

Human Resource Accounting: A Pathfinder in Internal-External Decision Making

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Abstract—*The shift to a knowledge-based economy has created increased attention on entirely different categories of asset known as human. Human counted as a part of intellectual capital is playing an increasingly important role in the wealth creating dynamic of the knowledge economy. However, this asset is less reflective in traditional accounting system which is the principal supplier of such information, its gathering and presenting. It allows timely and informed decision making by management and stakeholders. This paper investigate the possible inclusion of human asset into the accounting system known as human resource accounting and analyze development of modern accounting approach which can contribute to the new age of Human Resource Management practices and the decision making of stakeholders.*

Keywords and Phrases: Human resource accounting, intellectual capital management, valuating human resource.

JEL Classification: M41; O15.

1. INTRODUCTION

Human Resource (HR) is the energies, skills, talents and knowledge of people which are, or which potentially can be applied to the production of goods or rendering of useful services. (Narayanankutty; citation 2008) The key to competitive success is likely to be the ability to create, leverage, and develop specialized knowledge and intellectual resources. Human resources are counted as one of the important part of intellectual resources. This reality created challenges and opportunities for the human resource professional to establish human as an asset of the organization. The resource theory considers human resource in an explicit way. This theory considers that the competitive position of a firm depends on its specific and not duplicated assets (Conner 1991). The most specific asset that an enterprise has is its human resource. It takes advantage of their interdependent knowledge that would explain why some firms are more

productive than others. It is human that make all the difference (Archel 1995). One school of thought argues for the qualification of human resources as assets and the other group opposes the thought because of its intangible nature and in actual fact, incalculability. The accountants were long ignored the importance of human resource in business organization as creative asset until recent past. However, behavioral scientist conducted research to value the human resource and include as assets in the conventional accounting system. The process is still in the black and white stage. Traditional accounting has treated costs related to a company's human resources as expenses on the income statement that reduces profit, rather assets on the balance sheet that have future value for the company; results a faulty perspective of decision making. In this standpoint attempt has been made to consider the situation by assigning monetary value to the human resources engaged in the organizations. The attempt has been called Human Resource Accounting (HRA). This research attempts to add the body of the knowledge about HRA and its applicability in today's organization. It also examine the changes occurs in the organizations financial statement and ultimately affect the decision making both internally and externally. In developing country like Bangladesh applicability of this concept can create vital changes in perception of decision-making.

2. CONCEPT OF HRA

The concept of human resource valuation has been continual subject matter under discussion for both areas of studies, Economics and Accounting. Since the new concepts of human resource management evolve; this has become one of the fields of interest among HR practitioners and academicians. The concept of human resource thus been discussed here from different standpoint. Economists consider human capital in faintly different way. They consider it as a production factor, and explore different ways of measuring its investment. From human resource perspective HR valuation has important implication for external financial reporting, and in the modern economic scenario, it has larger significance for internal HRM decision-making.

According to American Accounting Association (1970), 'Human Resources Accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties.' Basically it is an information system that tells the management what charges over time are occurring to the human resources of the organization.

According to Flamholtz, HRA represents-'Accounting for people as an organizational resource. It is the measurement of the cost and value of people for the organization'. Thus, it can be said that, HRA is the system of mounting financial evaluation for people within organization and monitoring of these assessment.

HRA was introduced by different think tanks and most of the elements are found in many methods, tools and analytical frameworks. It combines internal and external information requirements in respect of costs-benefits of investments, human resource management and the relationship between various stakeholders' interests in enterprises. It is such a setting, which is more transparent, and rapidly developing than ever.

Economists, HR practitioners and Academicians all recognized the fact that human should be treated as asset, nevertheless Accountants have not been recognized the value of human assets for long. Research on this field continued from 60's and Renesis Likert expresses the importance of long-term planning of human resources qualitative variables that result in greater benefit in the long run (Bowers 1973). The path shown by him and others are still struggling to establish its way and not yet been implemented by most of the organizations.

3. RESEARCH ON HRA

The origins of HRA were traced by accounting historians way back to before 1865 (Flesher and Flesher 1980; Nash and Flesher 2005). Accounting theorists (Scott 1925; Paton 1962) provided support for treating people as asset and accounting for their value measurement. Concentration in HRA came from a diversity of sources, including the economic theory of human capital, modern human resource perspective, human asset as of corporate goodwill and organizational psychologists. Likert (1961) and Odiome (1963) studied leadership effectiveness and a new human resource perspective based on the premise that people are valuable organizational resources and therefore should be managed accordingly. In his book Likert (1967) focused on the economic value of human capital and the 'human organization as a whole.'

A main restraint in considering human resource costs as assets was the measurement problem. It is explained in this paper in detail within a section later. The recognition that organizations provide to the valuable human assets and their measurement led in the 60s to the development of the field of HRA. Early stages in the development phase of HRA research was intended to put together the present and potential uses of HRA as a tool for human resource professionals, managers, and external users of corporate financial information. The majority of the research studies showed that HRA had an impact on both external and internal decision-making. In addition, exploratory experimental applications of HRA in actual organizations were conducted. Even after repeated attempt HRA has not established as part of reporting and as a tool of decision-making.

Roger Hermanson accomplished one of the earliest works in HRA. In his pioneering monograph, *Accounting for Human Assets*, Hermanson (1964, 1986) recommended a model to measure human resource value in external financial reports, he encouraged for the further HRA development. Flamholtz, Bullen and Hua (2002), research was conducted at the University of Michigan. A research team included the late Rensis Likert, William C. Pyle and Eric Flamholtz. They worked on a series of research projects. One of the outcomes of this research Brummet et al. (1968a) was a paper representing one of the earliest studies dealing with human resource measurement. The term "Human Resource Accounting" was also used for the first time in this study. During that same year Brummet et al. (1968b) also published another article in which they assessed the HRA impact on management. Flamholtz's (1969) originated a theory of an individual's value to an organization and how it could be measured through HRA. In the same year Brummet, Flamholtz and Pyle (1969) published "Human Resource Accounting: a Tool to Increase Managerial Effectiveness," in which the role of HRA was emphasized as a tool for increasing managerial effectiveness in

the acquisition, development, allocation, maintenance, and utilization of its human resources. These authors described one of the first attempts to develop a system of HRA for a firm's investments by reporting on an actual application on R.G. Barry Corporation. The experiment continued and received considerable recognition because for a few years the company published pro forma financial statements that included human assets. The HRA studies emphasized the need for future research in the field, and a number of researchers continued or began work in the area. As noted in Sackmann, Flamholtz and Bullen (1989), Flamholtz, Bullen and Hua (2002), and Flamholtz, Kannan-Narasimhan and Bullen (2004), throughout the subsequent years many studies were conducted in the area of HRA.

4. IMPORTANCE AND IMPLICATION

The micro level (within organization) perspectives are directly linked to HRA, which, again, could be developed both for internal and external use. For internal use HRA can be considered a management tool, and for external use, a tool for profiling the enterprise/organization. It is obvious that there is a strong connection between external and internal functions. They are not mutually exclusive; sometimes one may even be a prerequisite for the other. Table 1 depicts reasons why HRA is been considered as important aspect for decision-making.

Table 1. Internal and External Reason for Developing HRA

Internal Reasons	External Reasons
1. Acquisition and allocation of human resource	1. Overcome the difficulties in providing sufficient information to investors with traditional financial statement
2. Development and improvement of human resource	2. Profile the enterprise and improve its image
3. Acquisition & Development policy formulation	3. Branding among future employees
4. Focus on employees as assets	4. Redistribute social responsibilities between the public & the private sectors.
5. Retain qualified employees and rewarding	
6. Overcome problems arising from the valuation of intangible assets.	

HRA can be helpful for allocation decision by quantifying variables involve in this allocation and express them in monetary units. Assessing the value of a proposed investment (Resource allocation) and then estimating the cost of the proposed expenditure (Cost estimation). HRA can address the decisions by measuring expected rate of return on proposed investment. For policy formulation estimates of historical and current costs required, HRA can help management assess the trade offs between buy-produce, develop policy of personnel acquisition and assist them in conserving its human organization by providing an early warning system. It measures the productivity (performance) and promotability of people. Such decisions may include overall reward system

i.e compensation, promotion, performance appraisal etc. It can also measure the performance of human resource management by comparing actual cost with standards. In principle HRA is a tool to be used when implementing or improving HRM. Employees are now considered not as overheads but as assets, investment in human capital encourages management to measure and to collect data on human resources and to manage those resources as an important asset for the enterprise. HRA is also about making these investments more efficient from a strategic point of view as well as from a cost-benefit point of view.

To overcome the difficulties in traditional balance sheets lot of work are being done at present by accounting, financing, investors' and others. Organizations such as the International Accounting Committee (IAS) and Fédération des Experts Comptables Européens (FEE) are vigorous in this area. The discussion particularly concerns companies listed on stock exchanges.

HRA is already being a way of profiling enterprises and organizations. Management focuses on increasing the market value of the enterprise; the market value of the enterprise reflects the net present value of the expected future cash flow of the enterprise. It is also crucial for the enterprise to report to its stakeholders on the human capital of the enterprise, its innovative capability and its ability to achieve competitive advantage. Organizations that want to attract fresh employees; employers of that organization have to focus more on their employees than earlier, and this requires better HRA, since HRA is an important external reporting tool which allows the enterprise to document its investment made on its employees. HRA can also help to report HR value into financial statement and this information would assist investor in making decisions to acquire, retain, or dispose of stock.

5. PURPOSE OF THIS STUDY

Combining the interest of both internal and external decision making the purpose of this study has been set. From above discussion it can be said that HRA is the process of innovative HRM activities and certainly helpful for the organizations effective management. The practice of HRA has long been evident in different organizations countrywide. However, it is still on the phase of awareness in our country. Discussion with the HR practitioners reveal the fact that most are unaware about the terminology even and implementation is matter of touching the sky. Considering this situation this paper has been developed with following objectives:

- ✓ To describe the background and a systematized overview to the emergence of HRA
- ✓ To present and discuss the main stakeholders' (internal and external) interests in HRA
- ✓ To exemplify different approaches for evidence in support

6. METHODOLOGY

This paper is exploratory in nature as such, for effective conceptualization various secondary resources such as journal articles, research papers, books and extensive Internet materials has been studied and analyzed. This is evident in the research on HRA part in this paper. Researchers have tested different methods of HRA and practices of different earlier organizations are carefully observed. As the concept of HRA is contradictory in nature authors faced immense challenge in proving the concept. The concept of HRA is not widely practiced in developed countries either and is still unknown by the HR practitioners in our country, per se, collection of primary data were next to impossible. Moreover, the concept of Human Resource Management is in the childhood stage and everywhere is not equally maintained, therefore introducing the concept at this early stage of HR practice in Bangladesh appear logical to the researchers. Subsequently, it can be considered as opening the door for the empirical studies in near future.

7. MODELS OF HRA

Several researchers are engaged in establishing HRA from various points of view. As an outcome various model has evolved. The models consist of two aspects namely (a) The investment made in human resources and (b) The value of human resource. Measurement of the investments in human resources helps to evaluate the charges in human resource investment over a period of time. The information generated by the analysis of investment has many applications for managerial purposes. Valuation of human resource is also necessary to measure the performance of human resource.

From investment aspect understanding cost is preliminary concern. Accounting uses the concept of cost in a variety of ways; so do human resource management. Formally defined, cost is a sacrifice incurred to obtain some anticipated benefit or service. All costs have 'expense' and 'asset' components. An expense is the portion of cost that has been consumed during the current accounting period. An asset is the portion of cost that is expected to provide benefits during future accounting periods. A fundamental accounting problem is, of course, measuring the expense and asset components of cost. The idea of 'Human Resource Cost' is derived from the general concept of cost. Human resource costs are costs incurred to acquire or replace the people. Like other costs they have expense and asset components. They may have outlay and opportunity cost; direct and indirect cost elements. In addition, it is possible to account for standard as well as actual human resource costs. Finally, the conventional accounting concepts of acquisition and replacement cost also have counterparts in human resource accounting. Conventional accounting measures the costs as expenses but actually it should be treated as investment. The managerial application of this concept will be explained in the next section of this paper.

Valuation of human resource is the second aspect of HRA. For this purpose, several approaches have been developed over the years. The approaches are mentioned in Table 2.

Table 2. Different Approach and Models

Approach	Model Name	Propounded
Cost Based	Historical Cost/ Original Cost	Brumnet, Flamholtz and Pyle
	Replacement Cost	Rensis Likert & Eric G.Flamholtz
	Opportunity Cost	Hekimian and Jones
	Standard Cost	David Watson
	Current Purchasing Power	
Monetary Value Based	Present value of future earnings method	Lev and Schwartz
	Adjusted Discounted Future Earnings Model	Hermanson
	Stochastic Reward Valuation Model	Eric G.Flamholtz
	Net Benefit Model	Morse
Non Monetary Value Based (Individual and Group)	State of Human Organizations	Likert-Bower
	Certainty Equivalent Net Benefit Model	Pekin Ogan
Group Valuation Model	Human Resource Valuation	Jaggi and Lau Model
	Aggregate Payment Approach	Prof. S.K. Chakraborty

Each model has its own limitations. Other than mentioned models Tang (2005) developed a heuristic frame addressing the link between human resource replacement cost and decision-making in a human resource replacement cost (HRRC) system. The system measures direct and indirect costs of human resources. Dobija (1998) proposed an alternate model for capitalization, where the rate of capitalization is determined through the natural and social conditions of the environment. This method takes into account the three factors for valuing the human capital embodied in a person. These include the capitalized value of cost of living, the capitalized value of the cost of professional education and the value gained through experience utilizing a compound interest approach. Alternately, Turner (1996) referred to the framework issued by the International Accounting Standards Committee and recommended the use of the present value of the value added by enterprise, and measurement of assets by the four methods of historical cost, current cost, realizable value and present value. Cascio (1998) proposed a method for measuring human capital based on indicators of human capital of innovation, employee attitudes and the inventory of knowledgeable employees. According to this method, innovation commands a premium and therefore needs to be measured, for example by comparing gross profit margins from new products to the profit margins from old products. Employee attitudes predicting customer satisfaction and retention are an important indicator of human capital and therefore need to be measured, as well as measures of tenure, turnover, experience and learning.

Among all these models one has proved to be more valid than other and used in several companies in India and other countries in the world: The Lev and

Schwartz model. It has been the most widely use model for its ease of use and convenience. Under this method, the future earnings of the human resources of the organization until their retirement is aggregated and discounted at the cost of capital to arrive at the present value. As the model is widely used this paper intends to highlight the model for ease of understanding for readers.

7.1 The Lev & Schwartz Model

The Lev and Schwartz model states that the human resource of an organization is the summation of value of all the Net Present Value (NPV) of expenditure on employees. It is shown in the equation (1). The human capital embodied in a person of age r is the present value of his earning from employment. Under this model, the following steps are adopted to determine HR value.

- i. Classification of the entire labor force into certain homogeneous groups like skilled, unskilled, semiskilled etc. and in accordance with different classed and age wise.
- ii. Construction of average earning stream for each group.
- iii. Discounting the average earnings at a predetermined rate in order to get present value of human resource's of each group.
- iv. Aggregation of the present value of different groups which represent the capitalized future earnings of the concern as a whole,

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

where, V_r = the value of an individual r years old
 $I(t)$ = the individual's annual earnings up to retirement
 t = retirement age
 r = joining age
 R = a discount rate specific to the cost of capital to the company.

A. Critical Appraisal of the Lev & Schwartz Model

- i. It is essentially an input measure .It ignores the output i.e. productivity of employees.
- ii. Service state of each individual employee is not considered.
- iii. The training expenses incurred by the company on its employees are not considered.
- iv. The attrition rate in organization is also ignored.
- v. Factors responsible for higher earning potentiality of each individual employees like seniority, bargaining capacity, experience etc. which may cause differential salary structure are also ignore.

To overcome some of the critical appraisals of Lev and Schwartz model another model has fitted best known as Stochastic Reward Valuation Model (SRVM). The SRVM, originally developed by Flamholtz (1971) for human resource valuation, and further explained in Flamholtz in (1999).

According to Flamholtz (1999) there is a dual aspect to an individual's value:

The amount the organization could potentially realize from his or her services if the person maintains organizational membership during the period of his or her productive service life defines the person's "expected conditional value (ECV);" and

- ii. The amount actually expected to be derived; taking into account the person's likelihood of turnover defines the person's "expected realizable value (ERV)."

A practical method for calculating ROI on management development and the incremental cash flows that an organization will receive due to investment in management development are showed (Flamholtz, Bullen and Hua 2003). The article concluded that use of HRA as a tool to measure the value of management development enhances not only the value of human capital but also the value of management accounting.

Measurement of Expected Realizable Value;
$$E(RV) = \sum_{i=1}^n \left[\frac{\sum_{i=1}^m Ri * P(Ri)}{(1+r)^t} \right] \quad (2)$$

Measurement of Conditional Realizable Value;
$$E(CV) = \sum_{i=1}^n \left[\frac{\sum_{i=1}^{m-1} Ri * P(Ri)}{(1+r)^t} \right] \quad (3)$$

where

- R_i = Value 'R' to be derived by the organization for each position i.
 $P(R_i)$ = Probability that an individual would occupy position i.
 t = Time of retirement.
 m = State of exit.
 r = Discount rate.

B. Application of the Stochastic Rewards Valuation Model

As reported in Flamholtz, Bullen and Hua, the steps in the SRVM may be summarized as follows:

- Step 1: Define the mutually exclusive set of states, or service states, an individual may occupy in the organization's system, or organization.
- Step 2: Determine the value of each state to the organization, or the service state values with price quantity method or income method.
- Step 3: Estimate a person's expected tenure, or service life, in the organization (a measure of expected conditional value) shown in equation (3).
- Step 4: Find the probability that a person will occupy each possible state at specified future times.
- Step 5: Discount the expected future cash flows to determine their present value (a measure of expected realizable value) shown in equation (2).

The approach is considered to be an improvement over Lev & Schwartz model in two aspects:

- i. It takes into account factors relating to the possibility and probability of employees career (different role) movement.
- ii. Quitting the organization for reasons other than retirement or death.

The models discussed above are the evidence of continual improvement in HRA practices worldwide.

8. DECISION MAKING IN HRA

HRA as a tool can be applied in internal-external decision-making. Figure 1 reveal the process how HRA can be used as controlling function for HRM and creates its impact. HRA can be applied in various decisions making on internal human resources practices (i.e. Recruitment, Performance management etc.) and certainly influence on the external stakeholders' (investor's decision, future employment branding, social responsibility etc.). Following the figure 1; explanation justifies HRA tool in both type of decision-making.

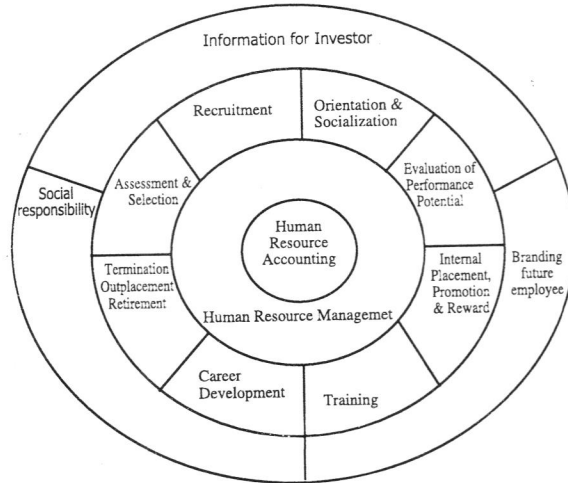


Figure1. HRA-controlling function in internal-external decision making

HRA can be an apparatus to aid in managerial decision-making by segmenting the costs allocated for the human resource management. Narayanankutty in his paper showed some of the techniques like human resource cost coefficient, times rate of return, percapita investment and percapita operating income that can be a measure in human resource decision making by internal users. His study on Cochin port provided useful information to the human resource planning division. His cost coefficient and total cost calculations (Table 3) are derived here for better example. After ascertaining the human resource investment and the current costs on human resources for five years the human resource cost coefficient can be estimated. First of all Total Human Resource Cost (THRC) are ascertained (THRC = human resource investment + human resource current costs). Human resource cost coefficient is also computed by taking the share of each class of human resources in the total human resource cost.

Table 3. Human Resource Cost Coefficient from Cochin Port Study

Year	Officer		Staff		Labor		Total
	THRC	Coefficient	THRC	Coefficient	THRC	Coefficient	
1988-89	175.08	0.0808	1772.04	0.8175	220.45	0.1017	2167.5
1989-90	215.34	0.0889	1964.64	0.8116	240.75	0.0995	2420.73
1990-91	289.82	0.1060	2192.56	0.8020	251.44	0.0920	2733.82
1991-92	315.28	0.1140	2201.66	0.7962	248.31	0.0898	2765.15
1992-93	353.51	0.1117	2544.99	0.8038	267.72	0.0845	3166.22

Table 3 shows the total cost and cost co-efficient of Cochin Port Trust for 5 years ending on 31.3.1993. The co-efficient gives idea to the management how the investment in human resources is spread among various classes of human resources (i.e. officer, staff and labor).

Besides, this study showed some ratio analysis for comparing and decision-making and rate of return on human resource techniques to analyze HRA information. These ratios are: i) Human Resources to Total Resources; ii) Human Resources to Capital Assets; iii) Human Resources to Salaries Allowances; iv) Human Resources to Operating Income; v) Human Resources to Profit before tax; vi) Human Resources to Value Added.

This study contributes to prove evidence in support how the specific assessment are measured and internal decision are made. Measuring the human resource cost can be a crucial decision making tool regarding humans engaged in the organizations. The influenced area covered through HRA in internal human resource management is shown in the third circle of the Figure 1.

With managerial decision making potential external stakeholders mainly the investors also will be interested in information which aid in decision making and with investors, thrust of information for future employees and for performing social responsibilities HRA is essential too (fourth circle Figure 1). However, no such information regarding human asset is presently available for investors because financial statement treat human as expense rather than asset as per GAAP accounting method. Based on this argument four related issues come in front 1) Are people assets? 2) What are the implications of financial statement without human assets? 3) How can investment be presented and 4) Accounting problems of reporting assets? These issues are addressed here consecutively. From model valuation sections of this paper we already understand human can be treated as assets as it can be the answer of issue no 1. The implication of above issue no 2 and 3 are; conventional practice of treating human as expenses results in distorted income statement and balance sheet. In the income statement, the figure designated "net income" is distorted because accountants treat all expenditures made to acquire or develop human resources as expenses during the period incurred, rather than capitalizing and amortizing them over their expected service life.

XYZ Company
Income Statement (Partial)

	Conventional Accounting	Human Resource Accounting
Sales	<u>Tk. 10,00,000</u>	<u>Tk. 10,00,000</u>
Expenses: Excluding depreciation and amortization	7,50,000	7,00,000
Depreciation	1,00,000	1,00,000
Amortization	<u>N/A</u>	<u>5,000</u>
Income Before Taxes	Tk. 1,50,000	Tk. 1,95,000
Less: Tax @ 40%	<u>60,000</u>	<u>78,000</u>
Net Income	<u>Tk. 90,000</u>	<u>Tk. 1,17,000</u>

The balance sheet is distorted because the figure labeled "total assets" does not include the organizations' human assets. There is, therefore, no indication of organization's actual investment in its human assets. Possible new inclusion is shown in a partial Income Statement and Balance Sheet.

XYZ Company
Balance Sheet (Partial)

	Conventional Accounting	Human Resource Accounting
Current Assets	Tk. 4,00,000	Tk. 4,00,000
Long term assets:		
Plant and equipment, net	15,00,000	15,00,000
Patents, net	1,00,000	1,00,000
Human Resource Investment, net	N/A	45,000
Total Asset	<u>Tk. 20,00,000</u>	<u>Tk. 20,45,000</u>

The above income statement shows that in conventional practice, Net income is less and by showing the amortization (Tk.5,000) of human resource investment (Tk.50,000) over expected life period of 10 years the income in HRA practice actually raised. Beside, showing the rest of the investment amount (Tk.45,000) in the asset part the total asset also raised.

This clearly exemplifies the distortion of net income caused by present accounting practice for investment in people. It also distorts the measurement of rate of return. The calculation of rate of return is a crucial variable in management and investors decision. Since it is the ratio of net income and total asset; it becomes distorted because of distortions in its components. Investors who attempt to base their decision on rate of return must adjust the situation. The changed rate is calculated by taking the figures from previous examples.

Rate using Conventional Accounting = $(\text{Tk.}90,000 / \text{Tk.}20,00,000) \times 100 = 4.5\%$

Rate using HR Accounting = $(\text{Tk.}1,17,000 / \text{Tk.}20,45,000) \times 100 = 5.72\%$.

The rate is higher using HRA than conventional accounting practice and Investor's decision might be influential in this regards. For a company the investor's interest is vital at any means that can be volatile as HRA can influence it. For addressing issue no 4 there are four possible methods of presenting investments in human assets in corporate reporting. This information may be presented in president's letter, in a statement of intangibles, in unaudited pro-forma financial statement or by integrating into the conventional financial statements.

9. LIMITATIONS IN HRA

HRA has implications for both external financial reporting and internal managerial reporting. External financial reporting is utilized in financial statements to distribute among stockholders, bankers, and potential investors and lenders. External reports for public companies, and often for private companies must follow "generally accepted accounting principles" (GAAP). It encourages

objective, reliable and verifiable measurement to facilitate assessment of the company's financial standing and comparability among organizations. Some people objects HRA because for them it implies ownership of human beings. With it a main problem raises that is subjectivity in measuring human assets. The same is true for reporting intangible assets such as goodwill and patents. GAAP does not allow reporting of human resources as assets, accounting rules do not allow for these intangible assets to be reported as assets.

One of the main obstacles that have been identified in measuring human resources value relates to the same problems facing the measurement of most intangibles assets. Jensen (2001) found that the most severe barriers to measuring intangibles included lack of concrete tools, time and resources, and that one of the significant barriers for reporting of human resources included the lack of recognized valuation approaches. Turner (1996) recommended that in order for human resources be reported on the balance sheet, the value of the asset should be established with reliability, and that the lack of recognized valuation approaches make it difficult to establish the reliability of the valuation of human assets. As reported by Jensen (2001), another barrier is the perception of managers of organizations that the outcome of reporting is not worth the effort of reporting. (Johanson and Mabon 1998) suggested that managers of organizations hesitate to adopt new routines such as reporting human assets because they are skeptical that the costs of conducting such exercises outweigh the benefits. Also the fact that alternate methods conform to the mandatory external reporting reduces the need for reporting on human resources for external financial reporting purposes.

For many potential users, the basic problem in the development of HRA for external reporting purposes is the appropriateness of expressing human resource assets in financial statements. Main arguments for excluding human assets from the financial statements include that they are characterized by uncertain benefits and lack of transferable values (Hedlin and Adolphson 2000). Uncertain benefits mean the possibility that the benefits from investment are uncertain both in terms of economic feasibility and the duration of benefits. Lack of transferability refers to the possibility that intangible assets are firm specific and it cannot be transferred from one organizational entity to another in case of liquidation. Researchers in HRA have been highlighting the invalidity of these reasons for keeping out of human assets in the financial statements. Turner (1996) stated that inclusion of capital value of human resources, as an asset would assist stakeholders in deciding if the organization has generated an acceptable rate of return on the assets invested. Despite these arguments, researchers have not succeeded in convincing the accounting profession of the logic behind including the monetary value of human resources in the financial statements.

Identification of problems in HRA is a compulsory part so that these bottlenecks to growth can be addressed. As noted in Flamholtz, Kannan and Narasimhan, and Bullen (2004), some of the main stumbling blocks identified include lack of a meaningful system of measurement, appropriateness of measuring human assets by a monetary value, and the fear in organizations about the disarranging of the existing social order due to HRA implementation. Whereas some proponents of HRA argue that it should be on the balance sheet

now, it is acknowledged that more applied research, case and field studies are needed in the development of HRA measurement techniques. Until HRA measures become widely accepted and used, the role of HRA in external financial reporting may best work as additional information to the external financial statements as it is mentioned in answering issue 4 of previous section.

10. CONCLUSION

HRA can change the modern management systems and procedure. It has been proven from the discussion that HRA can be an aid in managerial and external stakeholders' decision making. Utilization of HRA can not only makes the management transparent, but also can create value to the human who are now counted as part of organizational asset. The HRM implications can be effective with the help of HRA system as well. Organizational investment in human and its potential uses can also be efficiently determined. It signifies the viewpoint of organizations and opens up new dimensions both for human resource management and for accounting. Organizations may adopt the concept of HRA and to make the process ease GAAP may recognize the inclusion of HRA in financial reporting. However, the HR professional have to keep in mind that the prerequisites (basic HRM functions of an organization) of establishing HRA are the successful implementation of HR planning. At the early stage of an organization, first the basic HR planning must be ensured only then the outcomes of HRA can be beneficial.

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