that there are significant differences between different levels of organizational structure and human resource management efficiency. Moreover, the effects of different dimensions of organizational structure (complexity, formality, and concentration) on productivity of human resource management are different.

KEY WORDS: organizational structure, productivity, concentration, formality, complexity, human resource management.

INTRODUCTION

A number of studies have shown that management system or organizational structure is the main key element in improving the efficiency of all organizations. In fact, economic growth and industrial advancement of societies are due to proper management techniques and having a proper and desirable structure in the communities [1]. So regarding the key role of organizational structure to improve productivity, this study is aimed to explore the structure forming elements (Complexity, formality, and concentration) on one hand and human resource management efficiency on the other hand so that we will be able to step up in this field. Accordingly, through the present study it has been tried to investigate the influence of various levels of organizational structure (Complexity, formality, and concentration) on human resource management productivity in Electricity Distribution Company in Ardabil Province.

Appropriate organizational structure, efficient procedures, safe instruments and equipment, balanced work environment and, above all, competent and qualified manpower are essentials that should be considered by managers to achieve optimal efficiency. Organizational structure which is inappropriate regarding the objectives of the organization is a hindering bureaucracy and hinders organizations from achieving their goals or misleads them. Organizational structure clarifies how duties are determined and what formal coordination mechanisms and organizational patterns of interaction that must be met? [2]. Obviously, organizational structure, in a real sense of word, has a remarkable effect and is inclusive. Regarding the studies done and their results, the level of human resource management productivity is not satisfactory in the mentioned company, so this study is felt to be necessary in the current population.

Today, productivity is so important in the process of Iranian society development that without considering it, planning, and guidance and support of government in policies and investments, cannot succeed [3]. Also according to the studies done and their results it appears that organizational structure is of a key role and an organizational structure which designs the moving bed and the process framework of any organization shows its importance. Moreover, administering and elements of managing organizations are not less remarkable. Regarding the points mentioned, the main objective of this study is measuring the dimensions of organizational structure (Complexity, formality, and concentration) on human resource management productivity and also the quantitative prioritizing of desired effects in Electricity Distribution Company in Ardabil Province. Thus, some of these variables will be investigated:

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The three components that are regarded as the dimensions of organizational structure are Complexity, Formality, and Concentration. Although accepting these components is normal, they are not universal [4]. These components will be defined below:

**Complexity:** It refers to the degree of division which exists in organizations. Complexity can be measured in three dimensions: horizontal separation, vertical separation and geographic separation [2].

**Formality:** It refers to the rules that govern the relationship between people and groups who try to achieve the organizational goals [7].

**Productivity:** It is a comprehensive and overall concept which should be increased to improve living standards, greater prosperity, peace and human prosperity [3].

**Human Resource Management:** Human resource management is the process of attracting, developing, and retaining qualified and competent workforce to achieve the organizational objectives based on the prevailing value system. To state differently, human resource management is defined as a discipline used to identify, select, hire, train and develop human resources to achieve organizational goals [8].

Given the importance of the topic, many studies have been conducted in different countries. Nazem (2010) has done a study called "the relationship between organizational atmosphere and managers' productivity in the Relief Committee and offering appropriate management model". The results of multivariate linear regression analysis showed that there is a relationship between organizational atmosphere and managers' productivity [9]. Majidi (2011) conducted a study called "the impact of organizational structure on improving productivity of employees of Sciences Education of Army Forces" and the results showed the positive effect of organizational structure on improving productivity and regarding the appropriate structure, the organic structure was believed to have more impact on improving productivity [10]. Azma et al., (2009) have done the same study in Agriculture Organization of the Northern Khorasan province by which it was revealed that complexity, formality and concentration have inverse (negative) relation on organizational productivity. Moreover, it was confirmed that among the three variables, concentration has the most, and complexity the less association with organizational productivity. Moreover, it was meaningful relationship between formality, concentration, staff managers' level of education and creativity of staff managers [12].

Based on the literature reviewed, it can be claimed that there is a significant relationship between dimensions of organizational structure and productivity of human resource management efficiency. Given the importance and role of organizational structure in the efficiency of employees' behavior and performance, much research is needed to confirm or refute previous findings. To do so, the present study has tried to investigate the relationship between organizational structure and productivity of human resource management in Electricity Distribution Company in Ardabil Province. So the following hypotheses will be examined.

The main hypothesis of this study is that "there are significant differences between organizational structure and productivity of human resource management in Electricity Distribution Company in Ardabil Province".

Secondary research hypotheses are determined as follows:
1) There is a significant difference between complexity and productivity of human resource management in Electricity Distribution Company in Ardabil Province.
2) There is a significant difference between formality and productivity of human resource management in Electricity Distribution Company in Ardabil Province.
3) There is a significant difference between concentration and productivity of human resource management in Electricity Distribution Company in Ardabil Province.

**MATERIALS AND METHODS**

In this study, research method is cause-comparison and finally to conclude about the research hypotheses the analytical-description method was used. The research population of the current research includes all employees
of Electricity Distribution Company of Ardabil province distributed in different cities of the province cities from which 210 people have been chosen using random sampling in accordance with Morgan.

To measure organizational structure, standard questionnaire of organizational structure (Stephen Robbins), and Productivity Questionnaire (Smith et al, 1998) were used. For determining the validity of data collection tool of the study, the formal or symbol validity was used.

The test the reliability of the questionnaire, it was performed on 40 employees using the Cronbachs alpha coefficient (Table 1). Statistics showed that the research questionnaire has a high reliability.

**Table 1:** Reliability of the test questions of organizational structure and productivity of human resource management

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th>N of Items</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complexity</td>
<td>7</td>
<td>0.75</td>
</tr>
<tr>
<td>Formality</td>
<td>7</td>
<td>0.72</td>
</tr>
<tr>
<td>Dimensions of Organizational Structure</td>
<td>10</td>
<td>0.76</td>
</tr>
<tr>
<td>Concentration</td>
<td>42</td>
<td>0.96</td>
</tr>
</tbody>
</table>

In order to analyze the data obtained in this study, using descriptive statistics, status indicators of each of the variables in the study population have been investigated. Finally, using inferential statistics (F test), differences between variables were evaluated.

**RESEARCH LIMITATIONS**

It has been tried to avoid possible limitations in the current research, but some limitations are inevitable in any research. This research is not exception in this regard and suffers from the following limitations:

1) The necessary data to confirm or reject the hypotheses was collected through questionnaires in the current research, like most of the similar studies in the field. The problems of communicating with respondents and creating a reliable atmosphere for them to provide accurate and exact answers and removing their stress and anxiety have been felt during the research process.

2) Since the employees in focus were not fully aware about the importance of the results of this study, they have not cooperated in a real sense of word.

**RESULTS OF THE STUDY**

In this section, the results of variables analysis through descriptive statistics about the status of variables, the results of inferential statistics to generalize the results of the sample to the whole population and the results of overall analysis were included. In The following table (Table 2) the results of descriptive statistics show that the mean score of independent variables and their dimensions and dependent variable is symmetric in the studied people with no deviation from normal.

**Table 2:** Descriptive Results of the independent and dependent variables

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complexity</td>
<td>201</td>
<td>13</td>
<td>28</td>
<td>21.34</td>
<td>3.443</td>
<td>11.857</td>
</tr>
<tr>
<td>Formality</td>
<td>197</td>
<td>13</td>
<td>33</td>
<td>21.85</td>
<td>4.462</td>
<td>19.912</td>
</tr>
<tr>
<td>Concentration</td>
<td>187</td>
<td>19</td>
<td>42</td>
<td>27.79</td>
<td>4.755</td>
<td>22.610</td>
</tr>
<tr>
<td>Productivity of human resource management</td>
<td>136</td>
<td>45.00</td>
<td>88.00</td>
<td>68.44</td>
<td>8.45</td>
<td>71.56</td>
</tr>
</tbody>
</table>

**Testing the research hypotheses based on one-way ANOVA (F test):**

To investigate the relationship between organizational structure and productivity of human resource management the design of hypotheses is as follows:

Null hypothesis: There is no significant difference between the dimensions of organizational structure and productivity of human resource management in Electricity Distribution Company in Ardabil Province. H0: P

Hypothesis 1: There is significant difference between the dimensions of organizational structure and productivity of human resource management in Electricity Distribution Company in Ardabil Province. H1: P ≠ 0
**Table 3:** Squares mean (ANOVA) of degree of productivity of human resource management, different levels of dimensions of organizational structure (complexity, formality, centralization)

<table>
<thead>
<tr>
<th>Productivity of human resource management</th>
<th>Organization structure</th>
<th>Complexity</th>
<th>Formality</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.O.V</td>
<td>df</td>
<td>df</td>
<td>df</td>
<td>df</td>
</tr>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>987.87</td>
<td>0.000</td>
<td>674.12</td>
</tr>
<tr>
<td>Within Groups</td>
<td>194</td>
<td>17.88</td>
<td>49.33</td>
<td>49.32</td>
</tr>
</tbody>
</table>

- Regarding the main hypothesis of the study, since the amount of Sig. is 0.000 (Sig. =0.000), the null hypothesis is rejected with an error of less than one percent and the opposite hypothesis i.e. hypothesis 1 is confirmed. As a result, there is a significant difference between organizational structure and productivity of human resource management in Electricity Distribution Company in Ardabil Province.

- Regarding the first sub-hypothesis (complexity), one of the dimensions of organizational structure, based on table 3 the amount of Sig. is 0.000 (Sig. =0.000), the null hypothesis is rejected with an error of less than one percent and the opposite hypothesis i.e. hypothesis 1 is confirmed. As a result, there is a significant difference between complexity and productivity of human resource management in Electricity Distribution Company in Ardabil Province.

- Regarding the second sub-hypothesis (formality), one of the dimensions of organizational structure, based on table 3 the amount of Sig. is 0.000 (Sig. =0.000), the null hypothesis is rejected with an error of less than one percent and the opposite hypothesis i.e. hypothesis 1 is confirmed. As a result, there is a significant difference between formality and productivity of human resource management in Electricity Distribution Company in Ardabil Province.

- Regarding the third sub-hypothesis (concentration), one of the dimensions of organizational structure, based on table 3 the amount of Sig. is 0.000 (Sig. =0.000), the null hypothesis is rejected with an error of less than one percent and the opposite hypothesis i.e. hypothesis 1 is confirmed. As a result, there is a significant difference between concentration and productivity of human resource management in Electricity Distribution Company in Ardabil Province.

**Table 4:** Comparison of means of different levels of organizational structure through Duncan method at the level of 0.01

<table>
<thead>
<tr>
<th>Dimensions of organizational structure</th>
<th>organizational structure</th>
<th>Complexity</th>
<th>Formality</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>High level</td>
<td>24.25</td>
<td>B</td>
<td>24.14</td>
<td>B</td>
</tr>
<tr>
<td>Medium level</td>
<td>24.14</td>
<td>B</td>
<td>27.71</td>
<td>B</td>
</tr>
<tr>
<td>Low level</td>
<td>24.14</td>
<td>B</td>
<td>30.70</td>
<td>A</td>
</tr>
</tbody>
</table>

According to the Duncan table (Table 4), it is observed that there are significant differences between different levels of organizational structure and productivity of human resource management.

- There is a difference between high and middle levels and low level of complexity and the difference is high in the low level of productivity of human resource management and reaches its highest rate.
- There is a difference between high and middle levels and low level of formality and the difference is high in the low level of productivity of human resource management and reaches its highest rate.
- There is a difference between high and middle levels and the low level of concentration and difference is high in the low level of productivity of human resource management and reaches its highest rate.

**DISCUSSION AND CONCLUSION**

It is necessary to have tools to obtain productivity of human resource management. One of the necessary tools for growing productivity of human resource management is existence of organizational structure conforming to productivity of human resource management concepts. The research results show that there is a meaningful difference between different levels of organizational structure aspects and productivity of human resource management in Electricity Distribution Company in Ardabil Province and this difference was felt between low, middle and high levels. Also in assigning priority of variables, the effect of formality and complexity variables...
have been the same but concentration variable has the highest effect on productivity of human resource management.

The present research has resemblance with Nazem (2010), Majidi (2011) Azma et al., (2009) and Omidi (2007). Company officials and state agencies should also bear in mind that in the competitive world "increasing the productivity of human resource management" has been referred to, sometimes, as a tool and sometimes as a target and due to the importance of human resource management as the most valuable community asset, recognizing factors affecting the productivity of human resources management can be effective in any organizations to increase productivity and competitiveness and among these factors, organizational structure is considered as one of the most effective ones. Based on the findings of the current research, the following points are recommended for future research:

- To investigate the relationship between organizational structure and productivity of human resource management with regard to people's personality.
- The influence of individual factors on organizational productivity.
- To investigate the relationship between leadership style and efficiency with regard to organizational structure.
- To investigate the relationship of employees, and organizational productivity.
- The impact of organizational structure on the ability of government organizations.

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