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## **A Critical Evaluation of Measuring the Immeasurable: Human Resource Accounting (HRA)**

**Dr. C. S. Sharma**

Director, Maharaja Agrasen Institute of Management Studies, GGSIU, Delhi, India

**Sameer Lama**

Assistant Professor, Department of Commerce  
Delhi School of Economics, University of Delhi, Delh, India

### ***Abstract:***

*The contemporary distorted narratives on Human Resource Accounting and an unbridled spur of assorted horizons on HRA manifest the dire need of a sound and cognitive reasoning and analysis of human resource accounting. The cryptic metaphysics on measuring the immeasurable asset, i.e. human resource has gained much momentum for research and deliberations over the last five decades. This paper highlights the astounding growth and development made in the domain of human resource accounting. The paper also exemplifies the constraints on the measurement aspect of human resource accounting and examines the validity of the deceptive financial statements. The paper also discusses the development of human resource accounting made in the international arena and accentuates the importance of measuring the value of human resource highlighting the examples of some Indian companies that made unprecedented effort to value and account human resource in the financial statements.*

**Key words:** *Human Resource Accounting (HRA), Valuation, Human Resource, Financial Statements*

### **1. Introduction**

Attempts to measure human resource have gained considerable momentum since the early 1970s, when the first attempt towards measuring the human resource was made by a foot ware manufacturing company R. G. Barry Corporation of Columbus, Ohio with the help of Michigan University in 1967. Human Resource Accounting, also known as Human Asset Accounting involves identifying, measuring, capturing, tracking, and analyzing the potential of human resources of an organization and communicating the subsequent information to the various stakeholders in an organization. Accounting for human resource has been a mystery since the origin of the term Human Resource Accounting. Scholars across the world have been trying to solve the dilemma of HRA since last many decades but the enigmatic nature of human resource accounting and the failure of the national and international accounting standards boards to enforce a detailed standard on mandatory compliance norms have resulted into the dismal compliance of HR Accounting in the contemporary times. Inevitably the composition of the human resource and its management is the most difficult task to grapple by a manager in any organization (Lama, 2012). The importance of human resource is evident from the famous saying, "If you wish to plan for a year, cultivate flowers; if you wish to plan for ten years, plant trees; and if you wish to plan for eternity, development". This adage highlights the importance of human resource for any entity, if it so desires to sustain in a market for a long term, it cannot do so unless it develops its human capital. The importance of human resource for the organization in the modern management layout therefore depends on the intricacies of the value of the human resources. There is no apprehension that success of an organization in the contemporary world is ubiquitous aphorism to the value of human resource. The basic premises of human resource accounting manifest the need to measure the immeasurable. The following premises of HRA accentuate the overall need of accounting for human resources.

### **2. Basic Premises of HRA**

- People are the most valuable resources of an enterprise.
- The usefulness of manpower as an organizational resource is determined by the way in which it is managed.
- Information on investment & value of human resource is useful for decision making.
- Resources that can be measured can be controlled.

The basic premises of Human Resource Accounting highlights the dire need to measure the value of human resource and showcase the valuation in the financial statements of the organization. The various approaches to measure the human resources and the existing literature contributed mainly by the western researchers in this field highlight the grave concern on the issue and importance of HRA. The inefficiency of the various national and international standard boards clearly underlines the fact behind the subtle growth and development in the field of human resource accounting.

### 3. Historical Perspective of Human Resource Accounting – An Overview

Human Resource Accounting may still be considered as a new terminology in the field of accounting and management studies but its origin dates back to the late seventeenth century when economist, Sir William Petty first attempted to estimate the monetary value of population of England in 1681. The quest for the external corporate reporting on human resource accounting has mesmerized the HR professionals since the late 1960s, when the R.G. Barry Corporation, a leisure footwear manufacturer, Columbus, Ohio (USA) included human resource as assets for the first time in their balance sheet. Since then, numerous scholars have contributed on the different aspects of human resource accounting. The history of HR accounting and the different value based models for determining the value of human resource can be traced from a scholarly article by Roger Hermanson conducted at Michigan State University (Hermanson, 1964). Eric Flamholtz and William Pyle contributed vehemently to the literature of HR accounting during the late 1960s and 1970s. They worked on a series of research projects designed to develop the concepts and methods of accounting for human resources. The major outcome of this research (Brummet, Flamholtz & Pyle, 1968) was a paper representing one of the earliest studies dealing with the measurement of human resource. Scholars like R. Lee Brummet and Rens is Likert involvement and contribution in the field of HR accounting cannot be undermined. Flamholtz & Pyle (1968) also published another article in which they assessed the impact that HRA can have on management. Flamholtz's (1969) Ph.D. dissertation, an exploratory study in the area of HRA, developed a theory of an individual's value to an organization and how it could be measured through HRA. The extensive research in the field of HR accounting since the late 1960 till date attributes to the fact that human resource measurement is one of the most difficult and challenging aspect in the entire accounting arena (Lama, 2012). The recent research in this area attempts to distinguish economic values attributable to the human resources of a firm from the values attributable to other components of goodwill (Spiceland and Zaunbrecher, 1976).

### 4. Definition of Human Resource Accounting

Human Resource Accounting is an attempt to identify and report the investments made by organizations on human resources that are currently not accounted for under conventional accounting practice. Essentially, HRA is an information system in an organization that helps the organization to take a rational decision on investment of human resources. Human Resource Accounting has been defined by various scholars and reputed institutions in different ways. American Accounting Association's Committee (1973) on HRA defined "HRA is the process of identifying and measuring data about human resources and communicating this information to interested parties". R.L. Woddruff Jr., Vice President, R.G. Barry Corporation (1960) defines HRA as—"human resource accounting is an attempt to identify and report investment made in resources of the organization that are not presently accounted for under conventional accounting practice". Woodruff further considers it to be an information system that tells management what changes overtime are occurring to the human resources of the business.

Flamholtz (1979) describes the Human Resource Accounting paradigm in terms of the "psycho-technical systems" (PTS) approach to organizational measurement. According to the PTS approach, the two functions of measurement are (i) process functions in the process of measurement and (ii) numerical information from the numbers themselves, thus one role of HRA is to provide numerical measures, an even more important role is the measurement process itself. The HRA measurement process helps to increase recognition that human capital is paramount to the organization's short and long-term productivity and growth. Brummet et al. (1968) defined "Human Resource Accounting is the process of identifying, measuring, and communicating information about human resources to facilitate effective management within an organization." Knauf (1983) defined HRA as "The measurement and quantification of human organizational inputs, such as recruiting, training, experience, and commitment". Prakash (1993) defined human resource accounting as a scaling tool that generates and reports quantitative control information about the contribution of human resources for promoting industrial productivity. Chandran (2007) succinctly points out HRA as a method by which a cost is assigned to every employee when recruited and the value that employee generated during the tenure he/she worked for the company. Prof. Sidney Davidson defines human resource accounting as a "term used to describe a variety of proposals that seek to report and emphasize the importance of human resources—Knowledgeable, trained and loyal employees—in a company's earnings process and total assets".

The various definitions highlighted above by different scholars and institutions vividly interpret the various parameters of HRA and the loopholes attached therewith. If accounting is the language of business, for a layman, the language which records, communicates and interprets human resource is human resource accounting. Or in other words HRA is a sub-system of the total accounting system which, in turn, is a part of total management information system".

### 5. Relevance of the Study

There exists a wide gap in literature on the measurement aspect of human resource accounting. Research in accounting for human resource could not find its proper place in the literature due to its mysterious nature over the last few decades. Moreover, a large volume of research has been undertaken in some other branches of accounting, like the financial, management, and cost accounting. As such, this study has been done mainly to reinforce the importance of human resource accounting in the current

business framework highlighting the prospects and problems of human resource accounting and to bring forward the core measurement aspect of human resource facilitating the existence of human resource in the financial statements.

## 6. Review of Literature

Srimannarayana (2009) reveals that attempts made in Indian industry to measure the HR activities vary from a limited extent to a significant extent among various organizations. The author further concludes that employee compensation related activities are given more importance when compared to other domains of HR in measurement. The author also exemplifies that the positive results of traditional HR measures reinforce HR managers for their contribution, but may not stimulate change for business impact and thereby suggests that having achieved significant progress with respect to measuring HR using traditional measures, the HR profession also now may focus on measures that shows concrete business improvements. Pyle (1970) suggests that primarily the cost approach to HRA is helpful for a manager in planning for the development of human assets and creation of favorable relationships with external parties. The author also highlights that if human resource accounting grows in acceptability to the point where it is incorporated into the audited financial statements, it can help the manager in the same manner as that of conventional financial reporting. Spiceland and Zaunbrecher (1976) assert that reservation by economists concerning the treatment of humans as assets as being immoral or at least impractical relegated the topic to a dormant position for many years and further states that these reservations expressed in neo-classical economics will likely continue to help confine the effects of HRA to internal rather than external reporting purposes. Dermer and Siegel (1974) suggests that HRA systems should either make use of behavioral measures in accounting for HR or attempt to develop financial surrogates of the behavioral condition of an organization. Dittman, Juris and Revsine (1976) reveal that the greater the specificity of the training provided and the greater the mobility restriction to the human resource, the greater is the likelihood for asset creation. Ansari and Flamholtz (1978) reveal that Human Resource Accounting represents a major development in the adjustment of accounting to what has been called as 'post-industrial society'. Lepak and Snell (1999) exemplify the alternative employment arrangements used by firms in allocating work. Further, the author reveals that human capital theory, transactions cost economics, and the resource based view of the firm all converge on two dimensions, i.e. the value and uniqueness of employee skills as primary determinants of a HR architecture. The author also argues that adopting an architectural perspective may help both academics and practitioners understand which forms of human capital have the potential to be a source of competitive advantage at present and in the future.

## 7. Human Resource Accounting in Managerial Reporting and Decision-Making

The use of different models primarily the value-based models like the Lev and Swertz Model, Hermanson's Model, etc. in HRA provides the general understanding on the value of human resource of an organization in a particular time frame. HRA can play a crucial role in internal managerial decision making, and HRA measures can be used to show that investments in a company's human resources may result in long-term profit for the company (Bullen, 2007). Some scholars also hold the view that the presence of skilled human resources adds to the good will of the company that facilitates the profitability and growth of a company. To measure human value as a part of good will, HRA was introduced into the accounting literature in the 1960s (Flamholtz, 1985).

Human Resource Management decisions such as recruitment, selection, training, promotion, retirement, etc. can be easily forecasted using the value based models which primarily deal with finding the present value of all the future earnings and losses. Consistent and systematic HR accounting provides the necessary information to managers for making all kinds of decisions related to Human Resource. It has been felt during the last few decades that Companies are giving due importance to "intangible assets" and human capital and its various dimensions has been extensively explored during the last few decades. Proper valuation of human resources in an organization helps to eliminate the negative effects of redundant labor. Mahalingam (2001) states that "Pundits of today assert that while the other forms of capital, including material, equipment, tools and technology, only represent inert potentialities, it is the human capital that converts this potential and energizes the creation of wealth. Human Capital, one of the many parameters of Intellectual Capital has been a major force driving the Managers to accentuate their existence in a Company for a long run. The critical success factors for many knowledge-based companies were a substantial presence of its highly skilled and intellectual workforce. Notwithstanding the fact that intangibles cannot be measured and assessed, Companies like Microsoft, Amgen and Intel that came into existence in the 1980s relied almost entirely on intellectual capital for their survival and profit and hence succeeded. Many Indian companies like Infosys, NIIT, CCI, etc. also attribute its successes mainly to the human capital it possesses and understands the need to value the most important asset in their financial statements.

## 8. Objectives of Human Resource Accounting

- To provide quantitative information on human resource for managerial decision making regarding acquiring, developing, allocating, and maintaining human resources so as to attain cost-effective organizational objectives.
- To determine the return on investment on human resources.
- To provide information for determining the status of human asset whether it is conserved properly; whether it is appreciating or depleting.
- To assist in the development of effective human resource management practices by classifying the financial sequences of these practices.
- To communicate the worth of human resources to the organization & the society at large.

### 9. Limitations of Human Resource Accounting

- Human being is mobile. They cannot be owned or retained like other physical assets. Hence valuing human resource seems to be unrealistic.
- There is not generally accepted principle which makes it mandatory for companies to disclose its human resource in the balance sheet. Even IASB has failed in producing a sound international standard on this regard.
- There is no consensus among the professionals with regard to the valuation of human resources as the valuation depends on a large number of abstract factors not measurable in precise monetary terms. Hence, the valuation lacks objectivity and preciseness.
- In spite of all its significance and necessity, tax laws do not recognize human beings as asset. Hence, human resource accounting remains merely as a theoretical concept.

### 10. Advantages of Human Resource Accounting

- Human Resource Accounting helps the management in the optimum utilization of human resources.
- It helps in planning, supervising, directing and staffing the human resource. It assists in taking sound decision with regard to recruitment, selection, training, promotion and retrenchment of human resources.
- It assists the firm in evaluating the total expenditure that the firm has incurred for training and development schemes for its employees in terms of the benefits derived by the firm.
- It helps to reveal the gap in skills and competence among the employees in an organization and identifies the most appropriate person for particular tasks.
- The return on investment can realistically be calculated only when the investment on human resources is taken into account.
- It facilitates investment by providing information to investors about the achievements and capabilities of an organization. HRA is also helpful in presenting a sound image of the company facilitating and attracting new faces and increasing the retention of existing staff.

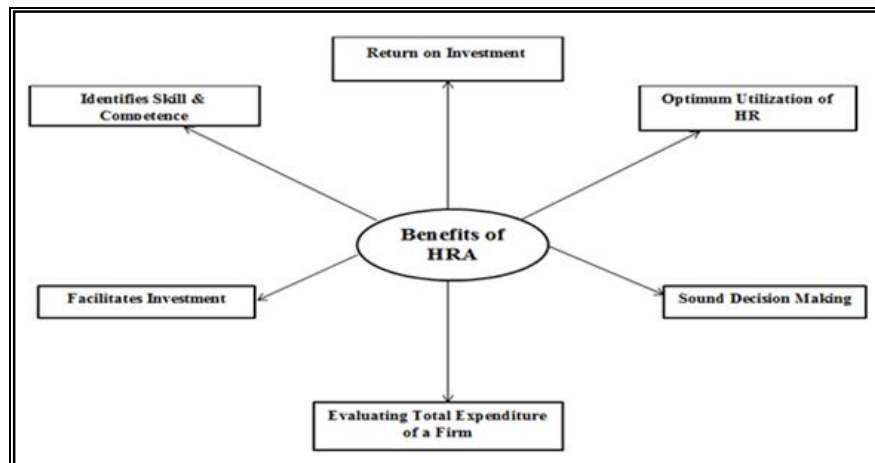


Figure 1: Benefits of Human Resource Accounting

### 11. HRA Measurement Models (Measuring the Immeasurable)

In spite of a wide range of contradictions among the experts in the field of human resource and accounting regarding the valuation of human resource and recording the same in the financial statements, there has been a significant contribution by researchers across the world for developing the various models in order to measure the value of human resource. Human Resource Accounting has can be broadly classified as monetary and non-monetary value-based approaches. The monetary approaches are further classified as (a) Cost Based Approaches, which incorporate historical cost approaches, replacement cost approach, opportunity cost model, standard cost method, current cost purchasing power method, and (b) Value Based Models embrace Hermanson's adjusted discounted future earnings model, Lev and Schwartz present value of future earnings model, rewards valuation model, Jaggi and Lau model, net benefit model, Eric Flamholtz model, Morse model, etc.

The cost based models are mainly designed to evaluate the various costs associated with hiring, training, induction, development, replacement, etc. whereas the value based models are mainly designed to find the present value of human resources in an organization. Organizations are mostly oriented towards the value based measurement of human resource as it provides a clear analysis of cost and benefit of all the employees (individual and group) of an organization.

The general adage "what is measured is managed" signifies the importance of measuring the immeasurable, i.e. the Human Resource. The measurement of human resource is perhaps the most difficult task which an individual can undertake. The embellishment of financial statements has already resulted in crippling effect in decision making throughout the world, disrupting the investors in understanding and taking rational decisions. Under such circumstances, it becomes a pre-requisite for accountants and decision makers to understand the basic difference and concept between the measurement aspect of the tangible and the

intangible assets. The measurement and recording of tangibles can be an easy task but the measurement of intangible is a uphill task. There is no generally accepted definition of “intangibles.” Reilly (1992) proposes that the most common categories of intangible assets are Technology-related (e.g. engineering drawings), Customer-related (e.g. customer lists), Contract-related (e.g. favorable supplier contracts), Data processing-related (e.g. computer software), Humancapital-related (e.g. a trained and assembled workforce), Marketing-related (e.g. trademarks and trade names), Location-related (e.g. leasehold interests), and Goodwill-related (e.g. going concern value).

**12. Human Resource Accounting Models**

“Once it has been determined that there is value, there is a need to establish its quantification”. The availability of the various models in HRA provides the necessary solution to the accounting professionals on the measurement aspect of human resource, but the limitation of all the models given below possess in itself a challenging and dissent aphorism. Mainly, the value based models have been felt to have a good acceptance in valuing human resource by the corporate world-wide. The diagram below clearly reveals the existence of a plethora of HRA models in order to quantify or measure the immeasurable.

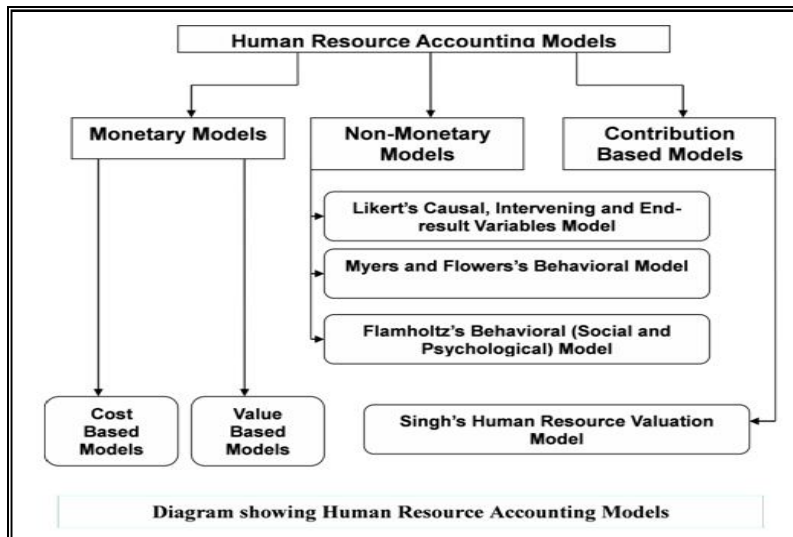


Figure 2: Human Resource Accounting Models

The Cost Based and Value Based Models under Monetary Models are as under:

<b>Value Based Models</b>
• Hermanson's Unpurchased Goodwill Method
• Hermanson's Adjusted Discount Future Wages Model
• Lev And Schwartz Present Value of Future Earnings Model
• Flamholtz's Stochastic Rewards Valuation Model
• Jaggi And Lau's Human Resource Valuation Model
• Robbinson's Human Asset Multiplier Method
• Watson's Return on Effort Employed Method
• Brummet, Flamholtz and Pyle's Economic Value Method of Group Valuation
• Morse's Net Benefit Method
• Ogan's Certainty Equivalent Net Benefits Method
• Friedman And Lev's Human Resource Valuation Model
• Chakraborty's Human Resource Valuation Model
• Dave's Modified Present Value Model

Table 1

Cost Based Models
• Acquisition Cost Method
• Replacement Cost Model
• Opportunity Cost Method
• Standard Cost Method
• Current Purchasing Power Method (C.P.P.M.)
• Rao's Input/output
• Control Mechanism Model
• Bardia's Cost Concept Model
• Human Resource Total Replacement Method

Table 2

It has been mainly observed that out of the various cost based and value based models, the practical applicability of value based models, particularly the Lev and Schwartz Model has mostly been accepted by the organizations to value the human resource.

### 13. International Developments in Human Resource Accounting

The resurgence of International Accounting Standards Board(IASB) since the last decade has facilitated a large number of international standards and thereby the IASB has been successful in converging over 130 countries to the new international standards popularly known as International Financial Reporting Standards(IFRSs). The inability of the IASB to frame a sound standard on HRA itself manifests the complexities and diversities to recognize and report human resources in the balance sheet. The international standard IAS 38(IntangibleAssets) and IFRS 3 (BusinessCombinations) recognize the importance of valuation for intangible assets but do not specifically mention anything about the human resources. Hence, there form in the reporting framework enunciated by the international accounting standard board indicates a more sophisticated approach to the measurement of assets, tangible as well as intangible, thereby creating enough space for further adjustments and modifications in the reporting framework. Beaver(1981) believes that frequent additional reporting requirements and continuing changes to existing requirements will be a permanent feature of the future financial reporting environment. Amidst the vivid contradictions, HRA has been reckoned as one of the important parameter on the foundation of which the business empire revolves.

A huge contribution in the field of HRA has come from the U.K and the U.S.A. Human resource accounting is predominantly an American invention and most of the early literature on HRA came from USA. A recent research paper by Wagner(2007) recommended that human capital is one of the intangible assets that investors look for in valuing a company, along with the structural capital and the relationship capital.DeweandVerma (2008) reveal that the measurement of human resource is very important for the organizations in U.K. The Scandinavian countries, especially Sweden have taken a particularly strong interest in the area of HRA in the recent years. HRA has also gained a uniform importance in the Asian sub-continent. Countries like India, Indonesia, Malaysia, Philippines, Bangladesh, and China have also realized the importance of human resource valuation and its disclosure in the financial statements and hence, have contributed vehemently to the existing literature of human resource accounting. Khanand Khan(2010) reveals that the HC reporting practices of leading Bangladeshi firms are not as low as projected in relation to the total list of items reported.

However, the extent of HRD activities in Thailand is limited. Retraining efforts to help the workers to adjust to the new technology in order to make the adaptable to changes are rarely found. NewZealand reflects a better picture in terms of human resource disclosure as the Companies Act 1953 and the accounting stand are issued by New Zealand Society of Accountants specify the voluntary disclosure of social responsibility and human asset value information in the financial statements and annual reports of the company.

BHEL(Bharat Heavy ElectricalLtd.) was the first Indian Company to promulgate the existence of human resource in the balance sheet. Subsequently,many public and private sector companies adopted the strategy of valuing human resources. Some of the Indian companies value their human resources and report this information in the annual report. Some of the companies, who are presently reporting human assets valuation, include:

- Bharat heavy Electrical Ltd (BHEL)
- Steel Authority of India Ltd (SAIL)
- Oil and Natural Gas Commissioning (ONGC)
- Oil India Ltd.
- Project and Equipment Corporation of India (PEC)
- Engineers India limited
- Mineral and Metal trading Corporation of India (MMTC)
- Electrical India Ltd.
- Hindustan Shipyard Ltd.

- Cement corporation of India (CCI).
- Infosys Technologies Ltd.
- Tata Engineering and Locomotive Works
- Southern Petrochemicals Industries Corporation Ltd.(SPIC).
- Associated Cement Company Ltd (ACC)
- National Thermal Power Corporation Ltd (NTPC)
- Hindustan Machine Tools Ltd. (HMTL)
- Rolta India Ltd.
- Cochin Refineries Ltd. (CRL)
- Satyam Computers Ltd.

Though Indian Companies are aware of the various advantages of the human resource accounting, yet the development and application of HRA have not been encouraging. One of the major reasons behind this failure is the passive role played by the national and international regulatory authorities. Neither the Indian Companies Act of 1956 nor the Income Tax Act of 1961 provides any scope for showing any information about human resources in financial statements. However, the need towards the necessity of valuing human resource and hence its existence in the balance sheet has been reckoned by many Indian Companies in the past few decades.

#### 14. Conclusion

The existence of various cost based and value based models in HRA emphasize on the measurement aspect of human resource. The true net worth of an organization can be determined only when the valuation of human resources is properly ascertained and reflected in the financial statements of an organization. Human Resource can be managed, controlled, and evaluated in an organization only if it can be measured and hence the advancement in the measurement mechanism of the human resource accounting is significantly warranted as the concept of HRA is yet to gain a momentum. Organizations in order to avail the best from its human resources are undoubtedly required to take necessary actions beforehand and assess the entire intricacies for the accounting of human resource and depict the same in the financial statements in order to recognize the ultimate worth of human resource. Accentuating the great significance of human resource accounting, it is the prerogative of the regulatory bodies for accounting standards in both the national and international level to focus more emphasize on the measurement and reporting aspect of the human resource accounting and enforce sound standards for reporting the value of human resource in the financial statement in the international arena.

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