

# Knowledge-Based Economy and Necessity for Human Resource Accounting in Enterprises

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## ABSTRACT

*At present, many managers and researchers recognize importance of human resource to corporate sustainable development. From the accounting aspect, however, the human resource is not properly evaluated due to inadequate treatment to this valuable asset by traditional accounting. Human resource accounting is a component of social accounting and aims at providing information needed for estimation of one of the most valuable assets of organizations. This paper tries to present the importance of human resource accounting, its contents and objectives, and its role in Vietnamese enterprises, along with recommendations on application of human resource accounting against the background of a knowledge-based economy*

Keywords: knowledge-based economy, human resource, accounting

## 1. INTRODUCTION

In recent years, globalization has caused the world economy to change dramatically. Information society facilitates development of new knowledge of human beings. Numerous managers have realized that besides tangible resources needed for development, intangible ones, including knowledge of their employees, constituted important preconditions for the sustainable development, and success in market competition. Human factor, along with skills, knowledge and professional behavior, therefore, is considered as the most important asset of an organization in a knowledge-based economy. Due to the importance of human resource, many enterprises have adopted well-devised strategies to increase investment in human resource in order to make the best use of this resource; and maintain, protect and develop it accordingly. Concept of human resource, therefore, comes into being in parallel with changes in awareness of the importance of human factor to development of an enterprise in particular and a nation in general.

Although important, human resource is not presented clearly and exactly by traditional accounting. In fact, expenditures on development of human resource, such as training courses, are usually recorded in performance reports as period costs that reduces profit while such expenditures bring about long-term benefits for the enterprise. This is why information about human resource is not presented clearly and exactly, which hinders greatly decision making process by users of information, especially outsiders who have no relevant information about quality of, and investments in, human resource of the enterprise.

Lessons from Microsoft and Intel show that enterprises that require high creativity or depend on outstanding technologies usually gain values much different from book values of their assets. This difference always comes from intangible assets that include values of human resource along with skills and creativity of workers. Human resource, however, is not treated as an intangible asset by financial statements and balance sheets because of poor treatment by traditional accounting associated with conditions for identifying and registering an item as corporate asset. Researches on ways of recording human resource as a corporate intangible asset are rare. As a result, there is no model beyond traditional limits for registering corporate intangible assets.

Concerning developing countries like Vietnam, human resource accounting is still a new field. This paper, in an effort to get access and accustomed to a new accounting

aspect, tries to clarify connotation of the human resource accounting, its technical methods and direction for its application to enterprises.

## **2. HUMAN RESOURCE: THE MOST IMPORTANT ASSET OF ENTERPRISES**

Generally, resources of an enterprise comprise tangible resources (machinery, equipment, factory buildings, raw materials, and cash, etc.) and intangible ones (labor force, employees' skills and expertise, etc.) that enterprises can employ to supply goods and services to the market. In a knowledge-based economy, the human resource has become increasingly important and decisive to the value of enterprise. Human capital, or human resource, is defined as knowledge, skills and competence of workers; creativity, creative power, attitude and behavior, and learning ability and motive of all members of an organization.

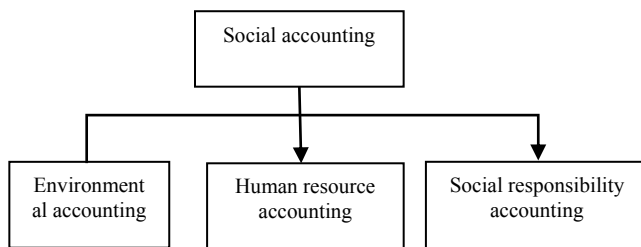
Although tangible resources are important, human resource with its own characteristics, such as unimitability, being hard to be transferred and a result of a long time of development, still occupies an outstanding position. According to the traditional view on management, employees are considered as cost drivers and a source of labor cost, and therefore they are treated as a cost-generating factor instead of assets of the enterprise.

Treating the human resource as a cost-generating factor makes managers try to cut labor cost if possible while, in practice, the right thing to do is to develop the human resource qualitatively and quantitatively, considering it as an important factor in the corporate development strategy. Because the human resource include various factors, such as knowledge, skills and competence of workers; creativity, creative power, attitude and behavior, and learning ability and motive of all members of an organization, it also includes corporate values, and business culture and philosophy developed by all members of the enterprises.

## **3. HUMAN RESOURCE ACCOUNTING**

### **a. Concepts and Characteristics:**

Human resource accounting is a component of social accounting, along with environmental accounting and social responsibility accounting.



**Figure 1: Human resource accounting in relation with other components of social accounting**

According to AAA (1973, 1974 & 2002), human resource accounting is the process of identifying and measuring data about human resources and communicating this information to the interested parties. Human resource accounting, therefore, not only involves measuring

costs or investments relating to recruitment, assignment, training and development of human resource, but also a process of evaluating and quantifying values of all persons in the organization. Flamholtz (1999) defines human resource accounting as the measurement and reporting of the cost and the value of people for the organization as a resource of the accounting entity.

From the reasoning aspect, theory of development based on resources maintains that corporate competitive edge in the market depends mostly on particular resources that cannot be multiplied or copied instead of transferable assets. This explains why companies operating in the same industry with similar machnies and technologies achieve different performance and competitive advantages. The factor that produces difference is expertise of employees. A high-quality and sustainable human resource will determine differentiation in business performance of companies.

Examining the human resource accounting within enterprises and in interactive relations with other accounting subsets ; shows that the human resource accounting has its own characteristics and objectives that show themselves in the following points:

- As a component of the corporate accounting system, it identifies resources realized within the accounting entity;
- It records investments in human resources;
- It measures costs and values of human resource;
- It records changes in human resource within the accounting entity over time; and
- It supplies information about human resource through reports to information users.

Main objectives of human resource accounting are:

- Supporting management of corporate human resources
- Helping improve quality and size of human resources;
- Estimating exactly values of the organization;
- Supplying quantified information (expressed in money) about human resource to help managers and investors in their decision-making process; and
- Supplying information about human resource (both financial and non-financial information) to interested organizations.

**b. Approaches to Human Resource Accounting:**

According to Barcon et al. (1999), human resource accounting can be approached by two ways:

- Financial accounting: Human resource is reflected in relevant accounts, such as payables and expenses, payment to laborers, costs, and other payables that are used by financial accounting to keep records of human resource.

According to accepted principles of financial accounting, when economic benefits obtainable from expenses on training are visible and those expenses are up to standard and can be capitalized, expenses on training the human resource can be recorded as an asset. However, these expenses are not really expressed by financial accounting. Accounting researchers have pointed out differences between actual assets of enterprises and assets recorded and described in balance sheets. According to accepted accounting principles, reported assets should be ones owned by enterprises. As conceived by economics, an asset comprises (tangible and intangible) resource and ways to employ it (know-how) for producing and supplying goods and services.

The above interpretations reveal two basic problems with human resources as intangible assets: identifying cost of shaping an asset and estimating time for depreciation.

Although researchers and accountants, and even the International Accounting Standards Committee generally admit that certain assets, such as cash, inventory and machines, etc.) can be identified easily, they still debate ways of determining if an item can be capitalized or recorded as a common expense. This leads to disputes about standards for capitalizing an item or recording it as a common expense. This is one of the reasons why investments in development of human resource are not widely

recognized among accountants and most of them tend to treat investments in human resource as a period cost.

- Managerial accounting: Employees of an organization are usually attached to an enterprise, all activities by employees, therefore, may generate expenses for the enterprise. One of methods of classifying expenses by traditional accounting is to divide them into three types: raw materials, labor and production. In managerial accounting, expenses on human resource are considered in relation with added values generated by the human resource. It is also the added value produced by laborers who use their skills and knowledge along with equipment to turn raw materials into goods or services accepted by markets. From this aspect, measuring values of the human resource and expenses on human resource requires accountants to use indirect measurements, such as purchasing, additional or opportunity costs.

### **c. Methods of Human Resource Accounting:**

There are many methods used for human resource accounting. Some of them are based on the cost concept while some others are based on discounting future earnings. Each method has its own limitation and choice of methods depends on conditions of enterprises, availability of basic information, and expertise of accountants. The following are basic methods used for human resource accounting.

Cost method: Actual costs generated during recruiting, hiring, training and developing human resource capitalized and amortized over the time of employing the human resource.

Replacement cost method: It measures the cost of replacing an employee of the enterprise. This method is better than the cost method because it reflects trends of the economy and it is more suitable for labor cost at present time.

Opportunity cost method: In this approach, human resource of an organization is evaluated according to economists' concepts of economic benefits lost when employing human resource for present operations

Present value of future earnings method: This method records economic benefits brought by an individual to the enterprise during the time he/she serves the enterprise. Measurement and estimation of future earnings are carried out. They are related earnings until the laborer's retirement and they are discounted to work out present value.

Method based on Lev & Schwartz's model (ICAI, 2007): Those two authors consider human resource of a company equals the sum of net present values of all expenses on employees of the company. Human capital is usually associated with each individual at a certain age and can be based on present value of all earnings over the time the employee works for the company.

In this model, the following steps are to be taken to determine values of the human resource:

- Dividing the labor force into identical groups according to their skills, and age, etc.
- Calculating average earnings of each group;
- Discounting average earnings of each group according to a preset rate to identify present value of the group;

Adding present values of all groups produces capitalized value of the current human resource of the company.

Formula for identifying capitalized value of the human resource in the Lev & Schwartz model is as follows:

$$V_r = \frac{I(t)}{(1+r)^{t-r}}$$

where

$V_y$ : expected value of a 'y' year old employee

$I(t)$ : annual earnings of the employee until his/her retirement

$t$ : employee's retirement age

$r$ : discount rate (based on cost of capital use of the company)

The Lev & Schwartz model still contain certain limitations because it relies on various conditions:

- It requires quantified input data but fails to examine output data, such as employee's productivity
- Expenses on training are not taken into consideration
- It depends on the assumption that the corporate development does not change over time.

- Factors that change employee's wages during his/her time of service are not examined (promotion, successful negotiation about pay rises, personal experience and skills, etc.).

The above analyses show that information about human resource accounting is overshadowed by information from traditional accounting. This situation requires appropriate application of technical methods of human resource accounting to highlight information from human resource accounting against data from traditional accounting.

Like environmental accounting, human resource one should be linked with accounting reports (from both financial and managerial one) to supply useful information for management of internal affairs and decisions on external issues. Human resource accounting should be included in accounting reports or presented in separate reports to support tasks of maintaining and developing exist human resource of the company.

To avoid contradiction to current accounting principles, the best solution is to present human resource information in an explanatory section or appendices of financial statements and introduce legal rules about presentation of such information as human capital, including the following basic pieces of information:

- Non-financial information: labor force, number of middle managers, ability to carry out tasks assigned, stability of task assignment, number of top managers, number of female employees, education level and average age of the labor force, average time for training courses (hour/employee/year), and their knowledge of information technology, etc.

- Financial information: expenses on ads about recruitments, selection cost, formal training cost, on-the-job training cost, expenses or allowance for learning trips, medical aid and other benefits, etc.

Thus, all experience and skills of employees and managers, creativity and creating environment, and investments in recruitment and selection, training and development of human resource, all belong to corporate human resource. The above discussions show that the human resource accounting can supply both qualitative and quantitative information about value of human assets to help top managers make decisions appropriate to corporate human resource. It can be concluded that human resource is a very valuable asset of the company but it is usually not given proper treatment, or even



ignored, by traditional accounting. Researching, and applying human resource accounting in companies is therefore an urgent and meaningful matter in the present knowledge-based economy.

#### 4. HUMAN RESOURCE ACCOUNTING IN VIETNAMESE ENTERPRISES

To improve practicality of the research and gather bases for comparing existing theories, author has examined application of human resource accounting in local enterprises based on their annual reports. The sample comprises 30 companies listed on HCMC Stock Exchange (VN30). They are selected because of their capitalization and effects on the VN-Index. Although the sample is not large enough, it can represent a—Vietnam's small stock market. Additionally, the research only aims at providing grounds for application of human resource accounting in local companies. Information from annual reports is selected because it can be obtained easily from corporate websites. Moreover, annual reports not only provide financial information, but also corporate policies and business strategies relating to social responsibility, human capital and human resource development. Such information are useful for the research.

Examined annual reports belong to the fiscal year of 2011, available in corporate or HoSE websites in the period from April to June, 2012.

Information disclosed by annual reports can be divided into three groups: (A1) financial information (19 variables); (A2) information about corporate management (9 variable); and (A3) information about social responsibility and human resource (8 variables). The variables measured by a dichotomous scale take a value of 1 if they exist and 0 otherwise.

Results are presented in Table 1.

**Table 1: Statistics of information from examined annual reports**

Group	Average	Max	Min	Range	Medium	Mode	Std Deviation
A1	9.81	13	7	6	10	11	1.51
A2	7.75	9	4	5	8	9	1.43
A3	3.81	6	0	6	4	3	1.56

The survey shows that companies only pay attention to financial and corporate management information and neglect information about human resource and social responsibility. Some companies do not even provide any human resource information in their annual reports. All surveyed companies have no policy on human resource accounting. This shows that human resource accounting is very new to local companies, and knowledge of human resource accounting is very limited with the result that companies do not care about such information and give it a proper position in their annual reports.

## **5. CONCLUSION AND RECOMMENDATIONS**

Investors' criticism of necessity for transparent information about corporate intangible assets has made financial statements expand much beyond traditional forms. This expansion comes from efforts by accountants to measure and prepare reports on corporate human resource. Nature of financial indices will change in the future within the knowledge-based economy where companies depend mostly on knowledge, tasks of keeping books, measuring and reporting human resource information will be increasingly important. It is necessary to integrate financial information with human resource and environmental information within an accounting entity.

The existing accounting system ignores the important role of human resource, and managers therefore acquire no necessary information needed for estimating validity and effectiveness of investments in human resource. IASB has treated most expenses on human resource as period costs instead of capitalizing them as assets. The more the companies invest in human resource, the less the accounting profit becomes. From this aspect, the accounting does not encourage investment in human resource.

In reality, human resource accounting has no internationally-accepted model. Many companies, especially IT ones, however, have applied Lev-Schwartz model. The need to measure competence of the labor force of a company of all levels to evaluate employees' knowledge and skills has become more and more urgent. Human resource accounting is the system that provides managers with basic information about changes in corporate human capital over time. Human resource accounting also includes accounting of investment in human capital and cost of replace employees, along with estimation of human values in an organization.

To apply human resource accounting to companies requires specific tracks but recommendations for a short term are as follows.

- Organize channels for gathering information about expenses on human resource needed for internal decisions and publicize human resource information on corporate annual reports;
- Investments in human capital should be treated as equally as other investments;
- Expenses on training and development of human resource should be considered as long-term investments in order to improve competency of employees and generate long-term benefits for enterprises, and thus should be capitalized, discounted, and recorded properly■

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