Investigation of the Influence of Human Resources Accounting Information on Managers' Decision-Making in Social Security Organization of Khuzestan Province

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ABSTRACT

Today, common accounting systems involve reporting physical resources (buildings, installations and equipment), financial resources (cash, net accounts receivable, and investment) and technical and ownership benefits (patent, brand, technical knowledge and ownership right). However, they usually do not report one of the most important assets, i.e. "human resources". Different instruments are used to manage this valuable asset. Human resource accounting is in fact the application of concepts and methods of accounting to human resource management. This accounting system is the criterion for measuring and selecting accounting methods in order to be applied to valuation of human resources. The main goal of this research is investigation of the influence of human resource accounting information on managers' decision-making in Social Security Organization in Khuzestan province, Iran. In this process, first we study theoretical bases and then we identify, measure and report various methods of human resource. In the next step, we will use a researcher-made questionnaire and determine sample size by means of Cho Ceran's formula and random sampling method. The questionnaire was used to collect answers from staff, high-rank and financial managers in all branches of Social Security (medical branches-administrative branches) Organization in Khuzestan province. The influence of human resources accounting information variables (human resource staffing cost information, employment cost information, the cost of development and training, performance evaluation cost information, payment cost information, and maintenance cost information) on managers' decision-making was measured and tested. Results of SPSS16 analysis showed that human resources accounting and its components affect Social Security managers' decision-making significantly.

KEYWORDS: information, human resources accounting, decision-making

INTRODUCTION

Accounting aims to report financial conditions and economic performance of real and legal persons. When human is not considered in financial reports and operations outcomes human values will not have any place in accounting too. Novel approach to human resources -which is one of the most effective productive factors in creating income for institutes-, is one of the new discussions in accounting knowledge.

Human resource accounting goals include: 1) registration of economic value of human in financial reports. 2) Consideration of an organization's investment in its human resources. 3) Increasing human resources management efficiency and facilitation of personnel policies evaluation like educational and training plans. 4) Evaluation of human resources in terms of maintenance, weakening and development. 5) Identification of non-operational profit and productivity resulted from investment in human resources. 6) Calculation of value which is created by human resources in other financial and physical resources of an organization.

Considering managers' need to information in decision-making process, human resources accounting provides information so that managers can make use of their human resources in a better and more useful manner (Ibrahim Reisi, 2001). Human resources accounting is an attempt to measure the costs incurred as a result of absorption and selection, employment, training and development of human resources in organizations. Furthermore, human resources accounting can measure individuals' economic value in organizations. Human resource accounting is an instrument for explanation of logical results and effects resulted from management decision-makings including hidden and long-term costs which are not clarified easily.

Human resource accounting has two functions: 1) it is a method for judging about human resources issues; 2) it is a collection of measurement criteria for quantification of costs and benefits resulted from human resource decision-making. Human resources accounting helps quantify and clarify the costs and benefits concerning such decision-makings (Hasan Ghorban, 2004). Human resources accounting can teach human resources values to management and result in effective and efficient management of human resources (Rouhi, 2009). Considering the above discussion, the main goal of the present research is to investigate the influence of human resources accounting information on managers' decision-making in Social Security Organization of Khuzestan province in Iran.

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Human resources accounting

Human resources accounting is the process of recognition and presentation of human resources information in order to facilitate management process. In human resources accounting, information is provided for managers so that they can make decisions more efficiently. Human resources accounting aims to help measure develop and manage human capital and is a new approach to human resources management (Tabarsa and Mohammadi, 2006). Human resources accounting is identification and evaluation of an organization's human resources and reporting the results to beneficiaries. There are three main points in this definition:

Identification: recognition of it's (=human resources) quality and quantity and preparation of appropriate human resources.

Evaluation: measurement of human resources economic value and determination of its financial level.

Reporting: preparation and presentation of appropriate financial reports concerning human resources

American Accounting Association defined "human resources accounting" as: "the process of recognition and measurement of information on human resources and reporting this information to interested individuals and beneficiaries." AICPA defined human resources accounting as: "the process of identification and measurement of information concerning organizations' human resources and providing this information for beneficiaries in order to help internal and external users of this information make better decisions." Human capital is defined as individuals' acquired knowledge which is obtained during their lives and they use this it in order to produce and provide better services and products (Foroughi, Ahmadi Nejad, 2010).

Since the introduction of "human resources accounting" in accounting literature in 60s, it has attracted many criticisms. For example, critics believe that human is not a property and cannot be owned, human is not measurable and there is no suitable measurement model for it. They also believe that human resources accounting cost is very heavy.

There are two methods for investigation of human resources accounting: 1) cost-based analysis method : this method emphasizes on cost factors which concern primary cost, substitution cost or opportunity cost. 2) value-based method: this method assumes that human resources value depends on human resources ability in acquiring income and this method can be classified into two branches: monetary and non-monetary measurement: (Tabarsa, Hemmat, 2008). One of the primary goals of human resources accounting system is helping management with controlling human resources effectively. In this chapter, the role of human resources accounting in individuals' management in organizations is investigated. A model is also presented to show that how human resources accounting provides necessary information for acquiring, developing, allocating, conserving, utilizing, evaluating and rewarding human resources. In the next sentences, we will show that human resources accounting is an important framework and instrument for human resource experts and executive managers.

Decision-making

Decision-making is considered as an inseparable part of management and is reflected in all other duties of a manager. Decision-making is the main pillar in determination of organizational policies, formulation of targets, organizational designing, selection, evaluation processes and all management actions. In a simple definition, decision-making is selecting one option out of different options (Alvani, 2005). Rapid changes of extra-organizational factors, development of organizations and complexity of management systems have increased managers' need to information. Presentation of on-time, appropriate, proper and summarized information and establishment of relationships in all levels of organizational management is necessary for an efficient management information system so that proper decision-making and planning and executive duties of management are facilitated (Alvani, 2005).

In general, it can be said that decision-making is either based upon previous information or based upon imagination and designing favorable conditions in near future or is based upon a combination of both of them (Sa'adat, 1993). Kuntz believes that decision-making is the base of planning. Designing, planning and policy-making depend on decision-making (Kuntz, 1988). Many studies concerning decision-making process are based upon the fact that individuals make decisions firstly in the present information range and second, in a logical manner (Talane, 2005).

Decision-making stages include: **1) determination and recognition of a problem**: finding problem is possibly the most difficult step in decision-making process. If a problem is not determined or analyzed well it is not possible to find a suitable solution for it. (Fakhariyan, 1999). **2) Determination of decision-making goal**: after identification of a problem or understanding a situation, a decision-maker should determine the goal of decision-making. In other words, a decision-maker determines the purpose of decision-making (Sa'adat, 1994). **3) Determination of solutions**: in most cases, reaching the first solution prevents a manager from finding other solutions. In this step, finding a solution for this problem needs creative and novel thinking. Therefore, it is better not to take the first solution and looking for other solutions is important (Modarres Zadeh, 2002). **4) Evaluation of solutions**: after several solutions were discovered, the manager should evaluate them qualitatively and quantitatively. He/she should measure each solution's possible outcomes and evaluate their

influences on organization (Vaziri, 1993). **5) Selection of a solution**: selection of a solution out of all solutions is the easiest stage in decision-making process in some cases and this simplicity will be achieved when each of the options involve quantitative factors and do not involve qualitative factors (Vaziri, 1993). **6) Putting a solution into action**: when the best possible solution was selected, managers should plan for resources which are necessary for execution of that solution. In fact, this stage is the most crucial case because decisions are intentions without being executed which are in managers minds. Therefore, execution of a decision is more difficult than selection of an appropriate decision. (Modarres zadeh, 2002).

7. Control: control helps managers with considering environmental changes and their influences on organizational advancement. Control helps managers with supervising effectiveness, planning, organizing and guiding activities. The main part of control is doing corrections when necessary (fakhariyan, 1999).

Management decision-making is classified into two main parts and each class has subcategories of measurement type. 1) Classification based upon complexity (Saymon Classification): a) programmed decisions (planned). B) Non-programmed decisions (non-planned) (Daft, 2003).2) classification based on nature or structure (Antony-Scott classification): a) structured decisions b) unstructured decisions. C) Semi-structured decisions (turban et al, 2002).

It is obvious that decision-making in different levels of an organization needs different information and information systems must concentrate their activities on provision of high-rank managers', middle managers' and operational managers' needs. Organizational management structure is divided into three levels: strategic, solution and operational (Alvani et al, 1996). **A) Strategic decisions**: these decisions help an organization with satisfaction of targets and missions considering environmental conditions and act dynamically towards environmental changes. These decisions need information which is mostly external, presented in a summarized manner and concern future possible events. **B) Solution decisions (executive)**: these decisions are made based upon information which is mostly created in an organization and concern the present or future. Decision-making in this level needs proper and exact information and involve completely structural decisions. **C) Operational decisions (tactical)**: these decisions concern tactical planning and control of duties of an organization. A large part of input information of this level is the summary of main activities performance of an organization which is usually periodic. In this case, input information are completely structural and they are predictable and exact in terms of contents (Sarrafi Zadeh et al, 2001).

Research background

The first study on the present subject was conducted by means of Alis (1972). Alis presented two sets of financial reports (one traditional report and the other report contained human resources accounting information) to his sample members who included accounting students, financial analysts and accountants. He asked them to make decisions on investment of companies. Results of the research showed that human resources accounting information have significant influence on decisions, although relationship between human resources accounting information and decisions was not very strong. Honfriks (1976) used financial and accounting students' opinions to conduct a research similar to that of Alis. In these research human resources accounting information also had significant influence on the decisions.

Gholami (2006) conducted a research as his thesis titled: "investigation of obstacles and problems of implementation of human resources accounting in Iran". he showed that the main reason for non-implementation and lack of application of human resources accounting in Iran is users', investors', credit-providers' and accountants' ignorance of human resources accounting and universities of Iran have not taken effective measures for introduction of human resources accounting.

- Mohammad Abbasi Foroud and Arjan karimi conducted a research titled "investigation of implementation of human resources accounting system in managers' decision-making and employees' behavior (case study: Iranian Petroleum Industry)" in 2010. He showed that human resources accounting has significant influence on advancement of organizational strategic goals and there is relationship between human resources accounting and organizational managers' decisions. Results of statistical tests showed that human resources accounting has significant influence on managers' decisions in 95% certainty level.

Conduction of such a research can be effective in identification and application of human resources accounting in Iranian organizations because human resources accounting is a new subject in Iranian Universities and accounting systems and because few investigations have been conducted in this regard. Human resource productivity is not at a satisfactory level in Iran and this is another reason for the importance of this paper. Of course, the present research tries to investigate the influence of human resources accounting information on managers' decision-making in Social Security Organization in Khuzestan.

METHODOLOGY

The present research is an applied and descriptive research in terms of its goal. This research aims to investigate conditions and phenomena (Bazargan, 2006). These phenomena include human resources accounting

information and its dimensions and their influences on managers' decision-making. Therefore, this research is a correlation study in terms of methodology. Correlation coefficient test was sued to test the hypotheses. Research hypotheses are as follows considering the goals and variables of the research:

Main hypothesis: human resources accounting information has significant and positive influence on improvement of managers' decision-making.

First subsidiary hypothesis: human resource staffing cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Second subsidiary hypothesis: human resource application cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Third subsidiary hypothesis: human resource education and development cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Fourth subsidiary hypothesis: human resource performance evaluation cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Fifth subsidiary hypothesis: human resource rewarding cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Sixth subsidiary hypothesis: human resource maintenance cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Considering the above hypotheses, human resources accounting information is regarded as independent variable and it has six dimensions and managers' decision-making is dependent variable. The following figure is a conceptual model which indicates the hypotheses variables relationship direction:
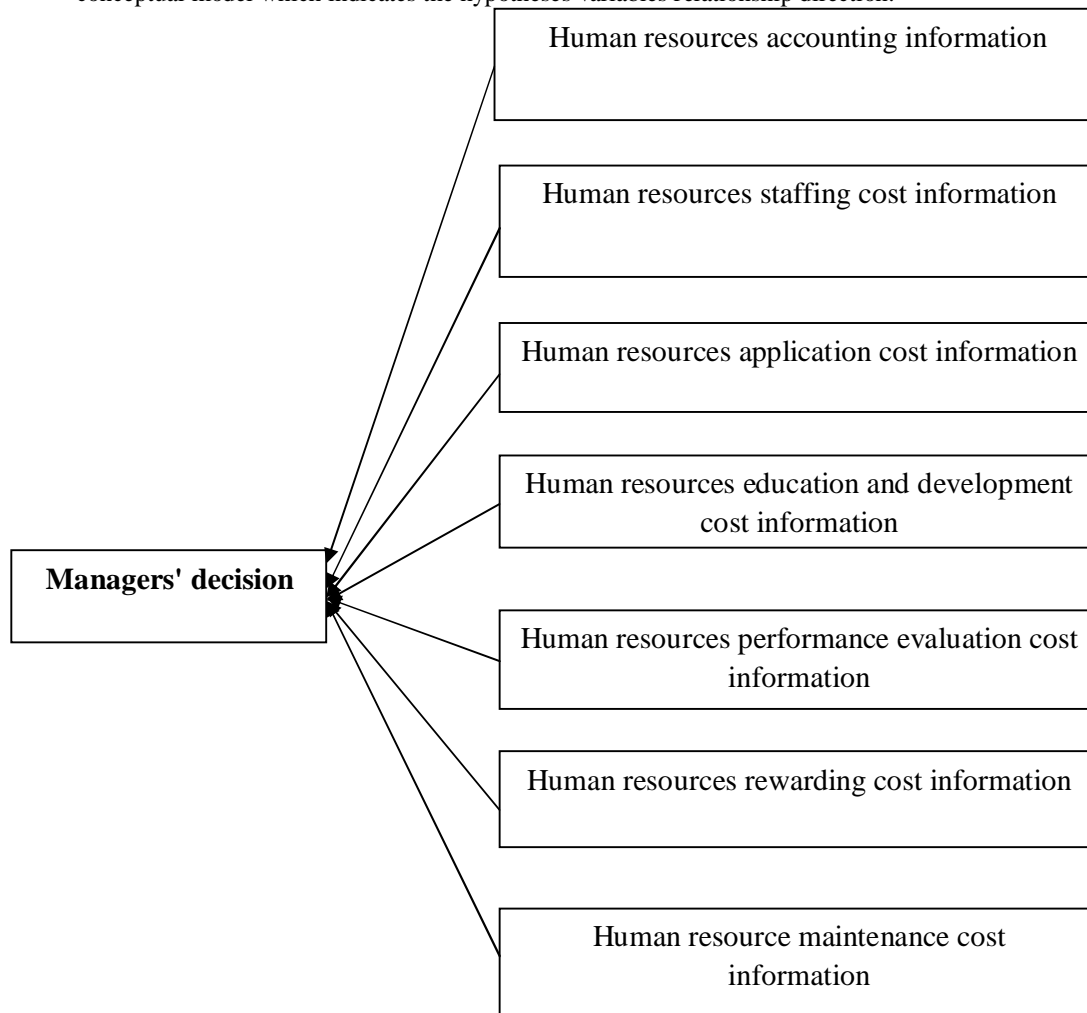
Figure 1. Research conceptual model (Flamholence, 1989, page 63).

In order to collect data for hypotheses tests, a questionnaire which was based upon 5-point Likert scale was used. Validity of the questionnaire was verified by experts. Cronbach's alpha ranged between 0.848 and 0.926 for questionnaire dimensions which is acceptable. Statistical population of the research included all managers

and chairmen of Social Security Organization in Khuzestan province in Iran. Chocheran's formula was used to calculate sample size (104 people). Descriptive statistics indices like mean, median, frequency table, percentage, standard deviation, variance and histogram were used for data analysis. Spearman correlation test was used for testing research hypotheses (because data distribution was not normal).

Data analysis

1. descriptive results

About 65.4% of the respondents were male and 34.6% of them were female. 90.4% of the respondents were married and 9.6% of them were single. 7.7% of the respondents had high school degree (=diploma), 6.7% of them had associate's degree, 56.7% of them had bachelor degree and 28.8% of them had master degree. 17.3% of the respondents had 6 to 10 years of experience, 25% of them had 11 to 15 years of experience and 21.2% of them had 16 to 20 years of experience, 29.8% of them had 21 to 25 years of experience and 6.7% of them had more than 25 years of experience.

2. research hypotheses

Research hypotheses are analyzed and discussed in this part of the research. First, each of the hypotheses is mentioned and then, possible reasons for verification or rejection of them will be discussed considering statistical evidence.

1. main hypothesis: human resources accounting information has significant and positive influence on improvement of managers' decision-making.

Considering table 1 and significance level of Pearson correlation test which is equal to 0 and is less than the significance level of the test (0.05), H1 is verified and H0 is rejected. In other words, there is relationship between human resources accounting information and managers' decision. The value of this correlation is equal to 0.833 which is a positive and significant value. In other words, an increase in human resources accounting information improves managers' decisions.

First subsidiary hypothesis: human resource staffing cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Considering table 1 and significance level of Pearson correlation test which is equal to 0 and is less than the significance level of the test (0.05), H1 is verified and H0 is rejected. In other words, there is relationship between human resources staffing cost information and managers' decision. The value of this correlation is equal to 0.752 which is a positive and significant value. In other words, an increase in human resources staffing cost information improves managers' decisions.

Second subsidiary hypothesis: human resource application cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Considering table 1 and significance level of Pearson correlation test which is equal to 0 and is less than the significance level of the test (0.05), H1 is verified and H0 is rejected. In other words, there is relationship between human resources application cost information and managers' decision. The value of this correlation is equal to 0.714 which is a positive and significant value. In other words, an increase in human resources application cost information improves managers' decisions.

Third subsidiary hypothesis: human resource education and development cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Considering table 1 and significance level of Pearson correlation test which is equal to 0 and is less than the significance level of the test (0.05), H1 is verified and H0 is rejected. In other words, there is relationship between human resources education and development cost information and managers' decision. The value of this correlation is equal to 0.775 which is a positive and significant value. In other words, an increase in human resources education and development cost information improves managers' decisions.

Fourth subsidiary hypothesis: human resource performance evaluation cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Considering table 1 and significance level of Pearson correlation test which is equal to 0 and is less than the significance level of the test (0.05), H1 is verified and H0 is rejected. In other words, there is relationship between human resources performance evaluation cost information and managers' decision. The value of this correlation is equal to 0.681 which is a positive and significant value. In other words, an increase in human resources performance evaluation cost information improves managers' decisions.

Fifth subsidiary hypothesis: human resource rewarding cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Considering table 1 and significance level of Pearson correlation test which is equal to 0 and is less than the significance level of the test (0.05), H1 is verified and H0 is rejected. In other words, there is relationship between human resources rewarding cost information and managers' decision. The value of this correlation is equal to 0.794 which is a positive and significant value. In other words, an increase in human resources rewarding cost information improves managers' decisions.

Sixth subsidiary hypothesis: human resource maintenance cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization.

Considering table 1 and significance level of Pearson correlation test which is equal to 0 and is less than the significance level of the test (0.05), H1 is verified and H0 is rejected. In other words, there is relationship between human resources maintenance cost information and managers' decision. The value of this correlation is equal to 0.810 which is a positive and significant value. In other words, an increase in human resources maintenance cost information improves managers' decisions.

Table 1. Pearson correlation coefficient between "human resources accounting information and its dimensions" and managers' decision-making

	Hypotheses	number	Correlation coefficient	Significance level	result
1	Human resources accounting information and managers' decision	104	0.833	0	verified
2	Human resources staffing cost information and managers' decision	104	0.752	0	verified
3	Human resources application cost information and managers' decision	104	0.714	0	verified
4	Human resources education and development cost information and managers' decision	104	0.775	0	verified
5	Human resources performance evaluation cost information and managers' decision	104	0.681	0	verified
6	Human resources rewarding cost information and managers' decision	104	0.794	0	verified
7	Human resources maintenance cost information and managers' decision	104	0.810	0	verified

RESEARCH RESULTS SUMMATION

Results of the hypotheses tests proved positive and direct relationship between variables. Results of the hypotheses tests have been summarized in table 1. It must be noted that research process, especially in humanities, never ends. In other words, results of any research are considered as experimental results and future studies may contradict or reject our results (Iran Nejad, 2003).

Main hypothesis: human resources accounting information has positive and significant influence on improvement of managers' decision-making. In other words, there is significant relationship between human resources accounting information and managers' decisions in Social Security Organization in Khuzestan province. Correlation value is positive and this shows that an increase in human resources accounting information can result in managers' decisions improvement. This indicates that changes in dependent variable (managers' decisions) are resulted from changes in independent variable (human resources accounting information).

First subsidiary hypothesis: human resource staffing cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization. In other words, there is significant relationship between human resources staffing cost information and managers' decisions in Social Security Organization in Khuzestan province. Correlation value is positive and this shows that an increase in human resources staffing cost information can result in managers' decision improvement. This indicates that changes in dependent variable (managers' decisions) are resulted from changes in independent variable (human resources staffing cost information).

Second subsidiary hypothesis: human resource application cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization. In other words, there is significant relationship between human resources application cost information and managers' decisions in Social Security Organization in Khuzestan province. Correlation value is positive and this shows that an increase in human resources application cost information can result in managers' decision improvement. This indicates that changes in dependent variable (managers' decisions) are resulted from changes in independent variable (human resources application cost information).

Third subsidiary hypothesis: human resource education and development cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization. In other words, there is significant relationship between human resources education and development cost information and managers' decisions in Social Security Organization in Khuzestan province. Correlation value is positive and this shows that an increase in human resources education and development cost information can result in managers' decision improvement. This indicates that changes in dependent variable (managers' decisions) are resulted from changes in independent variable (human resources education and development cost information).

Fourth subsidiary hypothesis: human resource performance evaluation cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization. In other words, there is significant relationship between human resources performance evaluation cost information and managers' decisions in Social Security Organization in Khuzestan province. Correlation value is positive and this shows that an increase in human resources performance evaluation cost information can result in managers' decision improvement. This indicates that changes in dependent variable (managers' decisions) are resulted from changes in independent variable (human resources performance evaluation cost information).

Fifth subsidiary hypothesis: human resource rewarding cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization. In other words, there is significant relationship between human resources rewarding cost information and managers' decisions in Social Security Organization in Khuzestan province. Correlation value is positive and this shows that an increase in human resources rewarding cost information can result in managers' decisions improvement. This indicates that changes in dependent variable (managers' decisions) are resulted from changes in independent variable (human resources rewarding cost information).

Sixth subsidiary hypothesis: human resource maintenance cost information has positive and significant influence on improvement of managers' decision-making in Social Security Organization. In other words, there is significant relationship between human resources maintenance cost information and managers' decisions in Social Security Organization in Khuzestan province. Correlation value is positive and this shows that an increase in human resources maintenance cost information can result in managers' decisions improvement. This indicates that changes in dependent variable (managers' decisions) are resulted from changes in independent variable (human resources maintenance cost information).

Considering the verification of all research hypotheses, the following applied recommendations can be presented to high-rank managers and middle managers of Social Security Organization in Khuzestan province: 1) preparation of human resources accounting information for all employees using an information system in accounting and the most appropriate method for measurement of human resources through human resources experts 2) registration of human resources accounting information in employees' personnel file in a secret way for managers' use (of course this information should be revised at least once a year.)

Recommendations are: 1) familiarization of employees and managers of the organization with human resources accounting and mentioning the benefits of execution of human resources accounting in the organization so that managers' attitude turns supportive towards human resources accounting. 2) Designing and holding a training course lasting at least 20 hours human resources accounting in education and development department for teaching this new concept to managers and employees. 3) Determination of a team made up of accounting and human resources experts for investigation of execution of human resources accounting information. 4) Teaching human resources accounting information to managers in order to identify human resources accounting information and way of using this information. 5) Issuing necessary instructions so that employees' accounting information provision becomes an obligation and legal capability.

Furthermore, the following recommendations are provided for future researchers: 1) future researchers are advised to deal with human resources accounting from other managerial and financial aspects so that necessary infrastructure is prepared for implementation of human resources accounting in public and private organizations. 2) Considering the fact that this research was conducted in high-rank employees' level, future researchers are advised to conduct this research on other personnel levels so that influence of human resources accounting information on their behavior is measured.

Scientific studies have usually limitations and problems. Authors of the present research also were confronted with restrictions. These restrictions include: 1) one of the problems was that many employees have become fed up with questionnaire and do not allow time for filling questionnaires because master degree students and therefore questionnaire distribution have increased. 2) Ignorance of and intangibility of human resources accounting concept was also a problem a researchers had to explain the topic by telephone or direct talking. 3) Lack of proper belief and culture concerning ineffectiveness of this kind of studies. 5) Ill-timed delivery of the distributed questionnaires and missing questionnaires in some cases made researchers to re-send questionnaires and this prolonged the research.

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