



EDUCATING A HUMAN RESOURCES ACCOUNTING MODEL IN THE MASKAN BANK BRANCHES OF SHIRAZ

EDUCAR UN MODELO DE CONTABILIDAD DE RECURSOS HUMANOS EN LAS SUCURSALES DEL BANCO MASKAN DE SHIRAZ

EDUCANDO UM MODELO DE CONTABILIDADE DE RECURSOS HUMANOS NAS AGÊNCIAS DO BANCO MASKAN DE SHIRAZ

Ghazanfar Baghdadam ¹
Saeed Sayadi ²
Hamdolla Manzari Tavakoli ³
Sanjar Salajegheh ⁴
Ayob Sheykhi ⁵

Abstract: The aim of the present study is to Educate a human resources accounting model in the branches of Maskan Bank of Shiraz. The research population to test the model included 30 experts. The opinions of 200 managers, deputies, and head of the headquarters, deputy of the headquarters, bank officials and experts of the branches were used to measure variables in branches of Maskan Bank in Shiraz. This research is a descriptive research conducted by using survey method. It is also a developmental-applied research in terms of objective. A combination of library and field studies was also used to collect the data. The data collection tool to measure non-monetary valuation was a questionnaire whose validity and reliability were confirmed. Monetary valuation was done using the information obtained from human resources development management of Fars Province Maskan Bank. Data were analyzed by SPSS24 software and Excel software. The research results confirmed the proposed model and showed that non-monetary valuation components used in this study included supply cost, health services cost, welfare cost, sports club cost, holding training course cost, salaries, overtime, appointment cost, and selection cost. Non-monetary valuation in this study also includes motivation and reward, commitment and loyalty to the organization, creativity, leadership skills, participation, communication, decision making, change, professional skills, applying positive self and

¹ Islamic Azad University, Kerman, Iran.

² Islamic Azad University, Kerman, Iran.

³ Islamic Azad University, Kerman, Iran.

⁴ Islamic Azad University, Kerman, Iran.

⁵ Shahid Bahonar University, kerman, Iran.



others' capabilities, and development of team capabilities. By educating this model employees can reach prosperity along with Bank's achievement.

Keywords: Educating human resource accounting, monetary valuation, non-monetary valuation.

Resumen: El objetivo del presente estudio es educar un modelo de contabilidad de recursos humanos en las sucursales del Banco Maskan de Shiraz. La población de investigación para probar el modelo incluyó 30 expertos. Las opiniones de 200 gerentes, diputados y jefe de la sede, adjunto de la sede, funcionarios bancarios y expertos de las sucursales se utilizaron para medir variables en sucursales del Banco Maskan en Shiraz. Esta investigación es una investigación descriptiva realizada utilizando el método de encuesta. También es una investigación aplicada al desarrollo en términos de objetivo. También se utilizó una combinación de biblioteca y estudios de campo para recopilar los datos. La herramienta de recopilación de datos para medir la valoración no monetaria fue un cuestionario cuya validez y fiabilidad se confirmaron. La valoración monetaria se realizó utilizando la información obtenida de la gestión de desarrollo de recursos humanos del Banco Maskan de la provincia de Fars. Los datos fueron analizados por el software SPSS24 y el software Excel. Los resultados de la investigación confirmaron el modelo propuesto y mostraron que los componentes de valoración no monetaria utilizados en este estudio incluyeron el costo de suministro, el costo de los servicios de salud, el costo del bienestar, el costo del club deportivo, el costo del curso de capacitación, los salarios, las horas extra, el costo de la cita y el costo de la selección. La valoración no monetaria en este estudio también incluye motivación y recompensa, compromiso y lealtad a la organización, creatividad, habilidades de liderazgo, participación, comunicación, toma de decisiones, cambio, habilidades profesionales, aplicación de capacidades positivas de uno mismo y de otros, y desarrollo de capacidades de equipo. . Al educar a este modelo, los empleados pueden alcanzar la prosperidad junto con los logros del Banco.

Palabras clave: Educación en contabilidad de recursos humanos, valoración monetaria, valoración no monetaria.

Resumo: O objetivo do presente estudo é Educar um modelo de contabilidade de recursos humanos nas agências do Maskan Bank of Shiraz. A população de pesquisa para testar o modelo incluiu 30 especialistas. As opiniões de 200 gerentes, deputados e chefe da sede, vice da sede, funcionários do banco e especialistas das agências foram usadas para medir variáveis nas agências do Maskan Bank em Shiraz. Esta pesquisa é uma pesquisa descritiva realizada usando o método de pesquisa. É também uma pesquisa aplicada ao desenvolvimento em termos de objetivo. Uma combinação de biblioteca e estudos de campo também foi usada para coletar os dados. O instrumento de coleta de dados para mensurar a avaliação não monetária foi um questionário cuja validade e confiabilidade foram confirmadas. A avaliação monetária foi realizada com base nas informações obtidas na gestão do desenvolvimento de recursos humanos do Banco Maskan da Província de Fars. Os dados foram analisados pelos softwares SPSS24 e Excel. Os resultados da pesquisa confirmaram o modelo proposto e mostraram que os componentes de avaliação não monetária utilizados neste estudo incluíram custo de fornecimento, custo de serviços de saúde, custo de assistência social, custo de clube esportivo, custo de realização de treinamentos, salários, horas extras, custo de nomeação e custo de seleção. A avaliação não monetária neste estudo também inclui motivação e recompensa, comprometimento e lealdade à organização, criatividade, habilidades de liderança, participação, comunicação, tomada de decisão, mudança, habilidades profissionais, aplicação de capacidades positivas do eu e de outras pessoas e desenvolvimento de capacidades da equipe . Ao educar esse modelo, os funcionários podem alcançar a prosperidade juntamente com as conquistas do Banco.

Palavras-chave: Educar contabilidade de recursos humanos, avaliação monetária, avaliação não monetária.



1 INTRODUCTION

In the current age when the main approach of organizations and companies is constantly changing (moving from industrial economy to post-industrial economy), the focus is on knowledge and information for survival and profitability, and human capital is at the core of this transformation. Hence, the potential success of organizations depends more on intellectual capabilities rather than physical assets. Thus, organizations should pay especial attention to improving and developing their intellectual capital and human capital. In fact, one of the most important tasks of managers is to use all available resources to achieve short-term and long-term goals of the organization. The efficiency and effectiveness of management in any organization means the ability of its managers in the way of preparing, developing, allocating and maintaining, and applying existing resources, and it requires correct information about organizational resources (Optall, 2014). Human resources are considered as the most valuable asset of the organization.

Now as you calculate the value of the assets, and set up an account for them and you have thorough and comprehensive information on the state of your physical and financial resources, having information about the economic value of scarce human assets, how much of the money spent on bringing up and training the specialist and required individuals is worth being regarded as the asset account, and how much is considered as the cost, is one of the weaknesses of accounting systems (Saadat, 2011).

Moreover, managers should obtain knowledge and information on the value of human assets so that they can use human resources efficiently and appropriately. Based on managers' need for information to make decisions about selecting, appointing and promoting human resources by applying human resources accounting, comprehensive and relevant information can be collected on the organization's human resources and provide them for decision makers (Navin, 2013). Human resource accounting is the process of identifying, measuring, and establishing communication between information to facilitate measurement of human resources in an organization (Kanter, 2014). In fact, human resource accounting can be considered as a combination of accounting and human resource management, and includes application of accounting concepts and methods within the scope of human resources management. In other words, human resource accounting is a measurement model and technique that can have a great effect on the way of management of an individual in an organization and it can be considered as identifying, quantifying and reporting the knowledge, skills and abilities of the organization's employees (Holtz, 2012). In this regard, one of



the important topics of management is making distinction between human resources and other resources of the organization, as human resources are elements with learning, changeability, innovation, and creativity abilities that can ensure long-term survival of the organization if managed well (Khajavi and Momtazan, 2014). By identifying individuals' costs and reviewing the expenditures (costing approach) on one hand and measuring the value of human assets (valuation approach) on the other hand, human resources accounting leads managers to make different decisions under similar conditions (Tabarsa and Hemmat, 2014). If you look at the financial statements of organizations, you will find that in conventional accounting, except for human resources, other factors are identified as the assets of the organization, but in the human resources area, it is not considered as factors of production, assets or capital. No system of accounting has been designed so far to consider the importance of this asset (Dianati and Malek Mohammadi, 2013). Moreover, lack of sufficient information about the economic value of human capital is considered as one of the weaknesses of current accounting systems (Rahmati and Rezaei, 2013).

Human resource accounting can be considered as a combination of the two areas of accounting and human resource management and it involves application of accounting concepts and methods in the area of human resource management. In short, human resource accounting is the art of valuing, systematically collecting and presenting human resources values in an organization's financial statements (Rahmati and Darueian, 2013). Human resource management is one of the main elements of management in organizations, and human resource accounting is one of the most important tools for measuring and evaluating monetary and non-monetary resources and human capital of the organization (Sabaghian, 2015). In the human resources evaluation process, users of financial information often face difficulty in properly understanding the human resources evaluation methods. Previous studies have shown that researchers are unable to provide a model free from inherent restriction for identifying organizations' human resources as assets. The main limitation of most of the models presented for evaluating human resources as assets is that researchers are unable to identify the effect of the environment on growth and maturity of employees. Additionally, human being is a creature with a variable nature and his or her efficiency varies according to the environmental conditions, so it is very difficult to express its value based on a sustained physical quantity (Karimdad Forsanghi, 2016). Human resource information is a creature of its age needs, that is, the expansion of the human knowledge of users of accounting information. In developing countries, and especially in Iran, skilled and specialized employees are scarce resources that management of all economic units and social institutions seek for them to



improve their performance and train their human resources to achieve the desired level of skill. Lack of information about the economic value of such scarce resources is considered among the weaknesses of existing accounting systems in Iran.

Given what was stated above, one can recognize the important role of human resources accounting information in enhancing the effectiveness of managers' and other stakeholders' decisions. In addition, since the efficiency and success of Iran's banking system, as a service organization, is largely dependent on the effective use of human resources, finding an answer to the questions of what is the level of Maskan Bank in Iran in terms of the applicability of human resources management methods and what are the most appropriate factors in this bank system (given the facilities of accounting and users' knowledge of information to analyze and increase the effectiveness) can be effective. In this regard, the researcher aims to answer the following questions:

1-What are the components of human resource accounting model in Shiraz Maskan Bank branches?

2-What is the status of human resources accounting model in Shiraz Maskan Bank branches?

Human resources accounting concept

Accounting is a set of rules and procedures by which the financial and economic information of an institution is collected, classified and summarized in the form of accounting reports and made available to stakeholders for decision making. Each accounting system has three functions, including information, control, and services. The most important of these functions is information. For this reason, accounting is essentially an information system. The accounting system accepts, and processes document-based information as data or input and ultimately provides various reports that are the output of the system (Maders, 2014).

Human resource accounting is the process of identifying and measuring information about human resources and reporting this information to interested people or stakeholders. In fact, human resource accounting is transforming the qualitative and intellectual concept of the value of human resources to an objective and quantitative form using accounting knowledge and it is related to three important parts of human resource, including identification, evaluation and reporting:

Identification: Detection of its quantity and quality and preparation of appropriate statistics.

Evaluation: Measuring economic value and determining its financial value.



Reporting: Preparing and presenting appropriate financial reports about it based on the management's need for information to make decision (Hess et al, 2014).

Information is considered a precious resource for economic units, and the size of energy and machinery is important. To make accounting information useful in decision making, accounting and financial reporting goals require that information to be appropriately relevant (Motmaeni et al, 2011).

According to the definition presented by American Accounting Association, it is the process of identifying and measuring information about human resources and reporting information to interested people and stakeholders. In fact, human resource accounting is transforming qualitative and subjective concept of value of human resources to quantitative and objective concept using the knowledge of accounting. It concerns with three important parts of human resources including identifying its quality and quantity, evaluating and measuring economic value and reporting. There is a good deal of finance involved (Karimdadi Forsanghi, 2016).

Models of human resources accounting systems

According to the model presented by (Holtz, 2012) to measure human resources, human resources costs can be classified into two main classes of ownership costs (service purchase) and learning costs. The ownership costs include direct costs such as selection, recruitment, employment and replacement, and indirect costs include employment and promotion within the organization. Learning costs include the costs of formal training, familiarizing with job and in-service training. In a human resources accounting system, these costs are reported in the assets with future economic benefits rather than consumption costs (Holtz, 2012). There are many methods for human resources accounting. Different methods should be applied based on the goal of information and the person using the information. The main challenge of human resources accounting is to select the best method for valuation of human capital. Various methods have emerged for human resource accounting. An economic organization is used to measure, develop and manage human capital. None of these methods have been generally accepted. There are different approaches as a basis for determining the monetary value of human resources, each of which applies a different model to determine the value of an employee in a company (Avazzadeh and Rayashkar, 2010).

Current value model: in his current value model, (Holtz, 2012) suggests that individuals need to be valued in terms of current value of the services they will provide in the future. Therefore,



(Holtz, 2012) defines an individual value to the organization as the current value of the total of services expected to be provided in the future, if the individual remains in the organization (Bontis et al, 2011).

-Real cost model: Berament proposes that education and development costs that are a part of real costs should be recognized as capital expenditures. He argues that education and development are expected to bring benefits to employees and organizations in next years. In addition, he argues that other employment costs should be considered as costs of the same period (Bullen and Novin, 2011).

Historical cost model: Historical cost model is one of the most popular methods due to its similarity to natural accounting method. This method requires knowledge of the investment costs for the employees. One of the shortcomings of this method is which cost should be considered as a consumer cost and which cost should be considered as an investment (Holts, 2012).

One of the methods of making decision on this issue is to classify human resources costs into education or training costs. From this perspective, educational costs include anything that is relevant to the current job which should be spent. Training costs include everything that is needed to prepare for development and should be considered as an investment. Another perspective that can be used is that all the costs of employment, testing, training and development should be covered. The decision about which one should be the cost and which one should be considered as an investment depends on the fact that how long the cost will benefit the company (Choi, 2015).

If the benefit of that cost is more than 12 months, it should be considered as an investment. Berger argues that what is important in this approach is that the users of information should not have a false view. Historical costs cannot represent value of an employee, but they are merely an evaluation of past costs. However, the benefits of historical costs allow us calculate the rate of return on investment and the costs of financial turnover. There are other problems in this method. One problem is that what the employee learns outside his or her job is not paid. Another limitation is that employees may be trained at different levels. Considering the inability of the historical cost model to make decisions on the present and the future, some prefer to use the replacement cost model (Bontis et al, 2011).

-Replacement cost model: This method was suggested by Likert that employee costs should be valued based on what is imposed on the organization when the valuable work leaves the organization. In fact, it includes the costs of return of the current employee investment as well as the costs of ownership, training and development for an alternative. The value of an employee is determined by the



cost of replacing a similar employee. Replacement costs can be defined as the costs imposed on organizations to replace an employee. Replacement costs are of three types.

Abres Berger stated that they include the cost of employing new employees for existing jobs, the cost of training new employees to achieve desirable level, and the cost of transferring employees to a new position or out of the organization. One of the benefits of this method is that it is based on pure reality: the cost of employing and training. One problem of this method is that it does not consider the professional ethics of employees. The replacement cost is based on the current value of the employees of an organization. This value is the current value of the services expected of employees in the future (Karimdadi Forsanghi, 2016).

-Organizational integration model: Bontis et al argues that the value of a company should be considered as a whole and then divided among different inputs of the company and divided based on the activity of each group of employees (Bontis et al, 2011).

-Bidding model: In this model, managers determine the values through bidding for the human resources of that organization. This approach offers competitive bidding for rare employees in an organization, for example, the cost of acquiring the employees related to these shortages. This view states that investment should take place from the potential of human resource surplus within the organization (Karimdadi Forsanghi, 2016).

Economic value model: This model was derived from theories of human capital. Economic value refers to the interest rate appropriate to net cash flow generated by the human resources of a company during their economic life. Some researchers view the economic value method as equivalent to the current value measurement technique or use it as opportunity cost attitude (Bontis et al, 2011).

Random model: The latest model is the most complex among the others. This attitude focuses on the value of HRA rather than the cost of HRA. It calculates the value of an employee based on the sum of the reduction in service value that the individual uses during his or her tenure in an organization. This model requires 5 different classes of information (Tang, 2015):

- The unique services that employee receives from the internal system of the organization.
- value of each of these services for the organization
- Estimation the individual's tenure in an organization
- Guessing on the services the individual may use in the future.
- The interest rate applied to future cash flows relative to their current value.

It is very difficult to achieve some of this information, such as the value of services. Bontis announced that the developer of the model, (Holtz, 2012), has used the price or revenue method



to determine the value of services. The (Holtz, 2012) price method requires that the price of the product to be determined per unit of service provided to the person. Holtz revenue method requires predicting the expected revenue from a company and allocating it to individuals and other sources and allocating its surplus to specific individuals. (Holtz, 2012) states that some of these measures may be difficult, and special measures should be used in certain conditions. The inclusion of HRA measures and the process of measuring HRA measures in management decisions are necessary for sustainability in the organization (Theeke, 2015). The HRA participation in the organization provides information that facilitates human capital investment with other investment plans and indicates the long-term benefits of such an investment. Companies that invest in their own human resources have the advantage of creating sustainable transformation (Deyvidson, 2012).

Different organizations require varying degrees of human resources accounting system based on the type of needs and facilities. The (Table 1) presents five accounting systems

Table 1- Human resource accounting systems (Choi, 2015: 241)

System 1	It has purposeful elementary personnel system without advanced capabilities
System 2	Estimating costs of selection and training – budgeting personnel costs individually - personnel policy based on cost benefit analysis
System 3	Moderate capability in human resource accounting - estimating and budgeting initial costs and replacement costs
System 4	It has an advanced human resource accounting system – planning based on standard personnel costs- the use of random models and modeling for predicting human resources relocation and future needs-retaining human resources based on replacement costs and opportunity cost- determining the economic value of work groups
System 5	It has the highest capability in human resource accounting - human resource planning based on contingency evaluation models - comparing investment returns with human capital expenditures – personnel decisions based on cost-opportunity analysis, opportunity, determining the economic value of individuals as well as business units.

2 METHODOLOGY

One of the features of scientific study for finding reality is the use of an appropriate research method. Selecting an appropriate research method depends on the objectives, nature and subject



of the research and the executives facilities. The objective of the research is to provide accurate and easy access to answer the research questions. This research is descriptive in terms of method and applied-developmental in terms of objective. It also uses field research to collect the data.

The research population in the process of developing model included the experts who had knowledge on the subject of the study. The experts of the present study were university professors and experts in policy making who participated in model development through Delphi technique, and 30 of them were selected as sample. The second group of research population also included deputies, head of the headquarters, deputy of the headquarters, and officials and the experts of the branches of Maskan Bank in Shiraz.

Due to the limited statistical population in this group, all individuals were selected as the sample and after determining the population size using Krejcie and Morgan, sample size was determined to be 200 people using stratified random sampling method. Two questionnaires were used to collect the needed data.

A specific type of questionnaire (opened and closed) consisting of general (demographic) and specialized questions was designed and implemented for obtaining the experts' opinion with the aim of finalizing the non-monetary valuation components of human resources accounting and research model. Moreover, a questionnaire consisting of 91 questions was used to assess the non-monetary valuation components of human resources accounting. The components of monetary valuation were measured based on the costs of Maskan Bank branches of Shiraz to retain and maintain the human resources based on Rial value. In this study, SPSS24 software and Excel software were used for data analysis.

3 Results

Status of the subjects in terms of gender: the gender of 199 subjects out of 200 subjects was identified. Among the respondents, 122 (61.3%) were male and 77 (38.7%) were female.

Status of subjects in terms of age: out of 200 participants in the study, 26 (13%) were between 20 and 30 years old, 111 (55.5%) were between 31 and 40 years old, 55 (27.5%) were between 41 and 50 years and 8 (4%) were 51 years and older.

Status of subjects in terms of the level of education: Among the employees studied, 4 (2%) had a diploma, 40 (20%) had an associate, 83 (41.5%) had a bachelor, and 73 (36.5%) had a master degree.



Status of subjects in terms of employment history: Among the respondents, 23 (11.7%) had an employment history of 1 to 5 years, 66 (33.5%) had an employment history of 6 to 10 years, 91 (46.2%) had an employment history of 11 to 20 years, and 17 (8.6%) had an employment history of 21 and 30 years.

Status of subjects in terms of organizational position: 35 (17.5%) of the subjects were banking officers, 104 (52%) were head and deputy of branch, 52 (26%) were head and the deputy of headquarters, and 9 (4.5%) were experts.

What are the components of human resources accounting model in Shiraz Maskan Bank branches?

In this study, the research variables were investigated through library studies (referring to written documents such as books, journals, etc.). Identifying the dimensions and indicators of each variable, an interview was conducted with relevant experts (including professors and specialists who had knowledge on the subject of human resources management). The interview was mainly semi-structured interview. In such interviews, the interviewer obtains different realities and facts from the interviewee during the interview.

As Likert scale was used to measure the fit of the introduced components, the number 3.00 which represents the average level was used to confirm the components and the mean expert opinions in Delphi method were used on effective components by using T2 test with theoretical value of 3.00. If the desired component score is more than theoretical value (3.00), the proposed component will remain in the model. All of the proposed components in this section have been approved by experts ($3 < \text{mean expert opinions}$).

The monetary valuation components used in this study based on the costs that the branches of the Maskan Bank of Shiraz spent on the retaining and maintaining of human resources and had a Rial value, were used, and the period in which the valuation was calculated relates to the year 2018. These data include cost of supply (medical tests), maintenance cost (health services), maintenance cost (welfare services), maintenance cost (sports club), training cost (holding training courses), service compensation (salaries), service compensation (overtime), the cost of recruitment (appointment), and the cost of selection. The relevant data were obtained from the Human Capital Development Management Department of Maskan Bank of Fars Province.

Identifying non-monetary components of human resources accounting One sample t-test was used to examine this question. The experts' opinion on the fit of the components of human resources accounting with the human resources accounting variable is presented in (Table 2).



H_0 : There is no fit between human resources accounting components and human resource accounting variable.

H_1 =There is a fit between the components of HR accounting and the HR accounting variable.

Table 2- One-sample t-test results to examine the fit between the components of HR accounting and the HR accounting variable

Variable	Theoretical mean =3.0				
	Observed mean	SD	Statistic t	df	p
Motivation and rewards	4.20	0.72	8.952	29	<0.001*
Commitment and loyalty to the organization	3.82	0.71	6.272	29	<0.001*
Creativity	3.96	0.68	7.641	29	<0.001*
Leadership skills	3.93	0.65	7.703	29	<0.001*
participation	4.00	0.65	8.226	29	<0.001*
communication	3.82	0.65	6.769	29	<0.001*
Decision making	4.20	0.67	9.628	29	<0.001*
Change	4.20	0.72	8.952	29	<0.001*
Professional Skills	4.30	0.76	8.635	29	<0.001*
Applying self and others' positive capabilities	4.28	1.02	5.573	29	<0.001*
Developing team capabilities	4.36	1.02	5.406	29	<0.001*

As seen in (Table 2), since the significance level corresponding to the t statistic for all components is less than 0.05, the hypothesis H_0 is rejected ($P < 0.05$) and considering positive t statistic and as calculated mean is more than 3 for these components, there is a fit between all human resources accounting components and human resources accounting variable. Therefore, it can be stated that human resources accounting components include motivation and reward, commitment to the organization, creativity, leadership skills, participation, communication, decision making, change, professional skills, applying positive self and others' capabilities and development of team capabilities from the perspective of experts. In addition, according to the mean obtained from the experts' opinions, team development capabilities are more important.



4 DISCUSSION

What is the status of human resources accounting model in the Maskan Bank branches of Shiraz? In this section, the qualitative and quantitative descriptions of the research variables using descriptive indices (mean, standard deviation, minimum, maximum, skewness and kurtosis) and bar charts are presented.

1-Qualitative description of the research variables: In this section, the scores of the main research variables are categorized, and then a frequency (Table 3) and bar chart is provided to gain a better view of the status of the variables.

A) Qualitative description of variable of non-monetary valuation of employees: The scores obtained from the mean questions related to the study variables were divided into five categories: Very low (1-1.8), low (1.8-2.6), moderate (2.6-3.4), high (3.4-4.2) and very high (4.2-5) to provide a qualitative description of this variable. The results are presented in (Table 3) and (Chart 1).

As seen, 8% of the employees are at moderate in terms of non-monetary value, 51% are at the high level and 41% are at a very high level. In other words, 92% of employees were higher than average in terms of non-monetary valuation, indicating high non-monetary value of employees.

Table 3- Frequency distribution of mean non-monetary valuation of employees

variable	options	f	%
non-monetary valuation	Very low	0	0
	low	0	0
	moderate	16	8
	high	102	51
	Very high	82	41



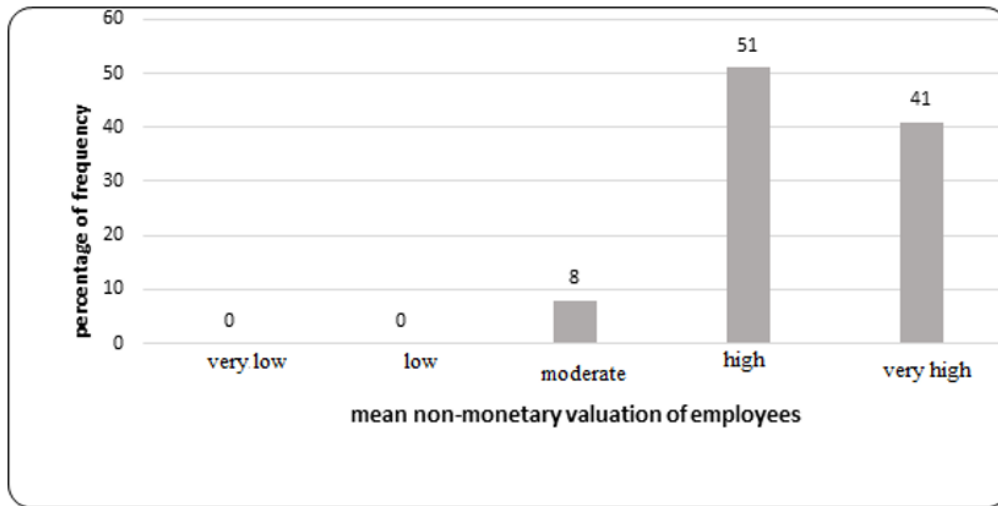


Chart 1- Bar chart of mean non-monetary valuation of employees

B) Qualitative description of non-monetary valuation of employees

The minimum score of the monetary value is 1129422 thousand Rials, and the maximum is 2775689 thousand Rials. The range was divided into five equal categories to provide a qualitative description of this variable. The results are presented in (Table 4) and (Chart 2). As seen, 16.5% of the employees were at very low level in terms of monetary value, 27.5% were at low level, 18.5% were at moderate level, 27% were at high level and 10.5% were at very high level. In other words, 44% of employees were below moderate, and 37.5% were above moderate, indicating that the monetary value of employees was relatively low.

Table 4- Frequency distribution of mean monetary valuation of employees

variable	options	f	%
monetary valuation	Very low	33	5.16
	low	55	5.27
	moderate	37	5.18
	high	54	27
	Very high	21	5.10





Chart 2- bar chart of mean monetary valuation of employees

2- Quantitative description of research variables

This section provides quantitative description of research variables (including non-monetary valuation, monetary valuation and employees' performance) and its components using descriptive statistics.

A) A quantitative variable description of non-monetary valuation of employees and its components

The employees' non-monetary evaluation questionnaire has 91 items. Each item is answered with options of very low, low, medium, high and very high, which are scored 1 to 5, respectively.

The non-monetary value variable of each employee is in fact the mean of the total scores given by them to the items. In addition, the value of each component of the non-monetary value variable is equal to the mean of the items related to that component. Accordingly, obtaining higher score on a variable by a person indicates that he or she has more characteristics of it. The values of the descriptive indices (including mean, standard deviation, minimum, maximum, skewness and kurtosis) of the non-monetary value variable and its components are presented in (Table 5).

As seen in (Table 5), the mean variable of non-monetary value of employees and all its components is greater than the expected mean of 3. Moreover, the negative skewness shows that the distribution of these variables is skewed to the left side, indicating that the level of scores of these variables tends to be higher. In addition, the skewness and kurtosis values are often out of range (-1.1), indicating the distance of distribution of these variables from normal distribution.



Table 5- Values of descriptive indices of non-monetary value variables and their components

Variable	min	max	mean	SD	skewness	kurtosis
Motivation and rewards	75.1	75.4	73.3	50.0	-37.0	50.0
Commitment and loyalty to the organization	30.2	90.4	11.4	38.0	-96.1	50.6
Creativity	38.2	63.4	77.4	49.0	-34.0	-54.0
Leadership skills	54.2	85.4	20.4	38.0	-55.1	36.3
participation	50.2	75.4	08.4	45.0	-32.1	30.1
Communication	38.2	69.4	17.4	46.0	-91.1	55.3
Decision making	71.2	00.5	19.4	41.0	-50.1	72.2
Change	40.2	00.5	12.4	49.0	-33.1	43.1
Professional Skills	29.2	86.4	16.4	45.0	-89.1	72.3
Applying self and others' positive capabilities	33.2	00.5	12.4	40.0	-15.1	53.2
Developing capabilities	team 18.2	00.5	21.4	43.0	-77.1	14.5
Non-monetary value of employees	75.2	59.4	08.4	33.0	-98.1	69.3

B) A quantitative description of the monetary valuation of employees and its components

Monetary valuation variable and its dimensions have been calculated based on the information obtained from Human Resource Development Management of Makan Bank of Fars Province, registered in 2018. Descriptive indices of this variable and its dimensions are presented in (Table 6). According to this table, it is seen that the mean monetary value of the employees is 1925572 thousand Rials. The largest share of the employees' monetary value belongs to maintenance costs, which is equal to 1778037 thousand Rials. Among the sub-components that explain the maintenance cost (as well as all sub-components studied), the largest share belongs to the cost of employees' housing, which is equal to approximately 980,000 thousand Rials. Among the components, the lowest cost (equal to 5590 thousand Rials) belongs to the supply cost component, measured with only one sub-component (cost of medical tests).



Table 6- Values of descriptive indices of monetary value variables and its components (based on Rials)

Variable	min	max	mean	SD	skewness	kurtosis
Supply cost (medical tests)	3000	7000	5590	1524	0.684-	1.190-
Cost of maintenance (health services)	100000	1450000	752000	339184	0.171	1.230-
Maintenance cost (health services)	6000	87000	45120	20351	0.171	1.230-
maintenance cost (welfare services)	122	1769	917	413	0.171	1.230-
maintenance cost (sports club)						
Cost of maintenance (housing)						
Maintenance cost (total)	980000	980000	980000	0	---	---
	1086122	2518769	1778037	359949	0.171	1.230-
Training cost (holding training course)	4500	7200	5982	1047	0.063-	1.598-
Service compensation (salaries)	13000	188500	97760	44094	0.171	1.230-
Service compensation (overtime)	3000	43500	22560	10175	0.171	1.230-
Service compensation (total)	16000	232000	120320	54269	0.171	1.230-
employment cost (appointment)	7200	13500	9838	1897	0.723	0.544-
employment cost (selection)						
employment cost (total)	4000	8700	5805	947	0.681-	0.042-
	11200	19390	15643	2302	0.244-	0.301-
Monetary value (total)	1129422	2775689	1925572	415824	0.161	1.235-

5 CONCLUSION

At current age when the main approach of organizations and companies is constantly changing, the main focus is on knowledge and information for survival and profitability,

and human capital is at the core of this transformation. Thus, the potential success of organizations depends more on intellectual abilities rather than physical assets. Therefore, organizations should pay especial attention to improving and developing their intellectual capital and human capital. Unfortunately, financial accounting and management accounting are not responsible for this transformation and change. In addition, the accounting and technology



paradigms related to them have not been conceptualized to calculate these economic transfers, and the continued use of current measurement tools are not appropriate to the conditions of this age. A group of researchers and professionals supporting human resource accounting and assuming these (human) resources as assets are certainly the origin of a paradigm. Modern theorists believe that individuals in their organizations are considered valuable assets. It should be noted that they are more important than the physical assets of the organization and should be measured based on an appropriate criterion. However, if we consider one of the most important innovations of the present century as creation of new organizations, the success of these organizations depends on the efficiently use of both human and non-human resources as well as the combination of their revenue and expenditures.

In such situation, the core of any organizational strategy and policy is individuals in the organizations. Therefore, the success or failure of an organization depends entirely on the way of attracting, measuring and recording its human resources. Managers of all business units and social institutions seek to enhance the performance of human resources by increasing the cost of financial resources and increasing the effectiveness and efficiency of the organization's operations through the development of human resources. Hence, human resources development decisions need useful information about these resources. Evaluating the performance and efficiency of human resources to achieve productivity and profitability is one of the most important goals of human resources accounting. By providing information on human resources evaluation criteria such as absenteeism rate, learning, job satisfaction, human capital return rate, organizational commitment, efficiency and effectiveness, learning and training costs, value added of each employee, human resources accounting determines the function of human resources in achieving the organization to its goals and strategies and overall organizational productivity, and thus provides the conditions for its promotion. Human resource accounting is the process of identifying and measuring information about human resources and reporting them to interested people. In fact, human resource accounting transforms the qualitative and subjective concept of human resources value into quantitative and objective form by using accounting knowledge. It deals with three important major parts about human resources including: identifying its quantity and quality, evaluating and measuring economic value, and financial reporting. A number of researchers have pointed to two aspects of human resource accounting: the monetary valuation method and the non-monetary valuation method. A questionnaire was designed and developed by a researcher with Delphi technique to measure human resources accounting in the branches of Maskan Bank of Shiraz with



two components: monetary valuation and its components (supply cost (medical tests), maintenance cost (health services), maintenance cost (welfare service), maintenance cost (sports club), training cost (holding training courses), service compensation (salaries), service compensation (overtime), employment cost (appointment), employment cost (selection) and non-monetary valuation and its components (motivation and reward, commitment and loyalty to the organization, creativity, leadership skills, participation, communication, decision making, change, professional skills, to use its and others' positive capabilities and development of team capabilities). The monetary valuation components used in this study were based on the components that the branches of the Maskan Bank of Shiraz spent to retain and maintain human resources and had Rial value.

REFERENCES

- Optall K. (2014), *Management Information System*, Translated by Ali Panahi, Azarakhsh Publications, 14(1), pp. 145- 156.
- Saadat A. (2011), *Human Resources Management*, SAMT Publications, 14th Edition, Tehran, 7(4), pp. 58- 66.
- Navin B., (2013), valuation of human capital" chartered accountant, 5(1), pp. 66-73.
- Kanter B. (2014), Relationship between job satisfaction and job performance in the public sector: A case study from India, *International Journal of Academic Research in Economics and Management Sciences*, 2(2), pp. 16-35.
- Holtz M. (2012), *Human Resource Accounting and its Implementation in University*, Malayer Thesis, 7(6), pp. 211- 219.
- Khajavi M. and Momtazan D., (2014), Critique on Performance Measurement Accounting Criteria and Proposal of Economic Value Added Criteria and Free Cash Flows for Reporting Business Unit Values, *Journal of Faculty of Administrative Sciences and Economics*, Isfahan University, 17(1), pp. 57- 78.
- Tabarsa A. and Hemmat G., (2014), Educating the Performance Evaluation Model of Branches of Banks and Credit and Financial Institutions (Case Study: Qavamin Bank) *Business Management Quarterly*, 1(2), pp. 127-143.
- Rahmati M. and Rezaei D., (2013), Challenges of Implementing the Human Resources Accounting System, *Tehran: Journal of Accounting Knowledge*, 3(1), pp. 117-137.
- Dianati M. and Malek Mohammadi G., (2013), Government Accountability and Accounting System in Iran, *Auditor Journal*, 8(2), pp. 413- 420.
- Rahmati F. and Darueian S., (2013), The Relationship between Human Resources Accounting and Human Resources Management, *Social, Economic, Scientific and Cultural Work and Community Quarterly*, 16(3), pp. 160- 170.
- Sabaghian R. (2015), Investigating the Relationship between Human Resources Accounting and the Performance of the Accounting Department Employees of Golestan Province, *Fifth National Conference and Third International Accounting and Management Conference*, Tehran, *Top Service Company*, 8(4), pp. 185- 193.
- Karimdadi Forsanghi F., (2016), Investigating the Relationship between Financial Information Quality and Human Resource Accounting in Afzalipour Hospital of Kerman, *Master Thesis*, Islamic Azad University, Kerman Branch, 6(4), pp. 65-77.



- Maders G. (2014), A study on relationship among leadership, organizational culture, the operation of learning organization and employees' job satisfaction, *The Learning Organization*, 14(2), pp. 155-185.
- Hess K. & Nealey S. & Owen T., (2014), a multitrait multimethod analysis of predictors and criteria of nursing performance"; *Organizational Behavior and Human Performance*, July, 27(6), pp. 311-320.
- Motmaeni M. & Ghasemzadeh A. and Shirazi H., (2011), The Interactive Role of Organizational Identity and Team Identity on Job Satisfaction and Transformational Behaviors, *Journal of Security Management Studies*, 9(2), pp. 287-304.
- Avazzadeh F. and Rayashkar G., (2010), Determinants of job satisfaction and its impact on employee performance and turnover intentions, *International Journal of Learning and Development*, 4(2), pp. 120-140.
- Bontis N. & Chua W. & Richardson S., (2011), intellectual capital and the nature of business in Malaysia, *Journal of Intellectual Capital*, forthcoming, 9(4), pp. 25-36.
- Bullen F. and Novin B., (2011), too much of a good thing? Absorptive capacity, firm performance, and the moderating role of entrepreneurial orientation, *Strategic Management Journal*, 34(5), pp. 622-633.
- Choi G. (2015), *Fundamentals of Human Resource Management*, 14(1), pp. 35-49.
- Tang N. (2015), Salesperson Creative Performance: Conceptualization, Measurement, and Nomological Validity. *Journal of Business Research*, 57(8), pp. 805-812.
- Deyvidson M. (2012), going the extra mile: cultivating and managing employee citizenship behavior, *Academy of management executive*, 18(4), pp. 85-93.
- Holts E. (2012), A model for human resource valuation on accounting review, 6(3), pp. 253-265.
- Theeke H. (2015), A Human Resource Accounting Transmission: shifting from failure to a future, *Journal of human resource costing & accounting*, 9(4), pp. 40-57.

ABOUT THE AUTHORS

Ghazanfar Baghdadam

Department of Management, Kerman Branch, Islamic Azad University, Kerman, Iran. E-mail: gh.baghadam@yahoo.com
 ORCID: <https://orcid.org/0000-0002-7689-2637>

Saeed Sayadi *

Assistant Professor, Department of Management, Kerman Branch, Islamic Azad University, Kerman, Iran. E-mail: Saeed.sayadi@gmail.com
 ORCID: <https://orcid.org/0000-0003-2917-9043>

Hamdolla Manzari Tavakoli

Assistant Professor, Department of Psychology, Kerman Branch, Islamic Azad University, Kerman, Iran. E-mail: hmanzari@iauk.ac.ir
 ORCID: <https://orcid.org/0000-0002-7805-6480>

Sanjar Salajegheh

Assistant Professor, Department of Management, Kerman Branch, Islamic Azad University, Kerman, Iran. E-mail: s.salajeghe@iauk.ac.ir
 ORCID: <https://orcid.org/0000-0002-3412-6731>



Ayob Sheykhi

Assistant Professor, Department of Statistics, Shahid Bahonar University, kerman, Iran. E-mail: sheikhy.a@uk.ac.ir

ORCID: <https://orcid.org/0000-0002-3731-6012>

Received on: 01-17-2020

Approved on: 02-22-2020

Published on: 03-18-2020

