

A Study on Method of Measuring Value of Human resource in Banks

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Abstract: With respect to the intensification of competition among companies, realization of importance of human resource by them as a strategic factor of organizations and need of management for information for decision-making, the issue of measuring value of human resource has gained attentions for many years. Human resource of an institute is a competitive edge of the present time and evaluation of these resources is of paramount importance in decision-making of institutes. As far as monetary criterion is concerned, the tool to measure human resource is human resource accounting. Attempt to measure activities related to creation of human capital will require the application of relevant and reliable tools. By employing human resource accounting, it would be possible to evaluate the investments proposed for human resource based on costing methods. Using historical cost models or human resource replacement model, it would be possible to measure and disclose us in accounting and management reports and basic financial statements. The present paper aims to present comprehensive information - including definition, history, importance, evaluation methods, and its special position - on human resource accounting (HRA), as one of the modern approaches in accounting. Meanwhile, by introducing human resource valuation models, we study possibility of measuring value of people working in banks, as an economic institution where human resource plays a crucial role and where information of HRA is used for decision-making of management, investment, etc.

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Introduction:

Management of business units calls the staff of their department as valuable resources in their annual reports. However, sufficient attempts are not made by the management to evaluate such resources and financial accounting systems and management of business units are unable to be responsive and helpful in this concern.

HRA deals with evaluation of people and the relevant economic results and evaluates investment in workforce. Most business units spend considerable sum on staffs training programs, without evaluating return of the investments. Some business units dispatch their managers to different training courses, without evaluating the obtained results precisely. Whenever the business unit is unable to pay for these courses, it stops the relevant training program. A HRA system should first identify those charges of human resource that should be divided from the other charges of a business unit. The employed methods should differentiate capital and current portions of the expenditures related to human resource. Capital portion of the expenditures concerning human resource is categorized into the portions such as employment, training, etc. Such information enables

management to make necessary decisions based on a realistic analysis of benefit expenditures and capital expenditures. Therefore, it creates an accurate basis for investors to evaluate business unit to make decision on investment.

Determining quantitative values for human resource is the first obstacle for creating HRA. All the business units use some methods for measuring sales, benefit, investment in installations and equipment, investment in inventories, etc. In spite of difficulty in determining intervals for depreciating costs, it is possible to measure costs concerning human resource such as training programs. Although it is possible to consider some costs concerning human resource as capital costs, how can a business unit determine quantitative values for honesty, skill, spirit, decision-making power, and intelligence of staffs? As determining quantitative value for these human factors seems to be difficult, recognizing the costs related to human resource, as current or capital, except cases in which such expenditures are identifiable, will be equally difficult. Measuring value of an asset (capital expenditures) is justified on the economic concept that an asset can gain promising interests for a business unit. Therefore, staff of a business unit plays a crucial

role in gaining promising successes; for this reason, staff values that should be mentioned in the annual reports of the relevant units as one of the major economic resources.

Tomas Kuhn, researcher and thinker on HRA, proposes that people of each group have a common paradigm within a period of time and they want to believe in some common models, values, paradigms and organizational symbols. According to this definition, a group of researchers and experts that support HRA and assuming these (human) resources as an asset definitely are source of a paradigm. The majority of modern theoreticians believe that people are considered as valuable assets in their organizations and they should be measured based on a suitable criterion. According to the theory of Thomas Kuhn, paradigms change, develop, and move slowly; however, this change occurs at the end. The paradigms proposed for human resource focuses on commitment of organization to human resource or people at the time it employs them. The emphasis is on managing abilities of staff. Such focus can be a completely acceptable method if it considers real criteria for valuation of human resource and financial information report concerning human resource. Future of HRA focuses on a change toward the new paradigm. However, if we consider creation of modern organizations as one of the most important innovations of the present century, success of these organizations depends on the effective use of sources, including human or non-human and combination of income and expenditures obtained from them. Doing so, axis of each organizational strategy and policy is its staff. Therefore, success or failure of an organization completely depends on how to acquire, measure and record value of its human resource. Managers of all economic units and social institution are seeking for actualization of potential power of human resource through spending financial cost. They attempt to provide conditions for growth, efficiency, and effectiveness of organization operations through developing human resource. Therefore, making decision on developing human resource requires useful information about these resources. Evaluating performance and return of human resource to achieve productivity and profitability is considered as one of the important objectives of human resource accounting. By providing some information on criteria for evaluation of human resource such as absence rate, learning, job satisfaction, rate of return on human capital, organizational commitment, efficiency and effectiveness, training and education costs, value added per employee. HRA specifies human resource performance of an organization in achieving its objectives and strategies and generally organizational productivity. This way, it paves way for its promotion.

The current accounting system, as an information system that provides different groups of users with their required information, does not measure and disclose financial information related to the most important economic units, i.e. human resource. On the other hand, in the developing countries, especially in our country, Iran, expert human resources are of the rare assets and managements of all the economic units are looking for them in order to promote its qualitative and quantitative level. Through spending heavy expenditure, it attempts to provide them with training in order to allow them to reach a favorable level. The present research attempts to provide practical basics to measure value of human resources in banks as one of the major professional references in which human resources play a crucial role in them.

Research Objectives:

One of the important objectives of human resource is quantification of economic value of people for organizations to provide useful information in order to make managerial and financial decisions. The main objective of the present research is to study possibility of implementation of historical cost model and economic value model for valuation of human resources in banks. Since bank staff plays a crucial role due to the professional activity in their institutes, they are considered as the important assets. They can be identified and reported through the relevant models by quantification of their value based on the monetary criteria.

Literature Review:

Research on HRA has started since 1960 and has developed concurrent to human management school. Attention to human resource, organizational psychology on effective leadership, and human capital economic theory were the principle incentives to emerge HRA. At the beginning, research in this field was in a fundamental and inapplicable manner; however, the issue of human resource gained attentions of researchers and organization early 1970. It was used practically in some small organizations and its information was applied for decision-making. About mid-1970, carrying out research in this field reduced, in both fundamental and practical manners. The reduction was caused by some reasons, including oppositions on valuation of human, disagreements on the measuring methods of human resource in practice, lack of experts, lack of paradigms and so on. However, interests in HRA have been resumed since 1980, which is attributed to the following reasons.

- Japan became as a strong competitor in world trade arena (attention to human resource)

- Type of the twenty-first century economy (service — technology and intangible types rather than industrial and tangible ones) in which brain ware and human resources were considered very important.

- Discovering the role of human resources and/or in other terms, the role of human resources management to reach productivity (human resources as the biggest source of competitive edge)

Therefore, HRA has gained attentions of most thinkers and managers since late twentieth century. Most companies all over the world accepted it as a basic principle and applied it in practice. For instance, in India, BHEL and Infosys and Reliance Industries practically applied HRA since the beginning of last decade of the twentieth century and showed human resource as assets in balance sheet. In 2000, Trade and Industry Ministry of Denmark obliged all the companies enlisted in the country to show information of customers, processes, and human capital in their annual reports and offered at least five indices for each. Further, it requested them to compare the results of the investment made in human resource with the ones obtained within the last two years and to offer detailed reports about them. Some research and studies conducted in the other countries are as follows:

In an experimental test, Flamholtz (1976) asked official accountants to choose one of the two people for taking a job. He provided the accountants with three types of information:

A) Traditional information on performance, B) Non-monetary information on HRA, C) Monetary information on HRA. The information on A, B and C was offered to the accountants. Despite Flamholtz's expectation, non-monetary information affected decisions.

Schwan (1976) studied the effect of human resource costs on the decisions made by bankers. The result of the research showed that including HRA information in financial reports leads to great difference in predicting net profit of a company.

Early 1967, a research team consisting Rensis Likert, R. Lee Brummet, William C Pyle and Flamholtz started and completed a project to describe HRA in R.G Barry company to determine historical cost of human resource. The outcome of the project showed that it was possible to calculate value of human resource using historical cost model.

Ogan also presented and implemented a human resource evaluation model in several accounting institutes (CPA). The results showed that measuring value of human resource using the pertinent models leads to a reasonable level of value of these resources.

A few studies were conducted on HRA in Iran within last years; most of them are in the form of academic research. No sample of application of HRA has been reported in practice so far. Some studies in Iran are:

-Hassan Ghorban (1994) carried out a research on HRA in an audit institute. In an experimental method and using Stochastic Rewards Valuation

Model, the researcher concluded that HRA could provide a method to measure advances of management in appreciation of value of their staff.

-Shahriari (1995) conducted a research on the effect of HRA information on users of accounting information in Iran. Statistical population of the research included instructors of accounting and PhD students of Tehran universities. The results showed that presenting HRA information on additional notes and management reports has higher significant effect on users and the maximum effectiveness was on the behavior of managers, investors, staff, and creditors.

-Ghorbani (2009) carried out a feasibility study on application of HR valuation models in the audit institutes member of the Iranian Association of Certified Public Accountants (IACPA). Statistical population of the research included members of IACPA with PhD or master degrees in accounting. Two models including historical cost model and economic value model were introduced in the research. A study also conducted on the feasibility of application of these models in audit institutes members of IACPA, as a professional reference in which human resource plays a crucial role. Then they studied significance of the relationship between the models and some features based on which the models were analyzed. The results of the research indicate that both models can be implemented and they can be used for quantification of human resource value. According to the results, the economic value model can be implemented more than the historic cost model, which was proved through statistical relations.

Human Resource Accounting (HRA):

Human Resource Accounting (HRA) is identification and evaluation of human resource of an institute and report to interested parties. There are three basic sections concerning human resource:

1. Identification: Identifying its quantity and quality and preparing appropriate statistics.
2. Evaluation: Measuring economic value and determining its financial rate.
3. Reporting: Preparing and offering appropriate financial reports thereof.

A comprehensive definition of HRA can be made like this: HRA is the process of measuring values obtained by an employee versus costs of his/her employment to retirement. In a simpler term, it can be known as determination of an employee's value for an organization. Not only does HRA include measurement of all costs and investment concerning employment, substitution, training and development of employees, but also it encompasses determination of human economic value in an organization. It aims to promote quality of financial decisions made by internal and external factors of an organization and to

approximate human capital variables to the traditional range of decision-maker management.

Human Resource Status in Banks:

Today, within the considerable growth of different aspects of technology, human resource is called as the most valuable resource of an organization. The importance of training and developing human resource and the effect of appropriate management on them have caused improvement of organization performance, developing strategies and different approaches to improve efficiency of human resource in knowledge-based organizations. In modern perspective, a bank acts like an enterprise that should be responsive to its administrative activities and its success is reflected in efficiency of its activities and finally in profitability of its operations. Although activities of a bank are performed under an overall policy and overall directorial and supervisory model, these are the staff that stand at the forefront and take on their roles. Therefore, the motto «*The main asset of a bank is knowledge of its staff*» is a fact. *Knowledge* is value creation and, in the new century, banks are in tough competition to gain such advantage, but it requires possessing an effective human resource with modern knowledge.

Human Resource Valuation Methods

The need of HRA for *valuation* is greater than its need for *costing*. The concept of human resource is based on value theory in public economy. Accordingly, human resource valuation methods are

- I. Economic value (Present Value): This theory is based on theory of capital value. According to the theory of Irving Fisher « Capital means capital value, discounted value of the future incomes. » Based on this theory, some researchers believe that market prices of assets are the discounted value of the revenues obtained from these assets; however, care should be taken that analyses of macroeconomic issues are not completely generalized at microeconomic level. Market price of assets is the price paid for all the potential interests and services of these assets. This issue is not true for staff's salary, as the paid salary is the price of staff's services in a specific time and/or a specific amount of task. Therefore, labor market price cannot be compared with assets price, as far as precise concept is concerned. Moreover, it can be concluded that labor market is highly affected by labor law, negative regulations, and collective bargaining contracts. Consequently, comparing labor market with other markets is not so practical. However, based on this theory, some believe that the future incomes obtained from services of human resource can be discounted and considered as human resource value. This method includes calculation and wage payment during a five-

year period and then discount of these payments by rate of return of appropriation assets in industry for recent years. This way, present value of amount of salary paid for the following five-year is calculated based on current year return.

- II. Replacement Cost: Replacement cost of human resource is replacement cost of human resource available in an organization. In this method, replacement cost encompasses the following items:
 - A- Costs of Employment: This cost includes direct and indirect costs.
 - Direct costs include:
 - 1- Cost of recruitment, including cost of initial search for the required human resource inside and outside an organization.
 - 2- Cost of choosing, including costs of choosing staff among qualified individuals
 - 3- Cost of employment, including cost of employing new people for an organization and taking appropriate position.
 - Indirect Costs, including cost of self-promotion and taking new positions in an organization
 - B- Cost of Training: This cost includes two parts including direct and indirect.
 - Direct costs include:
 - 1- In-service training, including costs of in-service training of staff
 - 2- Official Training: It includes cost of training programs and making an individual acquainted with organization.
 - Direct costs include:
 - I. Time of instructor, including cost of supervisors during training period
 - II. Losing productivity during training, including cost of the hours during which staff (except trainees) are not doing their assigned services during training period.
 - C- Cost of transfer or dismissal: Including the cost imposed an organization at the time of breach of duty of an individual. This cost includes direct and indirect parts.
 - Its direct cost includes cost of dismissal or breach of duty of an individual from an organization. Its indirect cost includes reduction of an individual's efficiency before transfer or dismissal and the cost caused by the unattended position in question until recruiting a new employee.

Not only does replacement cost theory considers an individual position in an organization, but also both transfer or dismissal costs of an individual and cost of reduction of efficiency.

Replacement cost can be defined as the cost incurred at the time of transfer of an employee. The cost measures replacement cost of an employee. These replacement costs are ones that should be incurred for replacing the employees who are working at present in

an institute or a unit. These costs are divided into two parts: 1-Positional or occupational replacement costs and 2-Personnel costs

▪ Positional Replacement Costs:

These costs should be paid for replacing an individual in an organizational position by a person who would be able to offer similar services in this organizational position. These costs consist of three parts, including labor supply, educational/instructional and resignation.

▪ Dismissal costs:

These are the sums spent on resignation of one or some organizational posts of employees. These costs include severance pay or bonus, cost difference before resignation, cost of unattended organizational position. It should not be forgotten that severance pay is in fact dismissal compensation (employees' termination benefit) and costs difference before resignation caused by reduction of productivity of an individual before resignation. Costs incurred by unattended organizational position are indirect costs affected by reduction of efficiency of the relevant unattended positions.

III. Value Coefficient: According to this theory, value of human resource equals the difference between the overall value of company and its book value.

In this calculation, intangible assets such as goodwill, loyalty, customers' dependency, and value of long-term contracts are regulated. In this method, value coefficients, which are the base of calculation, are determined by one of the following items:

- Educational and technical experiences
- Required experience for the relevant occupation
- Personal specifications
- Promotability
- Supply and demand
- Dependency of people on company and expectation of company to benefit from their services

In this method, an optional coefficient from zero to 5.2 is determined. In addition, staffs are categorized into four major levels, including advanced level management, management, supervisors, and employees.

With respect to above categorization, annual historical cost of staff is divided into four levels and share of each employee is multiplied by the determined coefficients. Therefore, the overall approximate value of human resource is obtained. If human resource value exceeds intangible assets (the difference between market value of company and net book rate), the coefficients will be regulated in a way that the difference is equal to items of intangible assets. The cost incurred for staff to recruit and train of human resource in a term is considered in the coefficients.

Consequently, the changes created in human resource value are shown during the term. As a result, profit and loss statement and balance sheet of human resource can be prepared and offered.

IV. Stochastic Rewards Valuation Model: This model encompasses definition of process of possibilities as a natural system, which is changed according to rules of possibilities. Measuring value of an individual for a business unit requires:

A) Estimating the period which it is expected that the individual offers his/her services to a business unit.

B) Measuring the services expected to be offered by the individual during this period.

Bonuses indicate the services offered to an organization as a result of playing organizational roles by different individuals. Therefore, measuring value of each individual for each organization includes levels; some of them are as follows:

- Defining a group of completely exclusive modes that each individual takes in each organization
- Determining value of each service mode for organization
- Periodic estimation of each individual in an organization
- Determining possibility of taking each service mode by an individual within a certain period in the future

V. Bidding Theory: According to this theory, a company is divided into investment centers and services of specialist human resource are bidden based on employment in these investment centers. This way, the manager who bids the highest price for services of human resource, employs the human resource. The agreed price is considered as the capital of the investment center. As far as concept is concerns, this method is based on performance appraisal of managers of different parts of economic unit encompassing the investment centers. Not only does each paradigm offers a different attitude, but also creates a different mechanism for calculating value of staff in an organization. Each paradigm is recommended with respect to the different systems, fields, and different theoretical structures by researchers.

Bidding theory is different from the rest of paradigms. According to this paradigm, staff valuation is performed by managers of an organization for competition on limited human resource available in the organization. Managers participate in a bid in order to compete and achieve rare human resources with the highest price. In this method, value is merely determined by managers.

VI. Historical Method: This method was the early attempt to determine staff value, which was achieved by Columbus - Ohio Company in 1976. This method

measured investment in human resource through 5 parameters of *employment, learning, formal trainings and familiarization, informal trainings and informal familiarization, experience and development.*

This theory is based on the common principles of accounting. According to this theory, the costs spent on staff directly leads to increasing their service value. Therefore, it leads to increasing value of human resource through calculating its historical cost. Human resource cost includes costs of staff employment and training.

Advantages and Disadvantages of the Offered Models to Determine Human Resource Value

I. Economic value (Present Value)

This theory is justified based on the principle that the profitability differences are caused by varieties of human asset performance.

The disadvantages of this method are

- 1- Neglecting withdrawal of an individual due to some reasons except demise and retirement and disregarding change of individuals' organizational role.
- 2- The model also failed to consider possibility of position change of an individual while being in service.
- 3- As determining level of following salary, employment in institute and discount rate are judgmental, it is difficult to estimate staff's income.
- 4- There is no agreement between it and the common accounting principles. Registration method of human resource asset in accounts disagrees with the accepted principles of accounting.

II. Replacement Cost

The advantage of this method is that it uses current market information to achieve economic value of an individual.

The disadvantages of this method are

- 1- Value of a special employee for an institute might exceed its replacement cost.
- 2- There might be no similar replacement for a specific human asset.
- 3- Replacement cost method is an intellectual method; therefore, managers might have problems in estimating replacement cost of all staffs of their organization and they might achieve completely different estimations.
- 4- This method is not in agreement with the common accounting principle and standards.
- 5- This method does not consider future advantages of human asset.

III. Value coefficient

The major advantage of this method is that value of human resource is valued in accordance with the present value.

Disadvantages of this method are

- 1- Individual/group assessment is impossible in this method.
- 2- Value of human resource is not measured directly, but it is achieved by comparison with other factors. As intangible assets are normally evaluated based on speculation, the obtained figure is not sufficiently accurate.
- 3- Coefficient determination method has not a scientific basis.
- 4- It is not accurately possible to determine current net values of a company.

IV. Stochastic Rewards Valuation Model

Rewards indicate services offered to an organization; therefore, playing organizational roles by individuals is different.

Advantages of this method are

- 1- It creates a clear-cut relation between individual payment and share in work.
- 2- It supports the staff with high performance.
- 3- It leaves important effect on key performance indices such as productivity, quality, and sales.
- 4- It connects total compensating payments to organizational objectives.

Disadvantages of this method are

- 1- It may increase useless individualism and competition.
- 2- It needs a comprehensive and dependable system to measure performance.
- 3- It may terminate the earlier good performances, which are created without this system.
- 4- A good performance of an employee may be neutralized by a bad performance of the other employee and no improvement is achieved for an organization.

V. Bidding Theory

In this method, *value* is determined only by managers.

Disadvantages of this method are

- 1- Rate of yield of capital is not an acceptable ratio for performance appraisal of managers.
- 2- No criterion is determined for scarcity or abundance of specialists.
- 3- Application of bidding theory in non-profit organizations and step production, which is indivisible into investment centers, encounters problems.
- 4- This theory may have negative effects on the staff whose service has been evaluated poorly and/or did not participated in bidding at all.

VI. Historical Cost

Advantages of this method:

- 1- This method is in agreement with the current performance of accounting based on the accepted principles, as the scale of measurement of assets.
- 2- Historic Cost Method is an objective method (objectivity feature of accounting information is

considered in it) and it is according to the current accounting methods.

3- Being documented, legal authorities, tax departments, and audit organizations probably accept this method more than other methods.

Disadvantages of this theory:

1- Determining distinguishing characteristic among human resource items and other resources and separating human resource costs into current cost and capital cost is very difficult.

2- Resources obtained from historical cost cannot satisfy all the needs of a management for economic decision-making, as what are important for management in economic decision-makings would be the future consequences of decisions, not what happened earlier.

3- Determining relationship between human resource return and costs allocated for these sources based on the predetermined depreciation rates is impossible.

4- It does not specify exactly the relationship between return and expenditures related to human resource.

5- Since the costs related to recruitment, selection, employment, training and growth of each employee in an institute may be different between similar employees, this method leads to some values, which lose their comparability.

How to Measure Value of Human Resource in Banks

Undoubtedly, in today's growing and knowledge-based world, it is of requirements to pay attention to human resource, as the axis of development and detecting and measuring systems of this important and valuable resource. Meanwhile, the role of managers, as organizational decision-makers, and accountants, as decision makers of this field, will be more highlighted and sensitive. History of HRA expressed that how theoretical concepts were applied practically in companies and satisfied company needs as a robust mean for managers' decision-making.

Key variables that affect different organizations in which HRA is applied are human capital intensity, number of educated and skilled staff, and number of people dealing with similar occupations. The more an organization enjoys human resource, the more it will need HRA. Therefore, service organizations in which human resource is one of their major sources require further need to HRA. Banks are considered as obvious instances of service organizations.

With respect to acquaintance with the valuation models, their advantages and disadvantages, and in connection with recognizing human resource as assets, it is not the case that people and staff are recognized as assets; however, the services expected to be offered by people form assets. In this regard, in order to recognize assets, main criteria of recognition such as future potential interests, measurability in terms of

monetary unit, and appropriability and controllability by an accounting entity should be considered. Through applying the models offered in this regard, it is possible to measuring value of human resource in terms of monetary criteria is possible. It is recommended to study almost two practical and advanced models of historical cost and economic value.

Human Resource Reporting

There is a fundamental reason for evaluating human resource assets and reporting investment in human resource assets:

1- Providing information concerning financial position, including financial statements to inform investors, staff, and financiers

2- Determining contribution of capital and labor in the performance of organization

3- Offering a basis based on further economic incentives for administrating organization and providing extensive information for performing clerical tasks

Reduction of investment in human resource may increase short-term profit; however, it is a threat to profitability of organization within a long time. Minimum advantage of using HRA would be availability of such information for investors. Following four methods are used for reporting:

3-1- In the report of board of directors to general assembly of shareholders: Report of board of directors to general assembly of shareholders often include some information on the costs concerning human resource that may be considerable or even more important than the costs considered for objective assets. As a preliminary action on the accounting action of human resources, board of directors' report may report costs exclusively considered for training of its staff. Such information helps investors and financial analysts to evaluate attention of management to develop human resource as a vital factor to guarantee company's profitability in a long period. In addition, report of board of directors should include information on breach of duty of employees as far as its process and expenditure are concerned. A company should report on breach of duty of its key managers and technicians who may join company's business competitors or create a new competitor. This issue will not be abnormal in the industries, which proceed with technology, and those in which R & D and technical knowledge play a crucial role. This phenomenon may happen in those industries.

3-2- Report of Intangible Assets: This method was presented by Arthur Anderson Audit Firm. This institute recommends reporting major sums spent on intangible assets, including human resource, separately in financial statements. It means that the companies which spend large amounts of money for

intangible assets, especially the companies that invest for their staffs through dependency to technology and/or through integrating and buying stocks and paying a large amounts of money for goodwill of available business activities should present a list of their intangible assets. Such lists indicate costs for different intangible assets during current and earlier terms.

One of the important constraints of this method is its misleading balance sheet, as company assets are undervalued as compared with the real one. Measurement of profit or loss was defined since all the costs related to human assets within the term they set are considered as current costs. Therefore, measuring investment return will also be in a defined form.

3-3- Non-audited Financial Statements: Companies can present a series of financial statements encompassing investment in human assets according to the offered methods of HRA as completion of information together with annual financial statements. They can also express that the relevant financial statements should be studied independent from the basic financial statements, which have been prepared and offered according to the accepted accounting principles.

3-4- Presentation in Basic Financial Statements: This investment method in human assets is brought about as a long-term asset and depreciated within its expected useful life. Although this action is not common for investments in human resource, some institutes and companies such as airlines, electronic industries, sports and professional clubs, which their major part is formed by human resource, apply this method.

Conclusion

The age of industry and pure thought of industry has been elapsed and we are living in a knowledge-based economy era. Today, human capitals in knowledge-based organizations have found a special role and importance and managing human capitals in today's organizations have turned into their key to success. Therefore, human capital is the only input capable of changing itself, producing or regulating other inputs, and creating a basis for innovation that extensively lead to economic growth. In modern approaches of management, management has converted from taking commanding and controlling roles into training role. Managers have focused on "efficiency" and "effectiveness" concepts. It should be noted that in today's economy, virtual and intangible assets and tangible assets specify value of an organization. Economic changes of this era led to revising attitude toward employment level of human resource. Such changes consider that creation of wealth and value

added guarantees survival of modern organizations. Success of these organizations depends on the effective use of human resources, which have a dynamic, alive, and independent identity as compared with other resources of a more privileged organization. Therefore, it is necessary to identify a law-governed mechanism for measuring and registering account of human resource. In this way, it would be possible to compare and report value of human resource with other resources of an institute through the business language, i.e. accounting.

HRA is a suitable response to the need of these organizations. The current accounting systems are based upon the economy structure, which is based on physical and financial assets. They report physical resources (buildings, installations, machineries, equipment, etc), financial resources (cash, revenue accounts, investments, etc), and technical resources and resources obtained from ownership (patent, trademarks, goodwill, etc). However, they are still unable to report much information on costs and values of one of their greatest and the most important resources, i.e. human resource. Yet, there is an ever-increasing need of organizations to gain information on human resource. HRA can be considered as a combination of both accounting and human resource management fields. It includes concepts and methods of accounting within the range of human resource management. In other words, HRA is the paradigm and technique of measurement that has profound effects on the way individuals manage in an organization. It can be considered as identification, quantification and reporting knowledge, skills and staff's abilities in an organization.

The present paper recommends how to measure human resource in banks using both historical cost and economic value models. The offered methods are in agreement with the accepted principles of accounting, they assume feature of objectivity of accounting information, and they are acceptable to legal, tax and audit authorities.

At present, companies and institutes found out the importance of HRA. Therefore, research and studies should increase in this concern to reveal applications of this powerful management tool. By carrying out research in this field, the interested organizations should study feasibility, problems, benefits, and implementation of HRA model in the Iranian companies. Through holding classes and training seminars, they should make managers and beneficiaries familiar with the advantages and implementation of this concealed strong tool.

By carrying out some studies in this field, we hope to discover hidden advantages of this strong resource and provide decision-makers with them.

Recommendations:

With respect to the problems in creation and implementation of HRA, there have been some recommendations for its application. Some recommendations only focus on the allocated costs; while, the others focus on anticipation values, which are as follows:

1- Considering salary costs as capital costs: Using this recommendation, a business unit merely considers the salary paid to its staff as capital costs, assuming that the activity of staff provides the business unit with future benefits.

2- Considering recruitment costs as capital costs: This recommendation aims to consider all costs of recruitment, training, etc as capital costs, which are returned at the time they are transferred. (This is true for professional sports.)

3- Considering startup costs as capital costs: Not only does this recommendation considers startup costs as capital costs, but also considers the costs related to the time required to create appropriate relations among staff and population of startup activities as capital costs.

4- Costs of Lost Opportunities: According to this recommendation, managers of business units are required to pay for more costs (more salary and wages) in order to employ specialists with special characteristics. Therefore, the income that the business unit could gain due to not employing the specialties (in other words, the income that the business unit could gain due to investing for a purpose other than employing the specialists) should be considered as cost of lost opportunities in calculations.

5- Present Value Method: This method includes calculation and payment of salary during a five-year period and then discount of these payments to return rate of the assets in possession in industry for recent years. Therefore, the present value of the amounts paid for salary and wage for the following five-year is calculated based on the return of the current year.

References**A) Persian References:**

- 1) Aghaei Taymoor (2009); *Modern Knowledge of Banking for Scientific Progress of Branch Staff*; Azadandishan Publications in collaboration with entrepreneurs
- 2) Agarwalla D. Senzo, Robins (2007); *Human Resource Planning*; Translated by Seyyed Hossein Abtahi and Heshmat Khalifeh Soltani; Research and Training Institute of Management (Affiliated to Ministry of Energy)
- 3) Abtahi Seyyed Hossein (2007); *Human Resource Management*; Research and Training Institute of Management (Affiliated to Ministry of Power)

- 4) Abtahi Seyyed Hossein (1996); *Human Resource Management*; Payame Noor University Publications
- 5) Flamholtz Eric. G (2000); *Human Resource Management*; Translated by Zahra Hassan Ghorban (PhD); Scientific Publications Center of Azad University
- 6) Asili Gholamreza (2011); *Modern Applications, Human Resource Management in Knowledge Era*; Oil Industry Institute Publisher
- 7) Etemadi Hossein and Shahriari, Mohammad Rahim (1996); *Effect of Offering Human Resource Accounting on Users of Accounting Information in Iran*; Quarterly of Accounting Studies of Administrative Sciences and Commercial Management College of University of Tehran; Issues No. 16 and 17
- 8) Riahi Belkaoui Ahmad (2002); *Theories of Accounting*; Translated by Ali Parsaeian (PhD); Culture and Management Publications, First Edition
- 9) Bakhtiari, Parviz (1986). *Human Resource Management, A Tool to Improve Management Effectiveness*; Hesabdar Journal, Iranian Institute of Certified Accountants monthly; Issue No. 22
- 10) Parsaeian Ali and Riahi Belkaoui Ahmad (2010); *Theories of Accounting*; Termeh Publications
- 11) Pooryanasab Amir and Talaneh Abdolreza (1994); *Financial Reporting to staff*; Quarterly of Accounting Studies of Administrative Sciences and Commercial Management College of University of Tehran; Issues No. 6 and 7
- 12) Talaneh Abdolreza and Pooryanasab Amir (1994); *Human Resource Accounting*; Quarterly of Accounting Studies of Administrative Sciences and Commercial Management College of University of Tehran; Issue No. 8
- 13) Teymoori Habibullah (1996); *Value, Money, Inflation, Accounting and Auditing* Specialized Studies Center of Audit Organization; Issue No 103
- 14) Hajikarimi Abasali and Rangriz Hassan (2000); *Human Resource Management*; Commercial Edition and Distribution Publications, First Edition
- 15) Hassan Ghorban, Zahra. (2000); *Human Resource Management*; Tadbir Scientific and Training monthly, Issue No. 101
- 16) Khaki Gholamreza (1997); *Human Resource Accounting and Auditing*; Tadbir Scientific and Training monthly, Issue No. 78
- 17) Raeisi, Ebrahim. (2001), *Human Resource Accounting*; Tadbir Journal, No. 115
- 18) Royaei Ramezanali (1992); *New Objectives and New Roles for Iranian Accountants*; Quarterly of Accounting Studies of Administrative Sciences and Commercial Management College of University of Tehran; Issues No. 1

- 19) Rahnamaye Roodposhti Fereydoon (2008); *Strategic Management Accounting (based on value-creating cost management)*; Islamic Azad University Publisher, Research Sciences Department
- 20) Rahnamaye Roodposhti, Fereydoon and Salehi Allah Karam (2010); *Financial and Accounting Schools and Theories*; Publication of Islamic Azad University, Tehran Department, Central Branch
- 21) Rahnamaye Roodposhti, Fereydoon and Mahmoudzadeh, Nosratollah (2008); *A Case Study on Human Resource Development (Organizational Commitment and Competitiveness)*, Industrial Management Publisher
- 22) Zamani Farizhandi, Manouchehr (2001), *Human Resource Management, Effective and Efficient Factor for All Banks*; Saderat Bank Quarterly issued by Saderat Bank Public Relations Publication, No. 19
- 23) Saadat, Esfandiari (2007); *Human Resource Management*, University Textbooks in Human Sciences (SAMT) Publication
- 24) Soltani, Iraj (2007); *Development of Human Resources with Standard-based Approach*; Arkan Publication
- 25) Seyyed Javadin, Seyyed Reza (2007); *Management of Human Resource and Staff Affairs*; Negahe Danesh Publication; Third Edition
- 26) Sheikh Abu Masoudi, Abbas (2011); *Human Resource Management (Strategic – Operational)*; Arkane Danesh Publication
- 27) Tabarsa, Gholamali and Ghafouri, Davood (2007); *Recent Trends and Future Advancements in Human Resource Management*, Hesabdar Journal, Iranian Institute of Certified Accountants monthly; Issue No. 187
- 28) Toosi, Mohammad Ali (1992); *Human Asset Accounting*, Journal of State Management, State Management Trading Center, No. 16
- 29) Zarif Fard, Ahmad (2001); *Industrial Accounting (I)*; Nasim Hayat Publication; First Edition
- 30) Asgari Majid (1984), *Human Resource Accounting*; Hesabdar Journal; Iranian Certified Accountants monthly; Issue No. 2
- 31) Karbasian Mahdi (1996); *Scientific Method to Improve Human Resource Productivity*, Tadbir Scientific and Training monthly; Issue No. 70
- 32) Gohar, Sasan and Sepehri Mohammad Reza (2001); *Status of Human Resource in Country's Banking System*; Saderat Bank Quarterly issued by Saderat Bank Public Relations Publication, No. 19
- 33) Latifi Fariba (1987); *An Introduction to Human Resource Accounting*; Hesabdar Journal; Iranian Institute of Certified Accountants monthly; Issue No. 30
- 34) Latifi Fariba (2005); *Human Capitals, A New Look*, Hesabras quarterly, Analytical – Informatics – Research quarterly of Audit Organization; Issue No. 20
- 35) Mirsiyasi Naser (1994); *Accounting and Human Resource*; State Management Trading Center Publication
- 36) Noroush Iraj (1992); *Human Resource Accounting*, Quarterly of Accounting Studies of Administrative Sciences and Commercial Management College of University of Tehran; Issues No. 1
- 37) Noori, Syamak and Haghghi, Mahasti (1999); *Human Development*, Scientific-Research Journal of Economy and Management; Issue No. 40
- 38) Nik Khah, Azad Ali and Mojtahedzadeh, Vida (1999); *Fields of Activity of Independent Audits form the Viewpoint of Users of Auditing Services and Independent Audits*, Quarterly of Accounting Studies of Administrative Sciences and Commercial Management College of University of Tehran, Issues No. 26 and 27
- 39) Nikomaram, Hashem and Banimahd Bahman (2009); *Theory of Accounting (An Introduction to the Descriptive Theories)*; Asare Nafis Publication
- 40) Hemmat Mozhan (2008); *Accounting in Human Resource: A Modern Approach in Accounting*, Hesabdar Journal, Iranian Institute of Certified Accountants monthly; Issue No. 197
- 41) Accounting Standards Board (1997); *Conceptual Foundations of Accounting and Financial Reporting in Iran*; Audit Organization, Issue No. 113
- 42) (1995). *Status of Human Resource Accounting its Development*, Hesabdar journal, Iranian Institute of Certified Accountants monthly; Issue No. 111
- 43) (1996). *Logical Foundations of Human Resource Accounting*; Hesabdar journal, Iranian Institute of Certified Accountants monthly; Issue No. 113
- 44) (1997). *Human Resource Accounting; Measuring Methods of Human Resource Value*, Hesabdar Journal, Iranian Institute of Certified Accountants monthly; Issue No. 120
- 45) (1997). *Reporting Methods of Investment in Human Resource*; Hesabdar Journal, Iranian Institute of Certified Accountants monthly; Issue No. 121
- 46) (1998). *Management of Human Resource and Labor Relations*, Strategic Attitude; Mir Publication, Seventeenth Edition
- 47) (1999). *Human Resource Valuation*, Tadbir Scientific and Training monthly, No. 95
- 48) (1999). *Evaluation of the Effect of Implementation of Human Resource Accounting System on Decision-making of Managers and Investors*, Economy and Management Scientific and Research Journal, No 41
- 49) (1999). *Financial Accounting for Human Resource Policies*; Hesabdar Journal, Iranian Institute of Certified Accountants monthly; Issue No. 134
- 50) (2000). *Human Resource Accounting: Prescriptive or Descriptive*; Hesabdar journal; Iranian Institute of Certified Accountants monthly; Issue No. 140

- 51) (2004) *The Role of Human Resource Accounting in measuring capital return for Management Development*. Bourse journal, Stock Exchange Organization monthly, Issue No. 43
- C) English References**
- 52) Adam Kazan and Deborah G. Wanergin are from critical perspectives on accounting an international journal (1396), Vol. 7, No 1-2
- 53) Amitabh Deo Kodwani & Ravindra Tiwari, (2007), *Human Resource Accounting*, at: <http://ssrn.com/abstract=961570>
- 54) Asif Ahmed, (2010); *Human Resource Accounting (HRA): Techniques and Accounting Treatment*, at: <http://ssrn.com/abstract=1624928>
- 55) Bino Catusus & Maria Martensson & Matti Skoog, (2009); *The Communication of Human Accounts: examining models of sensegiving*, Journal of Human Resource Costing & Accounting, Vol. 13, No. 2, pp. 163-179
- 56) Bontis. M (2000); *Assessing Knowledge Assets: A Review of the Models used to Measure Intellectual capital* International journal of Management Review, Vol.3, pp 44-60
- 57) Bassi, Iauric and Daniel Mamurrer, (2005); "what to do when people are your most important?" handbook of business strategy, Volume 6, Number, p. 219 – 224
- 58) Caganesan, Suresh, (2006); *Accounting for Human Resources in Financial Services*, Macquarie University, School of Management
- 59) Craig Deegan, (2006); *Financial Accounting Theory*; Chapter 9: *Extended Systems of Accounting the Incorporation of Social and Environmental Factors within External Reporting*; 2nd Edition; McGraw-Hill Pty Ltd
- 60) Committee of American association and a committee of publisher and association accounting desk book (1975) 4th Edition, Institute for Business Planning p. 214
- 61) Cushing Barry E. *Accounting Information System and Business Organization* 3.ed.addison Wesley 1982
- 62) Dewe, Philip & Verma Shraffha, (2004) Valuating Human Resources Accounting and Business Journal, No. 83
- 63) Eldon Hendrickson *Accounting Theory* (1976); 15th Ed. IRWING; pp. 260-272
- 64) Fitz.enz.jac, (2000); *The Role of Human Capital amacom*, p. 7
- 65) Flamholtz. Eric. G. & Martia L. Bullen and wei llua, (2003), *Measuring the ROL of management Development: An application of the stochastic Rewards Valuation Model*
- 66) Flamholtz. Eric.G,(2001), *Human resources accounting*, 3rd ed.; Boston,351-356
- 67) Flamholtz. Eric.G,(1991); *Human resources accounting*, Sun Francisco, Joserry. Bass, publisher, Los Angles
- 68) Gebauer. Micheal, (2003); "Information System on Human Capital in Service Sector Organizations", New library World, Vol. 104. Num
- 69) Karen Legge & John story, (2007); *A Study of Human Resources Management in Ranbaxy Laboratories*, M.j.p Rohil khand University, 2
- 70) Michael Gebauer, (2003); *Information System on Human Capital in Service Sector Organizations*
- 71) Navin Bhutoria, (2003); *Valuation of Human Capital*
- 72) R. Parameswaran & K. Jothi, (2005); *Human Resource Accounting*, Chartered Accountant
- 73) Saeed Divkhaar Taymoorluie & Rahman Movassagh & Mohammad Reza Tahmasebi & Mir Hossein Seyyedi & Vahdat Aghajani, (2011); *Study of Human Resource Accounting and International Developments*, Interdisciplinary Journal of Contemporary Research in Business, July, Vol. 3, No. 3
- 74) Sunder. S, (1998); *Intellectual Capital Accounting Reporting & Managing*, htm, Vol. 14
- 75) Sunder. S, (1997); *Theory of Accounting and Control*; Southwestern Publishing, Cincinnati, p. 36
- 76) Theeke Herman, (2005); *Human Resources Accounting: shifting from failure to future*, Human Resources Costing & Accounting journal, No. 1
- 77) Vernon Kam, *Accounting Theory*; pp 136-147.

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