# Human Resource Accounting For Effective HR Decisions

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## INTRODUCTION

Human resource accounting (HRA) as an approach was originally defined as the process of identifying, measuring and communicating information about human resources in order to facilitate effective management within an organization. It is an extension of the accounting principles of matching costs and revenues and of organizing data to communicate relevant information in financial terms.

The subject of offering measures of the values of people to the organization through human resource accounting has tempted human resource professionals and academics alike. Flamholtz and Lace (1981) have defined this approach in the following way:

"Human Resource Accounting may be defined as the measurement and Reporting of the cost and value of people as organizational resources. It involves accounting for investment in people and their replacement costs, as when as accounting for the economic 'Values of people to an organization."

They go on to describe the value of an employee to the firm as 'the present value of the difference between wage and marginal revenue product. An employee's value drives from the ability of the firm to pay less than the marginal revenue product.

According to the American Association of Accountants (AAA), human resource accounting is "a process of identifying and measuring data about human resources and communicating this data to information to interested parties". This definition considers human resource accounting to be an extension of basic functions of accounting namely, identification, measurement and communication of data related to human resources.

In an earlier definition, Flamholtz refers to human resource accounting as "accounting for people as an organizational resource". According to him it involves measuring the costs incurred by business firm and other organizations to recruit, select, hire, train and develop human resources. It also involves measuring economic value of people to organisations. Eric Flamholtz's definition makes it clear that the term 'human resource' recognizes people who form organizational resource. Quoting Davidson. "Human resource accounting is the measurement of the cost and value, is 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 earning process and total assets".

In the words of R.L. Woddruff, Jr. Vice President, R.G. Barry Corporation, the company which undertook pioneering work (1960s) in developing human resource accounting, "human resource accounting is an attempt to identify and report investments 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 over time are occurring to the human resources of the business.

In the foregoing definitions one may not find unanimity on what human resource accounting is but one point should not escape notice ,the significance of information. Human resource accounting system requires and produces a great deal of information.

HRA involves accounting for people as human assets. Although HRA has important implications for external financial reporting, in the contemporary economic environment HRA has even greater significance as a powerful managerial tool in internal human resource management decisions. In light of the history of labor and human resource management, HRA suggests a vehicle for improvement of management as well as measurement of human resources. If HRA can demonstrate that improvement in human resource management enhances profits, then managers will integrate human capital implications in their decision making to an enhanced degree.

## THE RATIONALE FOR THE EMERGENCE OF HRA

**The macro level:**

- The change in production patterns, work organization and employment patterns
- The changing roles of governments, enterprises and individuals

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**The micro levels**

**Reasons for developing HRA for internal purposes:**

- To improve human resource management
- To focus on employees as assets
- To retain qualified labor force

**Reasons for developing HRA both internally and externally:**

- To overcome problems deriving from valuation of intangible assets
- To redistribute social responsibilities between the public and the private sector

**Reasons for developing HRA externally:**

- To overcome the difficulties in traditional balance sheets in providing sufficient information to investors
- To create and improve the company's image through presentation of HRA
- To attract future employees

## MANAGERIAL FUNCTIONS OF HUMAN RESOURCE ACCOUNTING

Although HRA could be used in some form to improve financial reporting, probably the most important benefit of HRA is that it is a managerial tool. Management can use HRA measures for HR decision-making. If management has gone through the process of measuring and has HRA information available, it is likely that important management decisions such as those involving job cuts and layoffs will be made differently. A related point is that the very process of measuring HRA information can have the effect of placing more emphasis on it.

That is, HRA can be thought of as having three major functions:

1. Providing numerical information about the cost and value of people as organizational resources;
2. Serving as an analytical framework to facilitate decision making; and
3. Motivating decision-makers to adopt a human resource perspective.

Flamholtz (1979, 1980) described the HRA paradigm in terms of the "psycho-technical systems" (PTS) approach to organizational measurement. The PTS approach holds that there are two functions of measurement:

1. Process functions in the process of measurement; and
2. Numerical or informational functions from using the numbers or measurements.

That is, one role of HRA measurement is to provide numerical information as an input to management and financial decisions. But another and even more important role comes from the measurement process, from the act of monitoring and quantifying the costs and value of people from a human resource perspective. From a managerial perspective, the process of measuring, as well as the measurements themselves, send the message that people are valuable organizational resources and should therefore be managed as such.

One example is the management of layoffs and downsizing. Management can use HRA technology to analyze the effects of such decisions and to better understand the long-term implications and hidden costs of managements business decisions. In addition to the significant costs of rehiring qualified employees, layoffs may also affect the morale, productivity and even retention of the employees not laid off.

## HISTORICAL DEVELOPMENT OF HUMAN RESOURCE ACCOUNTING

The development of HRA has passed through five stages as follows:

1. *1960-1966*: Derivation of basic HRA concepts from related bodies of theory.
2. *1967-1970*: Basic academic research developing measurement models.
3. *1971-1977*: Rapid growth of interest in HRA.
4. *1978-1980*: Period of declining interest in academia and corporations.
5. *1981-present*: Renewed international interest in HRA theory and practice.

***Stage I: Derivation of basic HRA concepts***

Early interest in HRA came from a variety of sources. Some of the early accounting theorists (Scott, 1925; Paton, 1962) provided support for treating people as assets and accounting for their value. Early organizational psychologists

such as Likert were concerned with leadership effectiveness and the "human resource perspective" that was based on the premise that people were valuable organizational resources (Odiorne, 1963; Likert, 1961). In his pioneering monograph, *Accounting for Human Assets*, Roger Hermanson (1964, 1986) described a model to measure human resource value in external financial reports. Hermanson's work was instrumental in providing inspiration for the next phase in the development of HRA.

***Stage II: Basic academic research developing measurement models***

Stage two was a period of basic academic research to develop and assess the validity of models for the measurement of human resource cost and value. It was a time of research designed to formulate the present and potential uses of HRA as a tool for human resource professionals, line managers, and external users of corporate financial information. It included a few exploratory experimental applications of HRA in actual organizations.

The research done during the early stages of the development of HRA was conducted at the University of Michigan. In addition, beginning in 1967, a research team that included the late Rensis Likert, R. Lee Brummet, William C. Pyle, and Eric Flamholtz, carried out a series of projects designed to develop concepts and methods of accounting for human resources. The outcomes of this research included an article by Brummet *et al.* (1968a) representing one of the earliest works in the area of human resource measurement, and the one in which the term "human resource accounting" was used for the first time. The authors analyzed the deficiencies of treating employee costs as expenses rather than as assets, and concluded that human resource accounting is primarily used as a managerial tool. In another article published the same year, "Accounting for human resources" (Brummet *et al.*, 1968b), the authors assess the impact that HRA can have on management.

Flamholtz's (1969) PhD dissertation was an exploratory study that formulated a theory of an individual's value to an organization. In the same year, Brummet *et al.* (1969) emphasized HRA as a tool for increasing managerial effectiveness in the acquisition, development, allocation, maintenance, and utilization of its human resources. One of the first attempts to develop a system of accounting for a firm's investments, it studied the application of HRA in R.G. Barry Corporation, an entrepreneurial public company.

***Stage III: Significant academic research and growth***

The third stage of development of HRA, which dated from 1971 to 1977, was a period of rapid growth of interest in human resource accounting. It involved a significant amount of academic research throughout the Western world and in Australia and Japan; and it was a time of early attempts to apply the HRA theory to business organizations.

Thus, during this stage, the R.G. Barry experiment continued and received considerable recognition because, at least for a few years, the company published proforma, financial statements that included human assets. This, in turn, stimulated increased interest in HRA. Because it was dramatic and innovative, "putting people on the balance-sheet" became the dominant image of HRA for many people. But it was controversial. One objection was that HRA communicated management's ownership or control of employees. Nevertheless, overall interest in HRA increased and this stage was characterized by a considerable amount of published research dealing with HRA, as well as a great deal of seminar activity.

Another indication of the practical dissemination of academic theory was that, during this stage, the American Accounting Association established committees on HRA in 1971-1972 and 1972-1973; and these committees published reports on the development of HRA. The AAA's involvement proved a catalyst for additional research.

Empirical research studies found that HRA had an impact on decision-making. Some examples of the effect of HRA on external decisions included Elias's (1972) experiment that determined that external users' decisions on investments in common stock were made differently with the inclusion of HRA information. Following the work of Elias, Hendricks (1976) found that stock investment decisions were significantly affected by additional HRA cost accounting information. Schwan (1976) further extended the Elias and Hendricks studies by examining the effects of HRA cost information on financial decisions in comparison with decisions based on conventional financial information. The results showed that the firm with HRA information was considered better prepared; and the inclusion of HRA information resulted in statistically significantly better predictions of a firm's net income. Likewise, Acland (1976), who presented quantified behavioral indicators to financial analysts, found that financial analysts prefer a firm with improving financial operating performance but with declining behavior indicators. Such preferences decrease when the human resource indicators are provided.

One study of the effect of HRA on internal managerial decisions was Zaunbrecher's study of the impact of HRA cost information on a personnel selection decision (Zaunbrecher, 1974; Spiceland and Zaunbrecher, 1977). Their results indicated that HRA information was considered even when conflicting traditional information were presented along with it. Tomassini (1974) studied differences in decision preferences involving the length of a layoff and found that HRA data can affect managerial decisions, both at the choice and the process levels. Flamholtz (1976) studied whether human resource value numbers influence the decisions made by certified public accountants. He found statistically significant differences in decisions made using:

- Traditional personnel numbers; and either
- Non-monetary HR value numbers; or
- Monetary HR value numbers.

He did not find differences using non-monetary versus monetary measures. Flamholtz suggested that the results may have been due to the nature of the research design, and called for future research.

Lombardi and Flamholtz (1979) also found a difference in decisions between traditional information and HRA information, but no difference between monetary and non-monetary HRA information. Using Air Force colonels as subjects, Harrell and Klick (1980) found that, contrary to the Flamholtz findings, participants placed significantly greater weight on monetary information and that their decisions were more consistent when they used monetary information. Again the need for future research was emphasized, and a number of researchers heeded the call.

In addition to study of the effect of HRA information on decisions, research during the third stage involved the continued development of concepts and models for measuring and accounting for human resource cost and value. Likert and Bowers (1973) included a number of non-monetary behavioral measures, including those involving human resources, in their computation of a monetary estimate of the expected change in the value of a human organization. They expanded the earlier work of Likert (1967), which focused on non-monetary behavioral variables.

Flamholtz (1971, 1972) utilized both non-monetary and monetary measures in drawing upon behavioral and economic variables. The Flamholtz model proposes that an individual's value to an organization is based on the future services that are expected to be rendered to the organization in future roles or service states. It views the movement of people among organizational roles over time as a Markovian stochastic or probabilistic process with service rewards. An individual's "conditional value" consisting of promotability, productivity and transferability, is considered in combination with the probability of the individual's occupying various service states, to result in a monetary measure of an individual's "expected realizable value." Drawing on the Flamholtz model, Ogan (1976) proposed a model that focused on measuring an individual employee's "certainty-equivalent net benefits." Gambling (1974) extended the Flamholtz model by applying a dynamics simulation in order to capture the relevant variable in accounting for human resources. Several other models that combined behavioral and economic approaches were Myers and Flowers (1974), Macy and Mirvis (1976), and Mirvis and Macy (1976).

In their model, Lev and Schwartz (1971) consider the human capital concept and discount the employee's future earnings to the present value. Morse (1973) combined the Flamholtz model and the Lev and Schwartz model into one, which specified the present value of the organization's human assets to equal the present value of human resources less the present value of payments to employees. Sadan and Auerbach (1974) also synthesized the contributions of Lev and Schwartz and Flamholtz in their stochastic model for valuation of human resources. During this stage other models included Jaggi and Lau (1974) and Lau and Lau (1978). For further assessment of human resource measurement models, see Grove *et al.* (1977), who attempted to clarify and evaluate the various methodologies. In 1974, the first edition of Flamholtz's book *Human Resource Accounting* (Flamholtz, 1974, 1985, 1999) was published, presenting the state-of-the-art of HRA.

***Stage IV: Declining interest in HRA***

The fourth stage in the evolution of HRA from 1977 to 1980 was characterized by a decreased interest in HRA. Although it waned, interest in HRA did not completely die, and some worthwhile activity took place. For example, Ansari and Flamholtz (1978) suggested that the development of management science facilitated the development of HRA as a managerial tool. In the same year Oliver and Flamholtz (1978) conducted an empirical study on the perceived uncertainty of decisions, decision style, and tolerance for ambiguity and found that HRA monetary replacement cost information did make a difference in layoff decisions.

One reason for declining interest in HRA was that most of the relatively easy preliminary research had been accomplished. The remaining research required to develop HRA was complex, could only be accomplished by a relatively few scholars, and required the cooperation of organizations willing to serve as research sites for applied research studies. Since relatively few individuals had either the skills required to do such research or the qualifications required to obtain the necessary corporate participation, few major studies were performed. Furthermore, the required research involved the application of HRA in organizations, and the cost of subsidizing such research was significant, while the benefits either were uncertain or would accrue to the field as a whole and not necessarily to the sponsoring firm. It was at this point that HRA seemed to have been an idea that was promising but that would not be developed much further. Significant trends in the environment changed that within a few years.

***Stage V: Resurgence of interest in HRA***

Stage five, the current stage of HRA development dates from 1981. It has involved the beginnings of a resurgence of interest in HRA as well as some practical applications. The first sparks of renewal occurred during 1980, and since that time there have been an increasing number of significant new research studies dealing with the development and application of HRA as well as an increasing number of attempts to apply HRA based on the theory. There has been considerable interaction between theory and application.

For example, the US Office of Naval Research (ONR) sponsored research dealing with the feasibility of applying HRA to the navy. Flamholtz's resultant study involved the development and application of a model for measuring the replacement costs of civilian industrial engineers. This was the first project of significant scope by a major institution in either the public or the private sector (Flamholtz and Geis, 1984; Flamholtz, 1999).

Around this time there was also a growing recognition that most of the world's advanced economies had made a gradual yet fundamental transformation in shifting from industrial economies in which plant and equipment are the core assets, to post-industrial economies in which human capital and intellectual property are the core assets. The potential success of an organization now lies in its intellectual capabilities rather than in its physical assets. Accordingly, organizations must pay attention to the development and deployment of intellectual capital, or the sum of human capital and intellectual property.

While long-dominant companies such as US Steel and General Motors have declined, new companies such as Microsoft, Intel and Amgen have emerged as the hallmark of the new era. The make-up of the Standard and Poors 500 index has significantly changed, away from manufacturing toward technology companies, which rely more heavily on their human resources than industrial firms.

Unfortunately, accounting has not responded to this change in circumstances – and it is likely that investors have paid a price due to lack of information about managerial and human capital. As a result, measurement tools cause anomalies. Accounting today is still based on an industrial paradigm in which only physical and tangible property is considered an asset. But organizations now need systems that continually assess and re-assess the people they employ, including their skills, talents and behavioral attributes, while paying attention to how human resources impact the bottom line. One accounting tool that is relevant to the measurement and, in turn, the management of intellectual capital, specifically human capital, is HRA.

## HRA SCENARIO

It is true that worldwide, knowledge has become the key determinant for economic and business success, but Indian companies focus on 'Return on Investment' (RoI), with very few concrete steps being taken to track 'Return on Knowledge'. What is needed is measurement of abilities of all employees in a company, at every level, to produce value from their knowledge and capability. "Human Resource Accounting (HRA) is basically an information system that tells management what changes are occurring over time to the human resources of the business. HRA also involves accounting for investment in people and their replacement costs, and also the economic value of people in an organization," says P K Gupta, the director of strategic development-intercontinental operations, of Legato Systems India. The current accounting system is not able to provide the actual value of employee capabilities and knowledge. This indirectly affects future investments of a company, as each year the cost on human resource development and recruitment increases. Experts point out that the information generated by HRA systems can be put to use for taking a variety of managerial decisions like recruitment planning, turnover analysis, personnel advancement analysis and capital budgeting, which can help companies save a lot of trouble in the future.

## ON BALANCE SHEET

Organisations can actually find out how much they can earn from an individual, as the intellectual assets of a company are often worth three or four times the tangible book value. Human capital also provides expert services such as consulting, financial planning and assurance services, which are valuable, and very much in demand.

Realising this, many companies world-over are making HRA as a necessary element on their balance sheets. One of the best examples is of the Denmark Government. The Danish Ministry of Business and Industry has issued a directive that with effect from the trading year 2005, all companies registered in Denmark will be required to include in their annual reports information on customers, processes and human capital. A minimum of five measures for each is required, and comparison with the previous two years must be shown. Figures for investment in intellectual capital must be shown and compared with the previous two years. A narrative should accompany each set of figures. Information for investors about intellectual capital, both current and future, should occupy at least one third of the report. Where relevant, information must also be provided regarding care for the environment.

In India, there are very few companies like BHEL, Infosys and Reliance Industries, which have implemented HRA and some are working on it. Infosys, which started showing human resource as an asset in its balance sheet, has been reaping high market valuations. NIIT has been following a similar method called Economic Value Addition (EVA), which also helps in assessing the real value that an employee can fetch for the company.

Experts point out that company can derive many benefits by going in for HRA. Not only can they measure the return on capital employed on total organisational assets (including the human assets), but the resources can also be planned accordingly. "Once organisations realize the actual benefit and take it as a growth process, it will only help them in increasing their shareholders' value. When a company is able to assess an individual's worth, it helps in increasing its own worth," says Ajay Sharma, senior HR manager of Cadence Systems.

Basically HRA can be tracked through two methods, cost-based analysis and value-based analysis. The cost-based approach focuses on the cost parameters, which may relate to historical cost, replacement cost, or opportunity cost. The value-based approach suggests that the value of human resources depends upon their capacity to generate revenue. This approach can be further sub-divided into two broad categories: non-monetary and monetary.

The disposition of resources can also be examined by allocating relative human asset values to different job grades. HRA also helps in examining expenditure on personnel and in re-appraisal of expenditure on services and training. It can also serve as a key factor in case of mergers and takeover decisions, where the human asset value becomes a relevant factor. Another very significant role, which HRA can help in creating, is goodwill for a company. The company can project itself in having best practices with superior policies in place. Experts believe that this may help the organization attract more investments.

## THE DETERRENTS

While HRA as a concept has been present in India for more than a decade, with BHEL taking a lead, it is only now that the awareness is being translated into application. However, Gupta points out that in terms of awareness and acceptance, the level is still low as many companies take little initiative to make the numbers public to shareholders, despite having the data. Another major deterrent is the lack of an industry standard. This means that every company has to evolve its own standard, which can become a tedious process, considering that most of them are still involved in improving their business. Industry bodies like Nasscom can help set a standard. Another aspect working against the acceptance of HRA is the need for extensive research that it entails. Many companies do not want to go into the intricacies of finding the value of their human resources. "While most big companies (with a large manpower) can afford to dwell into such best practices, it is not an economically viable option for small and medium companies," says Sharma of Cadence. Naresh Taneja, the head of human resources of HCL Technologies (Mumbai, formerly Gulf Computers), believes that one cannot totally rely on this concept. "Considering the dynamism of this industry, it is very difficult to predict as to what is going to be your future requirements and how technology is going to shape in the near future. This only raises the question on the benefits of HRA."

Gupta is however optimistic about the future. "As HRA is not directly related to RoI, many companies do not take it very seriously. However, in the past few years organisations have been investing a lot on improving their systems and infrastructure. And the next obvious step would be measurement of human assets."

However, it's ultimately the people who deliver results. Realising the benefits, which it can provide, the responsibility lies on the companies, as to how much importance can they or do they give to their HR.

## CONCLUSION

Human resource accounting aims at (I) increased managerial awareness of the values of human resources, (2) better decisions about people, based on improved information systems, (3) greater accountability on the part of management for its human resources, (4) developing new measures of effective manpower utilization, (5) enabling a longer time horizon for planning and budgeting, and (6) better human resource planning.

HRA illustrates how intellectual conceptualization and empirical testing in academic settings can serve industry's practical needs. After a 30-year history of intellectual development, firms are initiating new projects involving the application of HRA. Accountants, lawyers, corporate acquisition specialists, and company management, including human resource professionals, are applying HRA. Now that firms have begun to apply HRA, its development might be expected to proceed at an increasing rate. At the same time, study needs to be undertaken on how HRA technology can be adapted and extended to the measure of various types of intellectual property. In addition to improving internal managerial decisions such as in layoffs, implementation of HRA will lead to better overall firm valuation techniques and better decision making in buy-sell-merge transactions.

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The attitudes of Indian Investor are extremely apprehensive in regard to stock market investment. Several security scam and scandals harmed the faith of investor in the market. It is matter of strong communication strategy on part of market player that they should try to win the faith of investors. Good communication will create an environment of transparency and trust. After all it is not so very difficult for mutual fund to grow and create wealth mutually in India.

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