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## **DETERMINING THE IMPACT OF HUMAN RESOURCES ACCOUNTING ON THE PERFORMANCE OF PERSONNEL DEPARTMENTS AND STATE ENTERPRISES (CASE STUDY: YAZD EXECUTIVES)**

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### **ABSTRACT**

The aim of this study was to examine the impact of human resource accounting in the performance of executive departments and public enterprises in Yazd province. This is an applied study in terms of research objective and non-experimental in terms of data collection method and descriptive in terms of correlation-descriptive method. The research community includes all executive staff of Yazd consists of 1,032 people who were engaged in this task in 62 executives. Sampling method is stratified. Number of samples in this study was measured 226 people using Cochran formula. The main tool for data collection was a questionnaire. The Expert Panel was used for assessing the validity and reliability was established by calculating Cronbach's alpha coefficients for the different sections of the questionnaire (0.83). Staff performance was measured using components of quality of work, quantity of work, cooperation, trust, accountability, job knowledge, responsibility and innovation. The results showed that the average occupational knowledge equals to 3.97 that demonstrates a high level of job knowledge. The mean of accountability is 4.27 which reveal the functional organization of administrative staff in the Yazd province. Level of quantity commitment with the average of 3.30 has the lowest amount in the dimensions studied. Monetary value on human resource accounting with the beta value of 0.482 explains about 37.3% of variance related to staff performance. 18.7% of the performance of the executive organs of Yazd province is identified by measuring the value of non-monetary employee. An increase in the value of non-monetary human resource measurement will increase 0.231 unit in the performance of employees.

**Keywords:** Accounting, Human Resources, Performance, Monetary Value, Non-monetary Value

### **INTRODUCTION**

In new management issues, human resources issues and strategies for evaluating these resources has gain a special and important position. In one hand, human resources are considered limited resources and on the other hand, less attention to it will affect all other resources. Today, it is no doubt that manpower resources must be priced and reflected as part of the assets in the balance sheet and the depreciation of these resources is calculated and considered in a certain method (Flamholtz *et al.*, 2002).

In many countries, depreciation of human resources are put at acceptable costs of tax collection which in turn increases profit (Flamholtz, 1999). It seems that in order to achieve goals such as economic and human value in financial reports, considering an organization's investment in human resources, human resource management, increasing efficiency and creating opportunities for evaluating personnel policies, assessment of human resources of an organization in terms of preservation, analysis and development, identifying non-operational and productivity gains resulting from investment in human resources and calculating the value that human resources creates in other financial and physical resources in an organization, human resources accounting should have quantitative and practical dimensions (Dawson,1994).

Human resource accounting is the process of measurement and diagnostic information about human resources and communicating this information to a defined area of interest. Human resource accounting not only includes measuring all the costs / investments in relation to the recruitment, placement, training

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and development of employees, it also involves determining the economic value of the human being (Flamholtz, 1999). The aim of this definition is to improve the quality of financial decisions taken by the organization's internal and external factors and closing human capital variables to the traditional spectrum of management decision variables (Hejazi and Fotouhi, 2009).

Sayed (2002) maintains that using the measured value of non-monetary human resources is effective on employee performance. Haghayeghi (2007) also maintains that by payments in line with the working values of employees, we can achieve the goals related to human resource development. Zaeiffard and Nazemi (2004) emphasizes that considering the amount of learning in accounting and human resources staff, employees' attention can be drawn to organization learning and encouraged them to learn. From a management perspective, the role of human resource accounting is the preparation of information required to attract, develop, allocate, maintain operation, evaluate and compensate human resources (Flamholtz *et al.*, 2003).

One of the main purposes of human resources accounting is to provide ways to measure the value of human resources based on monetary items that typically follow the concept of value-added criteria such as level of skill, knowledge, health, etc. Thus far, several methods and models have been proposed for valuing human resources in money (Tabarsa, 2003). In current processes of accounting that cost a lot to spend on recruitment, selection, training and development of employees, generally these costs are deemed as current expenses, but today, these costs that are incurred to make the sources of manpower in the future, should be shown as assets in the balance sheet (Sedaghati, 2004). The greatest challenge in human resource accounting is to determine the monetary value of human resources in different areas. Two main routes are used for this purpose:

1. Material costs, including the cost-based method developed for the company's employees;
2. The method of economic value, including models based on the economic value of human resources.

In human resource accounting, there are two kinds of actual costs and cost of substitute or replacement. Actual expense method to calculate the returns is against money spent in human resources and human resources replacement cost is the cost occurs in the time of changing employees. The cost of replacing an employee includes recruitment, selection, training, compensation and costs. This information of this method will help decide on the dismissal or replacement of employees (Cascio, 1991).

Methods for calculating the economic value is divided into monetary and non-monetary ways. In monetary method, Phelm Holz method in determining the value of individual organizations, random rewards valuation model, competitive suggestion model of Jones and Hakimian, compensation model, theory of economic value (present value), theory of replacement value, theory of value factor, theory of auctions (cost of lost opportunity) and method of returns efforts can be categorized (Hajiha, 2007). In non-monetary ways, knowledge, skills, and ability to take advantage of their health and job performance can also be seen as human assets. Non-monetary methods can be calculated by Likert pattern and Weling's model. Although of human resources valuation is done by the non-monetary methods, this method cannot be applied in taking absorption decisions and allocating and maintaining manpower (Ghorbani, 2010).

Sedaghati (2004) states that if human resources are other assets are considered and their economic value are assessed as one of the existing methods, values and figures obtained that not only do not show the real value, as personnel puts it, it also has no effect on their performance. Etemadi and Dianati (2009) maintains that letting people involved in accounting, it will not cause high performance of people even with good management accounting information. Hejazi and Fotouhi (2009) showed that there is a significant relationship between competitive strategy, organizational design and management accounting systems and practices to fit the contingency approach. Azarehgar (2007) and Azarm (2006) emphasizes that measuring non-monetary value of human resources is effective on employee performance. Haghayeghi (2009) believes that by increasing the age of workers, monetary measurement has a positive effect on employee performance. Hajiha (2007) concluded that measuring the impact of HR on non-monetary value of employee performance evaluation, employees performance will change. Ehsani (2006) found a direct relationship between non-monetary valuation of human resources and human resource

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effectiveness and emphasizes that in organizations that are doing non-monetary valuation have better performance. Takouchi and Nounaka (2010) in a study with a formulation of personal knowledge and expertise, they involved their expertise in the formula and they suggested to organization managers to put their payment based on mentioned formula. After one year, they found that employees of organizations that apply their payments based on the formula (human resources accounting, with emphasis on knowledge and skills) are trying to upgrade their knowledge and skills in their own specialized fields. In studying the simultaneous relationship between organization's payment methods and applying new plan in payment, they concluded that there is a significant relationship between strategy of organization payment based on human resources accounting and management and employees performance.

According to the results obtained by comparing the performance of employees, Downport (2009) found that in the companies that amount of learning and skills in performance are considered by management and organization, and commensurately the amount they receive will increase; employees who have a much higher quality and effort with greater satisfaction and motivation. In the companies that there are innovative and powerful forces, employees are evaluated by human resources and innovation plays a role in employees' assessment. The overall goal of this study is to determine the impacts of human resources accounting on the staff performance of Yazd Province executives that is done by determining the impact of monetary and non-monetary value of human resources on the Province's staff performance.

## MATERIALS AND METHODS

This research method is descriptive-correlation. This article uses the theories, laws and principles of human resource accounting results to evaluate the performance of employees. In this study, a questionnaire was used as assessment tool. In terms of objective, this is an applied study and in terms of data collection method, it is a non-experimental study and a descriptive-correlation study in terms of research method which collect data in a field research method. Statistical community of this study consists of all executives' staff of Yazd city who are 1032 people who are carrying out their tasks in 62 executive corporate ho has a history of less than two years. Sampling method is stratified which the number of employees were chosen proportionate with sample size in a simple random method. The sample size in this study were 226 patients using Cochran formula. The main tool for data collection was a questionnaire. The Expert Panel was used for assessing the validity and reliability of research tool was obtained by calculating Cronbach's alpha coefficients for the different sections of the questionnaire. To select a model for the study of human resource accounting, the researcher used Schaltz and Becker's human resource accounting model that includes two components of the monetary and non-monetary value of human resources and for the study of human resource accounting. Also, to evaluate the performance of employees, the researcher used Sharifi *et al.*, model (2008). In this model, performance of employees is divided into components of quality of work, quantity of work, cooperation, trust, accountability, job knowledge, accountability and innovation.

## RESULTS AND DISCUSSION

### Findings

**Table 1: Descriptive statistical analysis of data and Employee Performance**

Variable	Mean	Sd	Median	Mode	SD	Variance
Professional knowledge	3.97	0.038	3.95	3	0.572	0.327
Accountability	3.42	0.033	3.40	2.33	9.484	0.235
performance quantity	3.30	0.031	3.27	3.27	0.454	0.206
Performance quality	3.40	0.032	3.37	3.37	0.476	0.226
Collaboration	3.61	0.034	3.58	3.58	0.498	0.248
Responsibility	4.27	0.041	4.24	4.90	0.604	0.365
Innovation	4.04	0.04	4	4.63	0.592	0.351

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**Organizational Performance:** In Table 1, each of the indicators of mean, median, mode, standard deviation and variance are given. The results showed that the mean of professional knowledge equals to 97/3 that has demonstrated a high level of professional knowledge. Mean of responsibility is 4.27 which reveal responsibility of staff administrative organizations in Yazd. Quantity commitment level of performance with the average of 3.30 has the lowest quantity n the dimensions studied.

**Normality of the Data:** Multivariate distribution of the data and its normality is an issue that its negligence by the researcher could lead him to the wrong conclusion. Zero value for variables slope and elongation was observed that means a coincidence or stretching it distributed variable with a normal distribution. Critical values that have been obtained from the division of slope and elongation into their standard error can be compared to 2.58. As reported in Table 2, none of the critical value obtained is greater than 2.58 and this indicates that observed variables have no significant difference with a normal distribution and this represents a multivariate normal distribution.

**Table 2: Unvaried and multivariate normality indicators**

Variable	Minimum	Maximum	Slope	Slope critical ratio	Elongation	Elongation critical ratio
Professional knowledge	2.214	3.857	2.214	0.377	0.278	0.617
Accountability	1	4.429	0.163	0.724	1.289	2.458
performance quantity	2	4	-0.204	-0.902	0.601	1.332
Performance quality	2.222	3.889	-0.153	-0.680	-0.809	-1.759
Collaboration	1.556	4.222	-0.311	-1.378	0.894	1.981
Responsibility	1.920	4.690	0.145	0.644	-0.563	-1.148
Innovation	1.33	4.530	0.163	0.722	-0.319	-0.707

**Monetary Accounting:** The results show that 36.6% of respondents believe that in their organization, the economic value of the skills of working of employees is considered as corporate assets in a moderate amount (human assets). 39% stated that in the organization, economic value related to employees' education promotion is considered as corporate assets in a moderate amount (human assets). 31.1% believed that in their organization, the economic value of the training and development of staff awareness is considered as corporate assets in a moderate amount (human assets) and 46.1% of subjects believe that in their organization, the economic value of professional education and staff practice is considered as corporate assets in a moderate amount (human assets).

**Non-monetary Accounting:** Results achieved showed that 44.9% of subjects believed that in the organization, non-monetary value related to improving education staff is considered as corporate assets in a moderate amount (human assets) and 37% stated that in the organization, non-monetary value related to retraining and updating employee information and knowledge is considered as corporate assets in a moderate amount (human assets) and 44.5% also maintains that in the organization, non-monetary value related to applied professional training of Staff is considered as corporate assets in a moderate amount (human assets). Also, 37.8% stated that in the organization, non-monetary value related to improving education staff is considered as corporate assets in a moderate amount (human assets) and eventually, 34.3% believed that in the organization, non-monetary value related staffs' physical education that leads to continuous and useful service is considered as corporate assets in a moderate amount (human assets).

**Measuring the Impact of HR Monetary Value on Employee Performance:** In order to examine the impacts of measuring monetary value of human resources on the performance of employees in the Executive Office of Yazd Province, regression was used. Given that the coefficient of determination  $R_2$  equals to 0.373, so it can be stated that 37.3% of the performance of executive offices of Yazd Province is explained by measuring monetary value of employees.

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**Table 3: Regression coefficients table to determine the monetary value of human resources**

Step	Variable	R	R <sup>2</sup>	R <sup>2</sup> <sub>Adj</sub>
1	Monetary value	0.611	0.373	0.368

Based on the results of table (4) and according to the standardized regression coefficient, it can be said that monetary value on human resource accounting with the beta value of 0.482 explains almost 37.3% of variance related to employees' performance.

**Table 4: Effects of measurement variability of monetary value of human resources one employees' performance**

Independent variables	B	Beta	t	Sig
Constant coefficients	47.046	-	9.90	0.00
Monetary value	0.482	0.482	7.10	0.00

Based on the regression coefficients and constants obtained from the stepwise multiple regression analysis, research regression equation was obtained as below:

$$Y = 47.046 + 0.482x_1$$

It can be said that a unit increase in the measure of the monetary value of human resources resulted in 0.482 units of increase on employees' performance. So we can conclude that this test regression model is statistically significant.

**Measurement of Non-monetary Value of Human Resources on Employees' Performance:** To investigate the effect of non-monetary measure of the value of human resources of employees' performance, regression analysis was used. Since the coefficient of determination (R<sup>2</sup>) obtained is equal to 0.187, It can be said that 18.7 percent of employees' performance of employees working in executive offices of Yazd Province is explained by measuring the non-monetary value of employees.

**Table 5: Regression Coefficients table for the value of non-monetary human resources**

Step	Variable	R	R <sup>2</sup>	R <sup>2</sup> <sub>Adj</sub>
1	Non-monetary value	0.387	0.187	0.166

**Table 6: The coefficients of the variable parameter to measure the value of non-monetary impact related to human resources staff performance**

Independent variables	B	Beta	t	Sig
Constant coefficients	11.89	-	9.90	0.00
Monetary value	0.531	0.231	3.42	0.00

Based on the regression coefficients and constants obtained from the stepwise multiple regression analysis, research regression equation was obtained as follows:

$$Y = 11.89 + 0.531x_1$$

So we can conclude that the regression model of this test is statistically significant. So it can be stated that an increase in measurement level of non-monetary value of human resource causes 0.231 unit of increase on the performance of employees. So we can conclude that the regression model of this test is statistically significant.

**Conclusion**

Human resource accounting is the process of identifying and providing information about human resources to facilitate management in an organization. In other words, human resources accounting can help managers effectively and efficiently use their services by providing the required information. Some experts in human resources accounting stressed the potential importance of non-monetary criteria in

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decision-making. Knowledge, skills, health, capacity utilization and job performance of employees can be treated as any other asset. But the fundamental problem in this discussion is that human resources accounting system that ought to consider human resources information fostering has not yet been used by any organization and therefore usefulness of human resources accounting information has not specified for organizations and companies. Based on the results achieved from this study, the following recommendations can be offered:

- It is suggested that the value of non-monetary assets related to employees' business skills be considered as organization assets (human assets).
- It is suggested that the value of non-monetary assets of the organization for the promotion of education among employees (human assets) be considered;
- It is recommended that non-monetary value of the organization related to re-training and raising awareness and information of employees be considered as organization assets (human assets).
- It is recommended that non-monetary value of the organization related to applied and professional training of staff be considered as organization assets (human assets).
- It is recommended that non-monetary value of the organization related to improving education staff be considered as organization assets (human assets).
- It is recommended that non-monetary value of the organization related to staffs' innovation be considered as organization assets (human assets).
- It is recommended that non-monetary value of the organization related to staff replacement (selection, recruitment and preparation) be considered as organization assets (human assets).
- It is recommended that non-monetary value of the organization related to improving education staff be considered as organization assets (human assets).

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