STUDY OF HUMAN RESOURCE ACCOUNTING PRACTICES

IN INFORMATION TECHNOLOGY SECTOR IN INDIA

ABSTRACT OF THESIS

Chapter 1: HUMAN RESOURCE ACCOUNTING

In the 21st century where knowledge and attitude of employees assume greater significance than the physical assets and the accomplishment of these organizations is contingent on the quality of their Human Resource- its knowledge, skills, competence, motivation and accepting the organizational culture. In knowledge driven economies therefore, it is imperative that the humans be recognized as an integral part of total worth of an organization.

The American Accounting Society Committee on Human Resource Accounting (1973) defines it as follows: "Human Resource Accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties." In simple terms, it is an extension of the accounting principles of matching costs and revenues and of organizing data to communicate relevant information in financial terms.

HRA Models: Lev and Schwartz Model and Flamholtz Model

HRA the Sad Story
Human Resources Accounting was introduced way back in the 1960s, but not many companies in India have adopted it in their organization. There is little agreement concerning the procedure of accounting for human assets. There are proponents and critics of the various approaches like cost and value approaches. Not many evidences are available that portrays the application of Human Resource Accounting in organisation. Hence, the growth and acceptance of HRA is quite less. The implementation of HRA is voluntary and no official body has made it mandatory that HRA should be put into practice.

Revival of Human Resource Accounting

Current amendments in IFRS standards have declared the requirement of implementation of HRA in all the Indian companies by the end of 2015.

Human resources have been enthroned as the canopy of all the "assets" that a nation possesses and owns at a given point of time. In order to ensure that these assets are preserved, there is a need of valuing them in correct manner. Thus, HRA would gain impetus.

Chapter 2: REVIEW OF LITERATURE

The aim of the present literature survey is to experience the impact of disclosure of HRA information on management decisions. Management decisions include decision by HR managers. The search resulted into more than 1000 references. Out of these, 200 are referred to in the present review. Two major perspectives will appear in the literature. First, there is a description of the concept, then an analysis of whether any evidence exists regarding the influence on management as a result of an application of the concept.

Human Resource Accounting as a Management Decision Tool

A few early studies in HRA attempted to test the effect of HRA information ondecision makers. HRA proponents such as Flamholtz (1985),Sackman et al. (1989), Elliot (1991), Wallman (1996), and Lev (1997) imply that the presence of human resource information on financial statements will influence analysts' performance assessments of companies and will therefore potentially affect their judgments as to the likelihood that they would recommend that their clients buy a particular security.

Flamholtz (1976) examined the effect of monetary and nonmonetary HRA information on a human resource management decision and results indicated that nonmonetary human resource information affected participant's decisions.

Two other studies examined whether the presence of human resource information made a difference in investment decisions. Elias (1972) used survey methodology to investigate differences among investment decisions of various accounting users based on the presence or absence of HRA information. The results of his study indicated that human resource data would make a difference in the investment decision.

Gaps in Literature

1. Lack of awareness
2. Lack of knowledge about the utility of the HRA information in HR decisions
3. Organizational Profitability
4. Impact of HRA on Employee Motivation

Chapter 3: RESEARCH METHODOLOGY

Primary Objectives:

1. To make an overall analysis of HRA practices in IT Sector in India

2. To find the impact of HRA in Strategic decision making

3. To find the link between HRA and HR practices

4. To find the impact of HRA on Motivation level of employees

5. To prove the role of HRA practices in profitability of the organization

HYPOTHESES OF RESEARCH

H_1: HRA positively influences decision making with respect to Human Resource Planning

H_2: HRA positively influences decision making with respect to Performance Management System

H_3: HRA positively influences decision making with respect to Training and Development

H_4: HRA positively influences decision making with respect to Compensation Management

H_5: HRA positively impacts the decisions related to Strategic HRM

H_6: Human Resource Accounting positively influences Motivation Level of Employees

H_7: HRA positively influences Profitability of the Organisation

Research Design

The research design is based on "The Research Onion", by Mark Saunders, Philip Lewis and Adrian Thornhilll (2006).

Interpretivism Research Philosophy is applicable in this Research. It follows **Inductive** Approach. **Survey** research strategy was used to test the hypothesis. The tools and techniques used for collecting data are observation, interview and questionnaire.

Sample Size: 45 managers and 46 employees

Chapter 4: DATA ANALYSIS

HYPOTHESES TEST RESULTS

No.	Hypothesis	Statistical Test	Hypothesis Acceptance Status
H1	HRA positively influences decision making with respect to *Human Resource Planning*	Sign Binomial Test Standard Binary Logistic Regression Multinominal Logistic Regression	**Accepted**
H2	HRA positively influences decision making with respect to *Performance Management System*	Friedman Chi Square Test	**Accepted**
H3	HRA positively influences decision making with respect to *Training and Development*	Sign Binomial Test Standard Binary Logistic Regression	**Accepted**
H4	HRA positively influences decision making with respect to *Compensation Management*	Sign Binomial Test Friedman Chi Square Test	**Accepted**
H5	HRA positively impacts the decisions related to **Strategic HRM**	Sign Binomial Test Friedman Chi Square Test	**Accepted**
H6	HRA positively influences **Profitability** of the Organization	Sign Binomial Test Friedman Chi Square Test	**Accepted**
H7	Human Resource Accounting positively influences **Motivation Level of Employees**	Sign Binomial Test	**Accepted**

Chapter 5: FINDINGS AND CONCLUSION

i. HRA information proved helpful in taking decisions pertaining to framing recruitment budget, selecting a suitable candidate for job, choosing the appropriate attrition control proposal.

ii. HRA information helps in better performance decisions and compare employees of different designations and across different departments.

iii. It helps to select a correct training program for employees and get ROI of each program.

iv. HRA information helps HR managers to decide the salary of an individual during the interview and during the promotion

v. It helps to predict the organizational performance and enables to save cost otherwise invested in incorrect decisions

vi. Implementation of HRA in the organization motivates the employees to perform better.

Chapter 6: RECOMMENDATIONS

i) HR managers should be given *detailed view of all the direct and indirect costs required for making recruitment budget*.

ii) An application blank can be designed differently to get additional information about the candidate such as probability of a person leaving the organization, his expected contribution towards the organization during his probable tenure and opportunity cost an organization has to incur if that candidate leaves the organization and need to be replaced by another candidate.

iii) Exact contribution of employees towards the organization should be considered in deciding salary of employee at the time of promotion

iv) HRA Based Performance Management System should be implemented in the organization.

v) HRA information should be given to HR managers while taking decisions related to Training and Development.

vi) Transition matrix should be shown to HR managers to analyze ROI of training program and to employees in order to motivate them to attend those trainings.

vii) Employees' value should be communicated to them, in a written format at the very outset of their association with the organization

viii) Every Organization should implement human resource accounting practices.

RESEARCH GAP	OBJECTIVES	METHODOLOGY	REULTS	RECOMMEN DATIONS
Unawarenes s of HRA	To make an overall analysis of HRA practices in IT sector in India	Analysis of Secondary Source to know the companies which have implemented HRA and the model used	4 IT Companies have implemented HRA practices. Mainly Lev and Schwartz or Flamholtz model is used	Every organization should implement HRA practice
No reference of use of HRA on Strategic Decisions	To find the impact of HRA on Strategic Decision Making	A hypothesis to find impact of HRA on Strategic HR functions was framed, and it was analyzed through Questionnaire administered on HR managers	HRA information has positive impact on Strategic HR decisions	HRA information used be used at strategic level for decision making

Lack of knowledge about the Utility of the HRA information	To find the impact of HRA on HR Decision Making	Four hypotheses were framed to check the impact of HRA on major HR functions i.e. HRP, PMS, T&D and Compensation. It is analyzed through Questionnaire administered on HR managers	HRA information has positive impact on HR decisions related to HRP, PMS, T&D and Compensation	HRA information should be given to HR managers for decisions making
No reference of use of HRA on Profitability Decisions	To prove the role of HRA practices in profitability of the organization	Cost Cutting initiative related questions were asked to HR managers and impact of correct decisions was analyzed through questionnaire method	HRA information has positive impact on Profitability of the Organization	HRA information should be used to save cost and avoid incorrect decision making
No literature was available on impact of HRA on employees	To find the impact of HRA on motivation level of employees	A hypothesis to find impact of HRA on Motivation level of Employees was framed, and it was analyzed through Questionnaire administered on IT employees	HRA practices motivates employees	HRA value should be communicated to the employees

Key Contributions of Research

The following were the outcomes of the research:

1. The study confirms the positive impact of HRA on various functions of HR department such as Human Resource Planning, Performance Management System, Compensation Management and Training & Development.

2. It confirms that HRA has positive impact on Strategic Decisions of the organization.

3. It proved that HRA and organizational profitability are positively related.

4. The study further confirmed HRA implantation leads to employee motivation.

Chapter 7: BIBLIOGRAPHY

First 20 research papers are written in form of annotated bibliography. The further research papers are presented in Harvard style. Papers are arranged in ascending order of author's name.

HUMAN RESOURCE ACCOUNTING

"Our core corporate assets walk out every evening. It is our duty to make sure that these assets return the next morning, mentally and physically enthusiastic and energetic."

- N. R. Narayana Murthy, Chairman and Chief Mentor, Infosys Technologies

Opening statement of the Infosys Annual Report, 2007-08

1.1 INTRODUCTION TO HUMAN RESOURCE ACCOUNTING

1.1.1 HUMAN RESOURCE ACCOUNTING: THE SCENARIO

In the knowledge driven economies of 21st century, where knowledge and attitude of employees assume greater significance than the physical assets and the accomplishment of these organizations is contingent on the quality of their Human Resource- its knowledge, skills, competence, motivation and accepting the organizational culture; it is imperative that the humans be recognized as an integral part of total worth of an organization.

A British accountant has said that human resources are the "pivotal variables without which the inanimate assets are worthless" (Rogers R., 1974, p-40). Thus, to grow or even to survive, an organization must manage its people properly. Human elements are becoming more important input for the success of any corporate enterprise (Sirisetti & Mallesu, 2014, p-48). Human resources, along with the financial and material resources, contribute to the production of goods and services in an organization. Physical and monetary resources by themselves cannot improve efficiency or contribute to an increased rate of return on investment. It is through the combined and concerted efforts of people that monetary and material resources are harnessed to achieve organizational goals. Human resources, therefore, are the most important assets of the organization. Unlike physical assets, human resources do not depreciate over a period of time. In fact, with additional training and experience gained over a period of time, they tend to do well in the job. This fact is ignored when a firm's balance sheet is prepared. According to W. Pyle (1970, p-70) a difficulty with conventional accounting arises in the budgeting process. Expenditures for physical resources are included in the firm's capital budget and

need not be formally justified against revenue in the current year. However, expenditures for building long term employee capabilities and favorable relationships with external parties are not included in the conventional capital budget. This practice makes it more difficult for the manager to secure funds for such purposes.

The expenses incurred in Recruitment, Training and Development, Performance Management and other HR activities are charged against the revenues of particular accounting period. In fact, as pointed out by Rensis Likert, the expenses on human resource are fixed in nature and do not offer any immediate return. The returns accrue to the form over the long period, i.e. as long as employee remains with the firm. Hence such costs should be capitalised and amortised over the entire period so that the balance sheet gives a 'true and fair' view of the state of affairs of a business. Since human resources are capable of enlargement over a period of time, there should be innovative ways of showing how the organization make investment in its people and how the value of people changes over a period of time. Human Resource Accounting is one such method which endeavours to measure both the cost and the value of people to an organization.

1.1.2 HUMAN RESOURCE ACCOUNTING: THE CONCEPT

"What gets measured gets managed"

- Nishchae Suri, managing director, Mercer

(Sabharwal, S. and Sengupta, D. 2011)

Human Resource Accounting is the upcoming term in the field of Management. It is a process of measuring the monetary value of each employee of the organisation. This is the only method which can give actual value specifically in terms of money without any human intervention or unfairness. It is just like assessing the value of physical assets. Besides, the value of human resources estimated through HRA becomes an important element of managerial decision making.

HRA is similar in principle to the financial accounting. Just as financial accounting reflects the costs of assets such as building and machinery, HRA shows human resources as capital not as expenses. HRA will force HR managers to take decisions on hard numerical data rather than experience or expert opinions. This is a branch wherein Human Resource Management, Financial Management, Accounting, Statistics and Strategic

Management collaborate for betterment of the organization. Thus, HRA shows the investments, the organizations make in its people and how their values change over a period of time.

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. If such information is not taken into consideration, then the management runs the risk of taking decisions that may improve profits in the short run but may also have severe repercussions in future.

The basic premises underlying the theory of Human Resource Accounting are:

a) People are valuable resource of every organization;

b) The usefulness of employees as an organizational resource is determined by the way in which it is managed;

c) Information about the investments and value of human resources is useful for decision making in the organization.

1.1.3 DEFINING THE CONCEPT OF HUMAN RESOURCE ACCOUNTING

The early accounting literature defined *human resource valuation* as the process of identifying, measuring, and communicating information about human resources to assist management decision-making within an organization. (Edmonds and Rogow, 1986, p.42) Since the output of human resource valuation could be seen of more use then initially thought of. The utility was not restricted to intrinsic decisions. Many external stakeholders of the organization could find the use of HRA. Hence, the definition was modified to include them.

The American Accounting Society Committee on Human Resource Accounting (1973) defines it as follows: "Human Resource Accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties." In simple terms, it is an extension of the accounting principles of matching costs and revenues and of organizing data to communicate relevant information in financial terms.

Mr. Woodruff Jr. Vice President of R. G. Batty Corporation defines it as follows: "Human Resource Accounting is an attempt to identify and report investments made in human resources of an organization that are presently not accounted for in conventional accounting practice. Basically it is an information system that tells the management what changes over time are occurring to the human resources of the business."

Moreover, Stephen Knauf (1983) has defined HRA as "the measurement and quantification of human organizational inputs such as recruiting, training, experience and commitment."

Davidson et. al. 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 earning process and total assets".

Flamholtz has defined HRA as "accounting for people as an organizational resource. It involves measuring the costs incurred by organisation to recruit, select, hire, train and develop human assets. It also involves measuring the economic value of people to the organization".

Brummet explains HRA as, "the process of developing financial assessments for people within organization and society and the monitoring of these assessments through time. It deals with investments in people and with economic results of those investments" (Saha, 1997, p.10)

P.K. Gupta (cited in Narayan, 2010, p.240) says "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"

Thus according to the above mentioned definitions, we can say that, human resource accounting is concerned with:

   I. Identification of data about human resources of an organization.

  II. Measurement of the data in terms of cost and value.

  III. Communicating the results to the all internal and external decision makers. Human resource accounting will definitely prove a best tool for decision makers as they will be exposed to a new kind of human resources related information which was never made available to them. The exact role of HRA information is yet to be understood as far as HR managers are concerned. This study strives for achieving the said objective.

1.1.4 OBJECTIVES OF HUMAN RESOURCE ACCOUNTING

1. To increase managerial awareness of the values of human resources,

2. To facilitate the effective and efficient management of human resources (Porwal, 1993),

3. To develop management principles by classifying the financial consequences of various practices(Likert 1971) and assist in the development of effective human resource management practices (Sirisetti & Mallesu, 2014, p-49)

4. To by classifying the financial sequences of these practices. It provides the sound and effective basis of human asset control, that is, whether the assets appreciated, depleted or conserved.(Sharma and Shukla, 2014, p-131)

5. It furnishes cost/value information for making management decisions about acquiring, allocating, developing and maintaining human resources in order to attain cost - effectiveness. (Sharma and Shukla, 2014, p-131)

1.1.5 IMPORTANCE OF HUMAN RESOURCE ACCOUNTING

Human Resource Accounting provides useful information to the management, financial analysts and employees as stated below:

1. Human Resource Accounting helps the management in the Employment and better utilization of human resources and helps the organisation to place the right man in the right post depending on his skills and abilities. (Akrani G.,2014)

2. It assists in deciding the transfers, promotion, training and retrenchment of employees.

3. It provides a foundation for planning of physical assets vis-à-vis human resources.

4. It helps to ascertaining the causes of high labour turnover and taking preventive measures.

5. It helps in tracing the real cause for low ROI.

6. It helps in understanding and assessing the inner strength of an organization and helps the management to steer the company well through most adverse and unfavourable circumstances.

7. It helps employees in improving their performance and bargaining power. It makes each of them to understand his contribution towards the betterment an organisation vis-à-vis the expenditure incurred by the firm on him.

8. HRA shows that the organisation cares about the employees and their welfare. This increases their morale and it motivates them to work hard and achieve the objectives of the organisation.(Akrani, 2014)

9. Only reputed organisations conduct HRA. So, competent and capable people want to join these organisations. Therefore, it attracts the best employees and managers to the organisation. (Akrani, 2014)

10. HRA helps the organisation to design (make) a suitable training and development program for its employees and managers. (Akrani, 2014)

Research during the early stages of development of HRA, was conducted at the University of Michigan by a research team including the late organizational psychologist Rensis Likert, founder of the University Of Michigan Institute Of Social Research and well known for his work on management styles and management theory (Likert, 1961), faculty member R. Lee Brummet, and then Ph.D. candidates William C. Pyle and Eric Flamholtz. The group worked on a series of research projects designed to develop concepts and methods of accounting for human resources. One outcome of this research (Brummet, Flamholtz & Pyle, 1968a) was a paper representing one of the earliest studies dealing with human resource measurement-- and the one in which the term "Human Resource Accounting" was used for the first time.

1.2 HUMAN RESOURCE ACCOUNTING MODELS

Researchers like Flamholtz (1999 and 1985), Lev and Schwartz (1974),Brummet, Likert (1985) and others tried to device a system to measure HRA value of an employee. As an output of their contribution are the different methods replacement cost model, stochastic rewards valuation model, historical cost model, discounted future wage method, acquisition cost model

There are two approaches to HRA:
Cost approach (HRCA) and Monetary Value based approach (HRVA)

1.2.1 COST MODELS

Cost is a sacrifice incurred to obtain some anticipated benefit or service. The ***cost approach*** involves methods based on the costs incurred by the company on an employee.

i) Historical cost model

Historical cost is based on actual cost incurred on human resources. The cost is of two types – acquisition cost and learning cost. Acquisition cost is the expense incurred on recruitment, selection, and placement. Learning cost involves expenses incurred on training and development. This method is very simple in its application but it does not reflect the true value of human assets. For example, an experienced employee may not require much training and, therefore, his value may appear to be low though his real value is much more than as suggested by historical cost method (Sirisetti & Mallesu, 2014, p-50)

ii) Acquisition cost model

This model is developed by Brummet, Flamholtz and Pyle. It measures the organization's investment in employees using the five parameters: Recruiting, Acquisition; Formal training and familiarization; Informal training and Informal familiarization; Experience; and development.

It suggests instead of charging the costs to profit & loss accounting it should be capitalized in balance sheet. In case the personnel leave the company before the anticipated period of service, then the unamortised portion of costs remaining in the

company's books is written off against the profit and loss account in that year. If the period of service exceeds the anticipated time, then amortisation of costs is rescheduled. This method is the only method of human resource accounting which is based on sound accounting principles and policies.

iii) Replacement Cost approach

This approach measures the cost of replacing an employee. According to Likert (1985) replacement cost include recruitment, selection, compensation, and training cost. The human resources of a company are to be valued on the assumption as to what it will cost the concern if existing human resources are required to be replaced with other persons of equivalent experience and talent. Such costs have two dimensions-

a) *Positional replacement costs* or the costs incurred to replace the services rendered by an employee only to a particular position; and

b) *Personal replacement cost* or the cost incurred to replace all the services expected to be rendered by the employee at the various positions that he might have occupied during his work life in the organisation.

iv) Opportunity Cost or Competitive Bidding Model:

It is the calculation of what would have been the returns if the money spent on HR was spent on something else, is also used. Hekimian and Jones (1967) proposed that where an organization had several divisions seeking the same employee, the employee should be allocated to the highest bidder and the bid price incorporated into that division's investment base. There are no criteria on which the bids are based. Rather, the managers rely only on their judgments.

1.2.2 MONETARY VALUE BASED APPROACH

The *economic value approach* includes methods based on the monetary value of the human resources and their contribution to the company's gains.

i) **Lev and Schwartz Model**:

Lev and Schwartz (1971) proposed an economic valuation of employees based on the present value of future earnings, adjusted for the probability of employees' separation (death and retirement) from the organization. This method helps in determining what an employee's future contribution is worth today.

According to this model, the value of human capital embodied in a person who is 'y' years old, is the present value of his/her future earnings from employment and can be calculated by using the following formula:

$$E(V_y) = \sum_{T=Y} P_y(t+1) \sum_Y I(T)/(I+R)^{t-y}$$

where E (V_y) = expected value of a 'y' year old person's human capital

T = the person's retirement age

P_y (t) = probability of the person leaving the organization I

(t) = expected earnings of the person in period I

r = discount rate

In India, this model is widely followed. The companies like BHEL, MMTC, Infosys, ONGC, NTPC follow the same method for calculating HRA value of the employees of their organisation.

Merits:

- It considers the value of employee rather than cost incurred.

  Value of each employee can be calculated individually.

Limitations:

- The training expenses incurred are not considered.

- Factors responsible for higher earning potentiality of each individual employees like seniority, bargaining capacity, skill, experience etc. which may cause differential salary structure are ignore.

- The measure is an objective one because it uses widely based statistics such as census income return and mortality tables.

- The measure assigns more weight to averages than to the value of any specific group or individual.

- This method has no indication about the accounting treatment of human resource.

- The Model ignores the possibility and probability that individual may leave an organization for reason other than death or retirement. The model's expected value of human capital is actually a measure of expected 'conditional value' of a person's human capital-The implicit condition is that the person will remain in organization until death or retirement. This assumption is not practical.

ii) Flamholtz's model of determinants of Individual Value to Formal Organizations:

This model has been suggested by Flamholtz (1971). This is an improvement on 'present value of future earnings model' since it takes into consideration the possibility or probability or an employee's movement from one role to another in his career and also of his leaving the firm earlier, that his death or retirement.

According to Flamholtz, the ***value of an individual*** is the present worth of the services that he is likely to render to the organization in future. As an individual moves from one position to another, at the same level or at different levels, the profile of the services provided by him is likely to change. The present cumulative value of all the possible services that may be rendered by him during his/her association with the organization is the value of the individual.

iii) Flamholtz's Stochastic Rewards Valuation Model:

Stochastic process means the progress of an individual through organizational roles during his service life. This model directly measures an individual's conditional value and expected realizable value. This model assumes that an individual generates value as he takes different roles in the organisation. An individual's expected conditional value and expected realizable value will be equal, if he is certain to remain in the organisation in the predetermined roles throughout his expected service life. (Badiyani B., 2012, p-157)

Flamholtz has given the variables affecting an individual's expected value (IERV): individual conditional values and his likelihood of remaining in the organization. The former is function of the individual's abilities and activation level, while the later is a function of such variables as job satisfaction, commitment, motivation and other factors.

Limitations

The model suffers from nearly all the drawbacks from which the present value of future earnings models suffers. Moreover, it is difficult to obtain reliable data for determining the value derived by an organization during the period a person occupies a particular position. The model also ignores the fact that individuals operating in a group may have a higher value for the organization as compared to individuals working independently.

1.3 HUMAN RESOURCE ACCOUNTING IN INDIA

1.3.1 HRA THE SAD STORY

Human Resources Accounting was introduced way back in the 1960s, but not many companies in India have adopted it in their organization. There is little agreement concerning the procedure of accounting for human assets. There are proponents and critics of the various approaches like cost and value approaches. This factor has become responsible for the slow development of the concept of human resource accounting. Even today when a good deal of research has been done in this field, it is very unfortunate that there is not any generally accepted method either for valuation of human resource or for their recording in the books of accounts.

Considering the statutory requirements, the Companies Act, 1956 does not demand furnishing of HRA related information in the financial statements of the companies. The Institute of Chartered Accountants of India too, has not been able to bring any definitive standard or measurement in the reporting of human resources costs.

Moreover, like other accounting exercise, the HRA too depends heavily on the availability of relevant and accurate information. This information is more in indirect form; hence implementation of HRA is a big problem.

The challenges are more than thought of. A detailed view of it is discussed in Literature review Chapter.

Limitations of Human Resource Accounting:

1. There are no clear-cut and specific guidelines for calculating cost and value of human resources of an organization.

2. The period of existence of human resource is uncertain and hence valuing them under uncertainty in future appears unrealistic.

3. There is an apprehension that HRA may dehumanize and manipulate employees.

4. The empirical evidence is yet to be found to support the hypothesis that HRA as a tool of the management facilitates better and effective management of human resources.

5. The pattern of executing employee value in the financial statement is the question yet to be classified on which there is no consensus in the accounting profession.

6. As human resources are not capable of being owned, retained and utilized, there is problem for the management to treat them as assets in the strict sense.

7. There is constant fear of resistance from the trade unions as placing a value on employees would make them claim rewards and compensations based on such valuation.

8. Amortization rate of human resources is still a question. Is the rate of amortization to be decreasing, constant or increasing?

9. Tax laws do not recognize human beings as assets.

10. There is no universally accepted method of human asset valuation.

11. In India, human resource accounting is still at the developmental stage. Much additional research is necessary for its effective application.

12. The life of a human being is uncertain. So its value is also uncertain. (Akrani G., 2011)

Not many evidences are available that portrays the application of Human Resource Accounting. Hence, the growth and acceptance of HRA is quite less. The implementation of HRA is voluntary and no official body has made it mandatory that HRA should be put into practice.

Researchers have conducted several study and surveys on HRA and came out with meaningful conclusions but many of those are under criticism.

1.3.2 REVIVAL OF HUMAN RESOURCE ACCOUNTING

Even though the situation prevails, yet, a growing trend towards the measurement and reporting of human resources particularly in public sector is noticeable during the past few years. BHEL, Cement Corporation of India, ONGC, Engineers India Ltd, National Thermal Corporation, Minerals and Metals Trading Corporation, Madras Refineries, Oil India Ltd, Associated Cement Companies, SPIC, Metallurgical and Engineering Consultants India Limited, Cochin Refineries Ltd etc are some of the organizations, which have started disclosing some valuable information regarding human resources in their financial statements (Srinivasan, 2009). Many of these enterprises spare a separate section in their annual reports for a detailed account of their human resources.

Although HRA faced tremendous criticism from researchers and finance experts, the term is now in its revival phase. The reasons and indicators for the same are

1.3.2.1 Modification in Accounting Standards implementation

Bullan M.L. and Eyler K.A. (2010, p-4) stated that in recent years, the financial reporting standards used in the United States referred to as Generally Accepted Accounting Principles (GAAP), have been moving toward adoption of more complex measurement methods compared with the traditional historical cost approach to asset measurement. The strong growth of International Financial Reporting Standards (IFRS) is another indication that the environment for financial accounting reporting is one that potentially encourages the consideration of alternative measurement and reporting standards. Accountants and others in the financial reporting environment have become accustomed to using more complex measurement approaches to the financial statement reported amounts. This would lend support to the possibility that future financial reports may include nontraditional measurements such as the value of human resources using HRA methods. A traditional framework of Accounting is in the process to include a much broader set of measurement than was possible in the past.

Current amendments in IFRS standards have declared the requirement of implementation of HRA in all the Indian companies by the end of 2015.

1.3.2.2 Increased Importance of HRM in organization:

What distinguishes a successful company from unsuccessful one is the quality of manpower. Organizations have increasingly recognized the potential for their employees as source of competitive advantage. It has always been argued by the managers that the employees of an organization constitute a valuable resource. The success of an organization depends upon the effective and meaningful utilization of its 3 Ms viz. men, materials and money. The importance of human resource has been well recognized now by the organisations.

The credit for recognizing human resources as an 'asset' goes to William Paton (1920) when he stated that "in a business well organized and loyal personnel may be more important asset than a stock of merchandise."

In order to ensure growth and development of any organisation, the efficiency of people must be augmented in the right perspective. Without human resources, the other resources cannot be operationally effective. The efficient and effective utilization of inanimate resources depends largely on the excellence, caliber, skills, perception, and character of the human resources working on it.

Although employees are always both an asset and a cost for their organisation, most organizations in India and abroad, have proven to be capable at measuring the cost side of the human capital equation than the asset side. This imbalances result in inefficiencies in human capital management. There is genuine need for reliable and complete management of human resources.

Sengupta (2013) questioned, what if organizations in India could quantify the workforce with objective, verifiable and value-based conservative valuation principles using certain set of tools as mentioned above to better manage the workforce using data instead of gut instinct?

Human resources have been enthroned as the canopy of all the "assets" that a nation possesses and owns at a given point of time. In order to ensure that these assets are preserved, there is a need of valuing them in correct manner.

1.3.2.3 Growth of Service Industry:

Another argument for Human Resource Accounting stems from the transition of our economy from a manufacturing orientation to a service orientation. As human beings become the key element in service organizations, failure to measure their value and account for their cost will lessen organizational effectiveness.

The past few decades have witnessed a global transition from manufacturing to service based economies, India not being an exception to it. The fundamental difference between the two industries lies in the very nature of their assets. Unlike any other industry, human resource is the greatest asset of the service sector. Rise in service sector and increase in the requirement of intellectual employees, there has been a need for quantifying and valuation of these resources. Emergence of Knowledge Era, states a new beginning for the intelligence based valuation of an individual. Increase in service sector lead to the appreciation of human resources as one of the several forms of wealth such as money, securities and physical capital.

In software companies and other service industries, the financial capital comes from the ability of the firm to transition the human capital into a structural capital that will be shipped out and consequently transition into financial capital. One of the major reason that IT companies initiated public disclosure of HRA information as to project the quality of its skilled workforce to various stakeholders like investors, clients etc. In an industry where attrition rates are still very high, HR valuation helps the companies know the value they would forego when they are about to lose a person. Most importantly, the management of these companies believed that their employees would provide them the greatest source of competitive advantage in the new generation 'knowledge economy'.

Hence, in the year 1995-96, Infosys took cognizance of this fact and became the first IT Company in India to disclose the value of its human resources by using HRA. "A company's annual report shows the financial parameters. It only looks at the tangible assets, but we also wanted to inform the shareholders about intangible assets. Our employees are our value," S Gopalakrishnan, the CEO and managing director of Infosys. (Sabharwal and Sengupta, 2011). Narayan (2010, p.242) said the company used the Lev & Schwartz model and valued its human resource assets at Rs 1.86 billion. Infosys had

always given utmost importance to the role of employees in contributing to the company's success. Analysts felt that human resource accounting was a step further in Infosys' focus on its employees. Narayana Murthy (CMD) said: "Comparing this figure over the years will tell us whether the value of our human resources is appreciating or not. For a knowledge intensive company like ours, that is vital information". Infosys Technologies valued its human resources which were Rs. 184 crores, much more than the value of its physical assets of Rs. 84 crores. (Sirisetti and Mallesu, 2014, p-48). Few years later, Satyam Computers followed suit by publishing its HRA information in its Annual report as "additional information to investors".

Thousands of IT companies have been set up in India, they hardly have any fixed assets but they have good team of human resources which are not shown in the balance sheet. If one wishes to compare the performance of an IT and a manufacturing company on the basis of 'Capital Employed ratio', the ratio would be higher for IT company as compared to manufacturing firm which is contradictory to our assumptions. The basic problem of IT sector is not high cost but absence of performance measures. This calls for HRA information.

As compared to other sectors, majority of IT companies have implemented HRA in their annual statements. The Indian IT industry accounts for a 5.19% of the country's GDP and export earnings as of 2009, while providing employment to a significant number of its tertiary sector workforce. More than 2.3 million people are employed in the sector directly or indirectly, making it one of the biggest job creators in India and a mainstay of the national economy. Looking at these aspects of IT industry, this sector has been selected for study.

1.4 HUMAN RESOURCE MANAGEMENT

Strategic human resource management can be defined as the linking of human resources with strategic goals and objectives in order to improve business performance and develop organizational culture that foster innovation, flexibility and competitive advantage. In an organization, SHRM means accepting and involving the HR function as a strategic partner in the formulation and implementation of the company's strategies through HR activities. Human Resource Management was regarded as a support function because of its inability to show direct contribution in company's profits. Now, as the focuses of companies have shifted to human resources and their importance has been acclaimed, HRM has greatly been accepted as a Strategic function. HR Managers have grabbed the positions in Board of Directors of the organization. Generally, strategy refers to the overarching, long-term directions of an organization that are critical to its survival and success. (George T., 1987, p-6)

Earlier Human Resource Department was considered as a cost center for the organization i.e. a department within the organization that brings in no revenue or profit—it only costs money for the organization to run this function. Due to the increased importance of employees in service based economy and a role in Strategic Management HRD has now been considered as revenue center.

The HRA practices have interplay with the strategic human resource practices. So, HRA has high impact on strategic HR decisions. Thus, this relation between HRA and other HR functions need to be analyzed.

For SHRM to happen, the cooperation of the line managers is critical (Ulrich, 1998). HRM is more of a line managers' responsibility with the increasing strategic importance of HR (Brewster and Smith, 1990; Mello, 2001; Truss and Gratton, 1994) and this requires a closer relationship between HR and line managers (Becker and Gerhart, 1996). Martell and Caroll (1995) look at the inclusion of line managers in the HR policymaking process as a critical element of SHRM. Line managers could be in a better position to respond to issues concerning the employees enabling HR managers to find more time to perform strategic functions related to HRM (Budhwar and Sparrow, 2002). However, effective participation may be constrained by factors like the lack of HR competence of the line managers, lack of training for taking up devolved HR responsibilities, inadequate time

for people management issues, and emphasis on short term performance measures that causes lack of focus on achieving results through managing people (McGovern, Gratton, Hope-Hailey, Stiles and Truss, 1997 cited in Krishnan and Singh, 2004).

Thus, in order to see successful HRA in organization having a great impact on Strategic HRM, there need to be effective implementation of the same at base or lower level.

Let us have a glimpse of some crucial functions of HR both at Tactical and Strategic Level.

1.4.1 HUMAN RESOURCE PLANNING

The success of a business is directly linked to the performance of the employees. Hiring the wrong people can lead to business failures. Hence, it is imperative to manage inflow of the employees and put effort into human resource planning. Inflow means recruiting the suitable candidate for job. Recruiting the right candidate and retaining them is important part of HRP.

IT organization requires professionals with right skills and right attitude to be deployed for positions based on global business opportunities. The human resource planning subsystem in an IT organization is faced with the challenge of matching supply and demand. (Narahari and Murthy, 2009). Also, many HR manager's output of work or productivity is the number of suitable candidates selected and retained.

The need of the hour is to develop a system that would help HR in preparing appropriate budget for HRP, selecting right candidate for job and retaining employees to control attrition. An information based mechanism that would assist HR manager in taking these decisions is required.

Strategic Human Resource Planning

In 1996, strategic planning, mission statements and benchmarking were the top three management techniques. Of the 409 North American companies surveyed, 89 per cent reported using strategic planning in 1996. (Pitt G., 1998)

Miles and Snow (1984) discussed "make" or "buy" HR strategies where HRM systems focus on building or acquiring human resources. Strategic Planning for Human Resources includes making a yearly budget for employees' inflow and maintenance. While making

recruitment budget all the direct costs involved in the process are taken into consideration and a rough figure is quoted as indirect costs. In the HR valuation process, indirect cost is counted and measured, the same should be used in making recruitment budget. Inclusion of appropriate costs enables HR managers to understand the exact money involved in the process and which costs can be saved.

One of the major decisions in HRP is implementing retention strategies. Which strategy should be implemented is the HR Managers choice. He/she need to choose the strategy that would best suit their company is cost effective and bring down the attrition rate. In order to take this decision, HR manager would need data about each strategy, cost involved in implementing the same, percentage of turnover expected to be reduced on implementation of that strategy etc. to take correct decision.

1.4.2 PERFORMANCE MANAGEMENT SYSTEM

Performance Management System is the area where utmost concern of the employee lies. But these employees are only those who wish to work with the organization for a long period of time and see their growth or career progression in the same company.

Measuring the performance of the employee is very crucial at the same time "difficult". Specifically in IT companies where employs are expected to work in teams and individual performance cannot be as curtained.

An employee works hard entire year to ensure that he fits into "performer" category. What if, the PM are faulty or biased? It decreases the employee's motivation to work. Performance may not be necessarily link to compensation or incentives or promotions but a simple recognition or the work done gives a good amount of satisfaction to employees.

Moreover, if PM is facility, neither manager (nor company) nor employee knows that how much has he/she has contributed to the organization.

In IT organization, most of the companies follow "bell performance measurement model". Due to this, many of the employees are forced into the best performer and non performer category.

Strategic Performance Management System:

Strategic performance management is defined as: the process where steering of the organization takes place through the systematic definition of mission, strategy and

objectives of the organization, making these measurable through critical success factors and key performance indicators, in order to be able to take corrective actions to keep the organization on track (Grigore A., Bagu C. and Radu C., 2009). The majority of employers fail to achieve strategic goals as they are missing a trick to align performance management with strategy. As a result, many employees are unaware of how they can contribute to their company's strategic goals. Rather than pushing people to work longer and harder, the answer may lie in equipping them to work smarter by telling them what to perform, how to perform, how is that contributing to corporate goals and how much are they contributing towards profits. Today's performance management system should provide a complete suite of competency measurement tools – i.e. more than just performance reviews and appraisals, it should give the holistic view.

"If you can develop a performance management system where people come out of it feeling more energized and positive, that's a good thing because often people walk in feeling ready for battle," says Paul Brewerton, director at the Strengths Partnership, an HR assessment and coaching consultancy (Gray, 2011). Thus, a Performance management system should be strategically designed to motivate employee to perform to his/her highest capabilities. This can be done by undertaking multiple initiatives such as implementing performance based pay, linking promotions to performance as the only criterion, comparing employee performance on corporate level and across different departments instead of in small groups, keeping performance criterion fair and transparent, etc. For doing this HR managers need the right tool. A tool in the form of performance management method that would appraise right candidate with apt reason and provide a guideline for future performance. Human Resource Accounting is the perfect method to do this.

1.4.3 TRAINING AND DEVELOPMENT
"There is nothing training cannot do; nothing is above its reach; It can turn bad morals to good, It can destroy bad principles and create good ones, It can lift men to angel ship."

-Mark Twain

Human capital is increasingly regarded as one of the major drivers of productivity, economic growth and competitive advantage. Recognizing the importance of human capital, enhancing this capital through training and development has become crucial. *An*

average Japanese company spends about 6% of budget on training. Motorola's CEO required all divisions to spend at least 2% of budget on training. Over next 7 years, profits increased 47% and it was estimated that each $1.00 in training yielded $30.00 in return.

As rightly said, *"An organization is only as good as it's employees,"* In order for an organization to produce professional career minded employees an investment has to be made.

Training and development refers to the process to obtain or transfer knowledge, skills and abilities needed to carry out a specific activity or task. Rapid changes in technology, the exportation of jobs (e.g., manufacturing), downsizing, shortcomings in formal education (e.g., high school level), global competition and the aging workforce are some of the major reasons making organizations to focus on continuous learning and job training. (Study Mode, 2014).

HR training and development responsibilities begin with newly joiner's orientation. Behavioural training programs HR to establish the relationship between the employer and employee, as well as help form collegial relationships among co-workers. During an employee's tenure, HR's provides skills training and professional development opportunities that prepare employees for additional responsibilities with the company as well as future promotions. But the sorry situation is when it comes to cost cutting, this is the first function to be sliced. Companies often fail to realize that the return on investment in training and development activities help support employers' goals for profitability, according to Paul Sarvadi, author of Entrepreneur magazine's May 2005 article titled, "The Importance of Employee Development."

Since, training and development programs are very costly; HR managers need to select a right candidate for attending the training program. It should be based on his contribution to organization, his tenure, and future expected services. HRA model can prove managers with these details.

Strategic Training and Development

Training has the distinct role in the achievement of an organizational goal by incorporating the interests of organization and the workforce (Stone R J. Human Resource Management, 2002). Now a day's training is the most important factor in the business world because training increases the efficiency and the effectiveness of both employees and the organization (StudyMode, 2014). Each training needed by organization to be given to the group of employees calls for a huge investment on company's side. While selecting a training program, HR mangers should know the expected ROI of the training. Does by attending the training program, is there any increase in the value of employee.

Impact of a training program need to be accessed, in the light of performance records and promotion charts of employees who have undergone that training programs. Calculating the effects of the training and comparing it with the investment made is very difficult as the effects are slow and difficult to measure. However, in long run, company need to do so, in order to take decision regarding future investments in training programs.

1.4.4 COMPENSATION MANAGEMENT

Compensation refers to all forms of financial returns and tangible benefits that employee receives as part of employment relationship. Compensation is divided into two parts and these are cash compensation which is the direct pay provided by employer for services rendered by the employee and fringe compensation which refers to employee benefit programs.

Cash compensation has two elements which include base pay and contingency pay. Base pay is the fixed pay plus overtime pay, while contingent pay is concerned with performance allowances such as merit increases, incentive pay bonuses and gain sharing. Fringe compensation on the other hand refers to benefits provided to employees by organisation.

Various studies have established that salaries and benefits are closely related to job satisfaction (St. Lifer, 1994); and job satisfaction can bring about motivation which in turn affects employee job performance and organizational commitment.(Unllib.unl.edu, 2014, p-2).

Strategic Compensation Management System

Compensation is a critical piece of Human Resource Strategy. Compensation is both visible and important to employees, a compensation program designed to communicate and reward strategic goals increases the probability that employees will not only understand what those goals are but also will achieve them. According to Dyre (1985) the notion that compensation policies are strategic, thereby affecting the Missions of the organization, has considerable currency. This is part of the current popularity of all things strategic. While some may write it off as another fad, another cynical view is that a strategic perspective on compensation is part of a growing recognition that macro-organization consider as an important part of the study of human resource management. (Milkovich, 1987, Pg- 2)

The importance of a strategic perspective on compensation rests on three fundamental tenets. The first is that compensation policies and practices differ widely across organizations and across employee groups within organizations. The second tenet is that the decisions managers and employees make help shape these differences; that discretion exists to choose among options and the processes used to implement them. Perhaps most fundamental of all the tenets on which a strategic perspective on compensation is based is the belief that fitting compensation systems to environmental and organizational conditions makes a difference; that systematic variation in compensation systems is more than random noise; that making compensation policies and practices contingent on organizational and environmental conditions has some desired effects on employee behaviors and the performance of organizations.(Milkovich, 1987, pg- 4, 5)

Lists of Compensation Decisions deemed to be strategic in the literature. It includes the market position (level of pay relative to competitors), Internal versus external orientation, hierarchy (the steepness of the pay structure and the basis—job versus skills—for the pay structure reward mix, and the basis of rewards (performance versus seniority, groups versus individual, criteria used, etc.) (Milkovich, 1987, pg- 9)

A technique of Job Evaluation is used to establish an equitable wage rate. This method is a more systematic and rational approach to internal equity where the jobs in an

organization are evaluated according to compensable factors like education, skill, experience, and responsibility.

All these activities that fall under the purview of Strategic Compensation need to be considered as at the end of the day what matters is the money.

1.5 RATIONALE OF STUDY

In the knowledge driven economy, Human Resources are the most important assets. The accountants in the past have not given due consideration to these assets. Organisations heavily invest in recruitment, training and development, etc. But the amount is treated as revenue expenditure and hence is debited to profit and loss account. However, these costs are incurred to get services from the employees and hence should be capitalized. Failure of accounting principle to give justice to human assets leads to emergence of human resource accounting concept.

Information Technology being the most human intensive sector needs to give more importance to their intellectual capital. Growth of IT sector in India lead to ample opportunities for software professionals. It became easier for employees to find more lucrative opportunities. Hence, attrition is high in this industry. Implementation of HRA practices and its proper usage may help to control employee turnover.

For the management, to prove their concern to their employees, organizations have to undertake multiple initiatives. There are companies like Infosys, Mahindra Satyam and Rolta India who has been undertaking Human Resource Accounting and consistently disclosing this information in their Annual Records. As a result of this, these companies know the monetary valuation and contribution of each employee and hence can utilize workforce properly.

Despite the importance attached to human capital in the IT Industry HRA is still at an infancy stage in India. The reasons for the non-implementation by the other IT Companies are relatively unknown. The main problem arises where the actual utility of the Human Resource Accounting information is questioned. The use of HRA value in decision making of various Human Resource function is to be proved. Every management would like to know how HRA initiative can help their organisation's profitability.

Management has long being searching for a decision making tool. There is a need to understand how the monetary information of employees can be used for human resource planning decisions, performance management, training and development and other decisions.

This research would not only contribute in answering the problems mentioned above but also help to understand as to how can Organizations in India translate their rhetoric that "people are our most valuable assets" into reality.

1.6 EMPLOYEE MOTIVATION

Motivation refers to reasons that underlie behavior that is characterized by willingness and volition (Guay et al., 2010, p. 712). Intrinsic motivation is animated by personal enjoyment, interest, or pleasure, whereas extrinsic motivation is governed by reinforcement contingencies.

The study by Shilpajainusms (2010) reveals: The various factors of organizational structure and culture have positive and negative impact on job satisfaction, job stress and employee motivation, through the extensive review of the existing literature. The structure, leadership, managerial practices and the decision processes mediated by organizational climate and good supervisory style positively impact the employee motivation. Centralization, lack of participation in decision making, little opportunity for advancement, great amount of formalization and high degree of specialization affect employee motivation negatively.

A motivated employee is a happy employee and therefore a ``productive employee. Recently, all the HR manager's efforts are concentrated towards motivating their employees. A highly motivated employee imparts lot of direct and indirect benefits to the organization. They are more loyal, creative, innovative, create good work environment, perform better, etc. All these benefits help organization to a great extent. Now-a-days, salary has become secondary option for employees, as it always was. But a trend has been seen that a good experienced employee shifts from the job of higher pay to the job of lower pay. When asked for reasons, we got varied viz. "I get to work on my domain", "Better Work-Life Balance", "Self- authority", "Flexibility in work such as work

from home option" are the few responses received from the employees of IT companies selected for study.

Every HR manager strives to proved employees with best of the amenities so as to retain them. But sometimes they tend to forget that association with an organisation is more of intrinsic decision which is driven by self-motivation.

The study attempts to find the impact of HRA on motivation level of employees. To check the same, three basic theories of motivation have been taken into consideration. Let us discuss the three theories in brief:

1.6.1 MASLOW'S THEORY OF HUMAN MOTIVATION

The different levels of needs on Maslow's hierarchy are discussed as follows:

(i) **Physiological needs** These are biological needs which consist of the need for oxygen, food, water, and a relatively constant body temperature. They are the strongest needs because if a person were deprived of all needs, it is these physiological ones that would come first in the person's search for satisfaction.

(ii) **Safety needs** When all physiological needs are met and are no longer controlling thoughts and behaviors, the needs for security can become active. While adults have little awareness of their security needs except in times of emergency or periods of disorganization in the social structure (such as widespread rioting), children often display the signs of insecurity and the need to be safe.

(iii) **Needs for love, affection and belongingness** When the needs for safety and for physiological well-being are satisfied, the next class of needs for love, affection and belongingness can emerge. Maslow states that people seek to overcome feelings of loneliness and alienation. This involves both giving and receiving love, affection and the sense of belonging.

(iv) **Needs for esteem** When the first three classes of needs are satisfied, the needs for esteem can become dominant. These involve needs for both self-esteem and for the esteem a person gets from others. Humans have a need for a stable, firmly based, high level of self-respect, and respect from others. When these needs are satisfied, the person feels self-confident and valuable as a person in the world. When these needs are frustrated, the person feels inferior, weak, helpless and worthless.

(v) Needs for self-actualization When all of the foregoing needs are satisfied, then and only then are the needs for self-actualization activated. Maslow describes self-actualization as a person's need to be and do that which the person was "born to do." "A musician must make music, an artist must paint, and a poet must write." These needs make themselves felt in signs of restlessness. The person feels on edge, tense, lacking something, in short, restless. If a person is hungry, unsafe, not loved or accepted, or lacking self-esteem, it is very easy to know what the person is restless about. However, it is not always clear what a person wants when there is a need for self-actualization. (Jerome, 2013)

1.6.2 HERZBERG THEORY OF MOTIVATION

Herzberg's Two-Factor Theory divides motivation and job satisfaction into two groups of factors known as the motivation factors and hygiene factors. Basically the theory differentiates the factors between intrinsic motivators and extrinsic motivators. The intrinsic motivators, known as the job content factors, define things that the people actually do in their work; their responsibility and achievements. These factors are the ones that can contribute a great deal to the level of job satisfaction an employee feels at work. The job context factors, on the other hand, are the extrinsic factors that someone as an employee does not have much control over; they relate more to the environment in which people work than to the nature of the work itself (Schermerhorn 3003 cited in Ruthankoon, 2003).

1. **Achievement:** An example of positive achievement might be if an employee completes a task or project before the deadline and receives high reviews on the result, the satisfaction the employee feels would increase. However, if that same individual is unable to finish the project in time, or feels rushed and is unable to do the job well, the satisfaction level may decrease.

2. **Recognition:** When the employee receives the acknowledgement they deserve for a job well done, the satisfaction will increase. If the employees work is overlooked or criticized it will have the opposite effect.

3. **Work itself:** This involves the employees' perception of whether the work is too difficult or challenging, too easy, boring or interesting.

4. **Responsibility:** This involves the degree of freedom an employee has to make their own decisions and implement their own ideas. The more liberty to take on that responsibility the more inclined the employee may be to work harder on the project, and be more satisfied with the result.

5. **Advancement:** This refers to the expected or unexpected possibility of promotion. An example of negative advancement would be if an employee did not receive an expected promotion or demotion.

6. **Possibility of Growth:** This motivation factor includes the chance one might have for advancement within the company. This could also include the opportunity to learn a new skill or trade. When the possibility/opportunity for growth is lacking or if the employee has reached the peak or glass ceiling, as it is sometimes referred to, this could have a negative effect on the satisfaction the employee feels with their job and position.

The following are the hygiene factors, which work in the same way with positive or negative attributes, however these factors can only have an effect on the dissatisfaction one feels.

1. **Company Policy or Administration:** An employee's perception of whether the policies in place are good or bad or fair or not, change the level of dissatisfaction that employee will feel.

2. **Personal or Working Relationships:** This is those relationships one engages in with their supervisors, peers, and subordinates. How someone feels about the interaction and discussions that take place within the work environment can also effect dissatisfaction.

3. **Working conditions:** This includes the physical surroundings that one works within, such as the facilities or location.

4. **Salary:** This factor is fairly simple, the increase or decrease of wage or salary effects the dissatisfaction within a company a great deal.

5. **Personal Life:** Although people try to separate the two, work and personal life, it is inevitable that one will affect the other.

6. **Feeling a Job Security:** This is a pretty significant factor. The sense of job security within a position or organization as a whole relates to the dissatisfaction as well. (Ruthankoon, 2003, pg. 338)

1.6.3 THE ALDERFER ERG THEORY

According to Alderfer, man is motivated by three groups of core needs, namely Existence, Relatedness and Growth needs, hence the name ERG theory. The existence needs include the human basic needs necessary for existence, which are the physiological and safety needs. The relatedness needs refer to man's desire to maintain important interpersonal relationships. These are man's social, acceptance, belongingness and status desires. The last group of needs is the growth needs, which represent man's desire for personal development, self-fulfillment and self-actualization. (Arnolds and Boshoff, 2002)
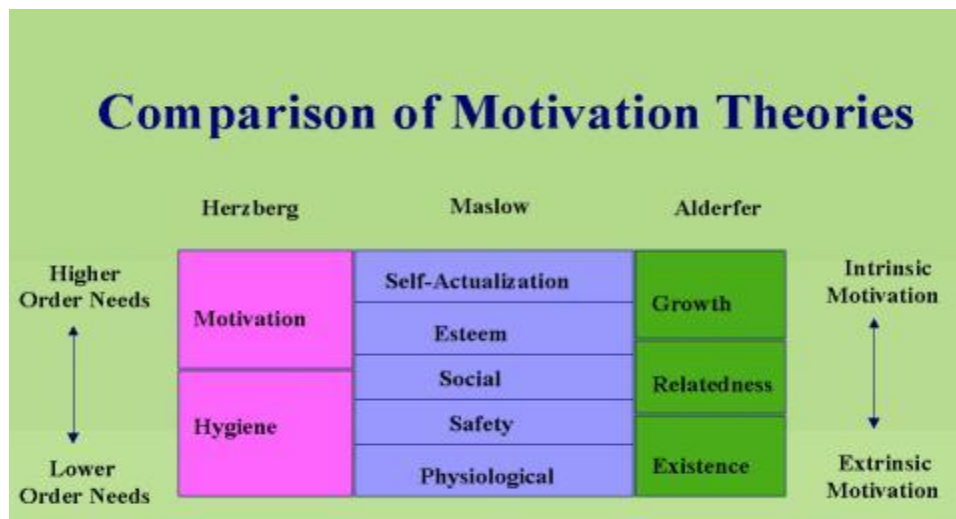
Source: Blogspot, 2011   **Figure 1. 1**

1.7 OVERVIEW OF IT SECTOR IN INDIA

The Information Technology (IT) sector in India is amongst the fastest growing sectors in the country and the world. The sector has increased its contribution to India's GDP from 1.2% in FY1998 to 7.5% in FY2012. According to NASSCOM, the sector aggregated revenues of US$118 billion in FY2014, where export and domestic revenue stood at US$86 billion and US$32 billion respectively.

The Indian Information Technology sector can be classified four categories - IT Services, Engineering Services, ITES-BPO Services and E-Business.

In today's knowledge-based organizations value is driven more by people than by any other factor. The valuation of companies has progressively changed over the last 20 years, putting a much higher weight on intangible assets like knowledge, competence, brands, and systems. These assets are also known as the intellectual capital of the organization. As compared to other sectors, majority of IT companies have implemented HRA in their annual statements.

1.7.1 IMPACT ON INDIA's GROWTH

IT-BPO sector has become one of the most significant growth catalysts for the Indian economy. In addition to fuelling India's economy, this industry is also positively influencing the lives of its people through an active direct and indirect contribution to the various socio-economic parameters such as employment, standard of living and diversity among others. The industry has played a significant role in transforming India's image from a slow moving bureaucratic economy to a land of innovative entrepreneurs and a global player in providing world class technology solutions and business services. The industry has helped India transform from a rural and agriculture-based economy to a knowledge based economy (Nasscom.in, 2010).

1.7.2 NATIONAL ASSOCIATION OF SOFTWARE AND SERVICES COMPANY (NASSCOM)

NASSCOM acts as an advisor, consultant and coordinating body for the IT-BPO industry in India. It helped to enable the government in India todevelop industry friendly policies. NASSCOM is a not-for-profit organization which was set up in 1988 to facilitate business and trade in software and services and to encourage advancement of research in software technology.

NASSCOM has been proactive in ensuring that the IndianInformation Security environment benchmarks with the best across the globe.

Asa part of its Trusted Sourcing initiative, NASSCOM is in the process of setting upthe Data Security Council of India (DSCI) as a Self-Regulatory Organization(SRO) to establish, popularize, monitor and enforce privacy and data protection standards for India's ITeS-BPO industry. DSCI shall function as an enabler to the IT and ITeS industry to grow at a rapid pace by facilitating the adoption and enforcement of the prescribed security standards and best practices.(India Law Offices, 2014)

Looking at these aspects of IT industry, this sector has been selected for study. Four IT companies from the top 20 list of NASSCOM have been selected for study.

Table 1.1: SWOT ANALYSIS OF INDIAN IT INDUSTRY

Strengths	Weakness
1. High Quality & Price Performance 2. Large Pool of Knowledge Workers 3. State-of-the-art Technologies 4. Flexibility, Adaptability & Reliability 5. Off-shore Development through Datacom links 6. High Growth 7. Engineering Base 8. High Aspirations 9. Indians in Silicon Valley 10. Government Encouragement 11. Infrastructure 12. Global Research & Development	1. Lack of Package Orientation 2. Lack of Domestic Computerisation 3. Lack of Internet Penetration 4. Original Technology 5. Mission Critical Real Time Operations 6. Project Management Skills 7. Venture Capital 8. Localisation
Opportunities	**Threats**
1. Global Market 2. Domestic Demand 3. Outsourcing 4. E-Commerce/E-Business 5. Overseas Listings 6. Internet Service Provider (ISP) Policy	1. Government Interference 2. Telecom Infrastructure 3. Infrastructure 4. Cost 5. Protectionism by Export Destinations

Table 1.2: Top 20 IT companies in India as per NASSCOM

Top 20 players in IT Services				
2012 -13	2011 -12	2010 -11	2009 -10	2008 -09	2007 -08

S.No	Company Name	S.No	Company Name
1	Tata Consultancy Services Ltd	11	Genpact India Pvt Ltd
2	Infosys Ltd	12	MindTree Ltd
3	Wipro Ltd	13	Robert BOSCH Engineering and Business Solutions Ltd
4	HCL Technologies Ltd	14	KPIT Technologies Ltd
5	Tech Mahindra Ltd	15	Polaris Financial Technology Ltd
6	iGate	16	Hexaware Technologies Ltd
7	Mphasis Ltd	17	Infotech Enterprise Ltd
8	L&T Infotech Ltd	18	NIIT Technologies Ltd
9	Syntel Ltd	19	Zensar Technologies Ltd
10	CSC, India	20	CGI Information Systems & Management Consultants Pvt Ltd

Note: This list does not include some companies whose corporate headquarters are located outside India, but have significant India-centric delivery capabilities, and have not shared their India-centric revenue figures. Had they been ranked based on their India revenues, companies such as Accenture, Cognizant, HP, Capgemini, Oracle and IBM and would also have appeared in this ranking.

1.7.3 COMPANIES FOLLOWING HRA PRACTICES

Out of the mentioned 20 companies of India, following companies has implemented HRA.

1. INFOSYS TECHNOLOGIES LTD.

Infosys Technologies Ltd. was incorporated in 1981. It provides software development, maintenance and independent validation services to companies in banking, finance, insurance, manufacturing and other domains. Infosys became a public limited company in India in 1992. Infosys is the third-largest India-based IT services company by 2012 revenues. Gartner (2013)

From a capital of US$ 250, it has grown to become a US$ 8.25 billion (FY14 revenues) company with a market capitalization of approximately US$ 31 billion (Infosys, 2014). On

31 March 2014, its market capitalisation was $30.95 billion, making it India's fifth largest publicly traded company (Ycharts.com, 2014).

Infosys has a global presence with 73 offices and 94 development centers in the United States, India, China, Australia, Japan, Middle East, and Europe. Infosys is a NYSE listed global consulting and IT services company with more than 160,000 employees. (Infosys Annual Reports, 2008). The only Indian tech firm to value its 'intangible assets', Infosys has valued each of its 1.3 lakh employees based on their earning potentials till retirement. (Sabharwal And Sengupta, 2011)

Management:

1) **N.R. Narayana Murthy**, **Founder,** Executive Chairman of the Board
2) **S. Gopalakrishnan**, **Co**-Founder, Executive Vice Chairman
3) **S.D. Shibulal,** Chief Executive Officer and Managing Director

Table 1.3: Disclosure of HRA practices in Annual Statements of Infosys

	2008	%	2007	%
Value-added				
Income	16,692		13,893	
Less: Operating expenses excluding personnel costs				
Software development and business process management expenses	1,306		1,187	
Selling and marketing expenses	302		371	
General and administration expenses	968		834	
	2,576		2,392	
Value-added from operations	14,116		11,501	
Non-operating income	704		378	
Total value-added	14,820		11,879	
Distribution of value-added				
Human resources				
Salaries and bonus	8,878	59.9	7,112	59.9
Providers of capital				
Dividend	1,902	12.8	649	5.5
Minority interest	–	–	11	0.1
Interest on debt	–	–	–	–
	1,902	12.8	660	5.6
Taxes				
Corporate income taxes	685	4.6	386	3.2
Dividend tax	323	2.2	102	0.9
	1,008	6.8	488	4.1
Income retained in business				
Depreciation	598	4.0	514	4.3
Retained in business	2,434	16.5	3,105	26.1
	3,032	20.5	3,619	30.4
Total	14,820	100.0	11,879	100.0

Note: 1) The figures above are based on the consolidated Indian GAAP financial statements. 2) Dividends for fiscal 2008 include special dividend of Rs. 1,144 crore.
3) Income taxes for fiscal 2008 and 2007 include tax reversals of Rs. 121 crore and Rs. 125 crore respectively.

Human resources valuation

The dichotomy in accounting between human and non-human capital is fundamental. The latter is recognized as an asset and is, therefore, recorded in the books and reported in the financial statements, whereas the former is ignored by accountants. The definition of wealth as a source of income inevitably leads to the recognition of human capital as one of the several forms of wealth such as money, securities and physical capital.

We have used the Lev & Schwartz model to compute the value of human resources. The evaluation is based on the present value of future earnings of employees and on the following assumptions: a) employee compensation includes all direct and indirect benefits earned both in India and abroad, b) the incremental earnings based on group / age have been considered, and c) the future earnings have been discounted at the cost of capital of 13.32% (previous year – 14.97%).

in Rs. crore, unless stated otherwise

	2008	2007
Employees (No.)		
Software professionals	85,013	68,156
Support	6,174	4,085
Total	91,187	72,241
Value of human resources		
Software professionals	92,331	53,592
Support	6,490	3,860
Total	98,821	57,452
Total income	16,692	13,893
Total employee cost	8,878	7,112
Value-added	14,820	11,879
Net profits excluding exceptional items	4,659	3,861
Ratios		
Value of human resources per employee	1.08	0.80
Total income / human resources value (ratio)	0.17	0.24
Employee cost / human resources value (%)	9.0	12.4
Value-added / human resources value (ratio)	0.15	0.21
Return on human resources value (%)	4.7	6.7

2. KPIT CUMMINS INDIA LTD.

KPIT is a global IT consulting and product engineering partner focused on co-innovating domain intensive technology solutions for corporations specializing in automotive & transportation, manufacturing and energy & utilities. It is an International Organization for Standardization (ISO) 27001 and ISO 9001:2000 Certified company. The company has been recognized as one of top ten investor friendly companies in India (Business Today, August 2007).

The most important reasons for adopting HRA practice in KPIT Cummins is that in the software / IT industry human resource is a significant asset utilized in generating revenues and the conventional accounting practice does not take any cognizance of this important asset in the organization. The widely accepted Lev and Schwartz Model has been used to compute the value of human capital. The subsidiary employees are not considered in the valuation and only the earnings in Indian Rupees are factored into the valuation. (Financemind, 2011)

Management:

1) Ravi Pandit, Chairman & Group CEO

2) Kishor Patil, Co-founder, CEO & MD

3) Sachin Tikekar, Board Member, President - Strategic Relationships & Business Transformation

According to Annual report (2004-05) of the company, in the Software / IT Industry Human Resource is a significant asset utilized in generating revenues. Conventional Accounting Practice does not take any cognizance of this important asset in the organisation.

There are various Models to evaluate the value of Human Resources. KPIT Cummins has used the widely accepted *Lev &Schwartz Model* to compute the value of Human Capital as at March 31, 2002.

KPIT disclosed HRA information in its annual reports in General Shareholder Information as 16th point.

Table 1.3: Disclosure of HRA information in KPIT

The future earnings have been discounted @ 11.59% (15.79% previous year), being the Weighted Average Cost of Capital for KPIT Cummins. The Subsidiary Employees have not been considered in the valuation and thus the number of employees and the value is less to that extent. Only the Earnings in INR have been factored into the valuation.

VALUE OF HUMAN CAPITAL

	March-2005				March-2004			
	Employees		Value		Employees		Value	
	No.	%	Rs. Mn.	%	No.	%	Rs. Mn.	%
Development	1279	90%	8,594	91%	806	90%	3,955.94	91%
Support	106	10%	667	9%	91	10%	372.23	9%
Total	1385	100%	9,261	100%	897	100%	4,328.17	100%

Source: KPIT annual report 2004-05

3. MAHINDRA SATYAM

Mahindra Satyam is one of the leading IT companies in India which is merger of Tech Mahindra and Satyam Computers. It is one of the few companies in India to implement and practice Human Resource Accounting.

Satyam had received the Golden Peacock Award in 2008 for Corporate Governance. Whereas the main stakeholder of the CG Practice, the employees, were misled and wrongly publicized in the books of accounts. Satyam underwent through illegal problems, is a known fact, and was acquired by Tech Mahindra. Satyam was conducting HRA practices, whereas Tech Mahindra was not. Now the new acquisition firm Mahindra Satyam continues to undertake the HRA practices.

Table 1.4: Disclosure of HRA information in Mahindra Satyam

Period	Human Resources Valuation		
	Category	Number	` in Cr.
	Development	97,349	95,600
	Support	7,501	6,533
Mar-09	Total	1,04,850	102,133

Source: HRM review, April 2010

HRA disclosure in Annual Reports of Satyam
1. Number of Associates / Employees
2. HR valuation separately for the development and the support staff
3. Employee cost
4. Employee cost vs. HR value
5. Functional classification of employees
6. Qualification wise break-up of associates
7. Average age of associates
8. Value of human resources category wise
9. Personnel expenses to software revenues
10. Asset base per associate
11. Export revenues per associate
12. Geographical spread of employees
13. Balance sheet including intangible assets
14. Information as per Section 217 (2A) of the Companies Act, 1956

4. ZENSAR TECHNOLOGIES

Zensar Technologies is a technology partner of choice for global organizations looking to strategically transform, grow, and lead in today's challenging business environment. Zensar operates in the US, Europe, Africa, Middle East, Singapore and Australia regions and has delivery centers in India (Pune, Hyderabad and Bangalore), China, UK, Amsterdam and US (Westborough). Zensar is the world's first enterprise-wide SEI CMM Level 3 Company.

5. ROLTA INDIA LIMITED (ROLTA)

Rolta India Limited considers all the direct and indirect benefits earned both in India and abroad by their employees. It reports human resource value per employee, net profit per employee, revenue per employee, total employee cost etc. (Financemind, 2011). Since, Rolta is not among the top 20 companies in India, it is not a part of our study.

1.7.4 SELECTION OF IT SECTOR FOR STUDY

As discussed IT sector is the fastest growing sector in India and has a huge contribution in Indian economy. Human Resources provide the single most source of competitive advantage for Organizations competing in the IT Sector. Majority projects are based on the past achievements and skill sets of the employees of the Organizations. Hence, Organizations needs to develop technical and functional

expertise within the workforce and effectively portray it to clients. Employee costs forms the majority of the costs and their value will form greatest assets of the organization. Thus, valuation of Human Capital and passing this information to the various stakeholders- Clients, Shareholders, senior management & HR Department- has become very important.

As India's outsourcing sector continues to grow bigger and more complex, experts and software professionals want these companies to start valuing their staff on their balance sheets. (Sabharwal and Sengupta, 2011)

Owing to the mentioned reasons, increasing awareness of HRA and proving its utility is mainly required in IT sector. Majority of the HRA expert are available in the above mentioned cities. Hence, study was conducted mainly among these IT cities of India.

1.7.5 MAJOR IT LOCATIONS IN INDIA
Following are the cities in India where majority of IT companies are located. Hence, the research was majorly conducted here.

1. Bangalore: Popularly known as the Silicon Valley of India and leading software exporter from India. Bangalore is considered to be a global information technology hub of India.

2. Chennai: Chennai is the second largest exporter of IT and ITES of India, and is the BPO hub of India. Chennai has the largest operations centers of TCS, and Cognizant.

3. Hyderabad: Hyderabad is a major it hub in India which is also known as Cyberabad which consists of many Multinational corporation companies such as Google, Facebook, Microsoft, Amazon, Oracle and Electronic Arts, etc.

4. Mumbai: The Financial capital of India, many IT companies has established offices.

5. Delhi: The National Capital Region comprising Delhi, Gurgaon and Noida are clusters of software development.

6. Pune: Pune is C-DAC headquarters. Many National and International IT firms are established here.

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IV

REVIEW OF LITERATURE

The aim of the present literature survey is to experience the problems faced by the HRA concept, available researches on HRA and impact of HRA on various stakeholders. Experience includes empirical findings as well as theoretical elaboration. The literature is derived from various sources such as:

a) Databases like ProQuest, EBSCO, etc.

b) Reference libraries like NIBM, Gokhale, TISS

c) Books

The search resulted into more than 1000 references. Out of these, 150 are referred to in the present study.

Three perspectives will appear in the literature. It is interesting to know that each perspective gave rise to second perspective discussed. First, there is a description of the problems faced by HRA concept, then an analysis of the actual use of the concept and, finally, a holistic picture of its utility. The parts of Literature Review are:

1) Human Resource Accounting – the Hard Facts

2) Impact of HRA on HR decisions

3) Impact of HRA at Organizational Level

Despite the considerable quantity of articles and books covered, it is no guarantee that all the relevant literature is covered in the present review. There are several reasons why this might have occurred. First, relevant references might not have been in the databases; second, authors might have used inadequate keywords; third, we might have missed relevant literature as a result of using inadequate keywords; and we might have excluded relevant literature because of a poor interpretation of the abstract.

DESCRIPTION OF THE CONCEPT

Human Resource Accounting is similar to the preparation of accounting statement. As financial accounting reflects the cost of assets such as land, building, machinery, etc; similarly HRA tries to place a value of human resources on human resource balance sheet. In this balance sheet, human resources are reported as assets instead of

expenses. Thus, HRA shows the investments made by the organization on their human assets and how this value changes over time.

Human resource accounting is the upcoming term in the field of Management. It stems from the transition of our economy from a manufacturing orientation to a service orientation. As human beings become the key element in service organizations, failure to measure their value and account for their cost will lessen organizational effectiveness. According to P.J. Taylor, the most important topic for research should be the clarification of the concepts and measures used by HRA. Its usefulness cannot be effectively demonstrated, particularly to those understandably skeptical managers and accountants outside the academic world, until its methodology and measures are less controversial (Glautier, 1976, p-13).

2.1 HUMAN RESOURCE ACCOUNTING THE HARD FACTS

HRA as a concept has encountered many problems. These problems lead to the slow acceptance of HRA. Providing solutions to these would lead to growth of HRA in India. Let us analyze the problems in detail:

2.1.1 GENERAL PROBLEMS

HRA is not being implemented in majority of the organisations because of following problems:

2.1.1.1 Awareness of HRA concept

The level of awareness and acceptance of HRA is still low as many companies take little initiative to make the information available to the shareholders despite having the data (Abubakar, n.d.). The findings show slightly more than half of the respondents were aware of the concept, even though based on the background information of the respondents they held managerial positions and had a minimum undergraduate degree qualification (MiinHuui Lee, 2008).

Reference to previous research shows that the problems associated with the concept of recording human resource value are non-acceptance, unawareness of the concept (Rhode, Lawler and Sundem, 2001).

A study by MiinHuui Lee (2012) revealed that one of the reasons why the slow development of the concept of human resource disclosure was, according to the respondents, the unawareness of the concept.

2.1.1.2 Is Human Resource an Asset?

The first question that arises is whether Human Resource is considered as an asset. Many research papers discussed and revealed the contradictory opinion of the mentioned fact.

Liao argues that though human resources are valuable to the firm, they do not fit the definition of an asset because the proprietary and entity conceit of accounting insist that the firm have specific rights to the future benefit of things and to dispose of the assets. (Liao, 1974) Presently, firms have no exclusive rights to human assets and no assurance of future control and benefits.

The accounting definition of an asset is important to be understood of human resource accounting and perhaps will explain the reason for accountants not giving attention to HRA and why most of the research has been undertaken by sociologists and human resource specialists.

The IASB *Framework (2008)* defines an asset in the following manner:

"An asset is a resource controlled by the enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise."

Otter (2008, p.5) argued that since the employee is free to leave the entity, the control criterion is not met, thus future benefits are not assured, and therefore the employee fails the asset test. A countervailing argument is that whilst **future benefits** are not assured they are nevertheless probable, since employees and employers enter into a business relationship with the intention of it being for some considerable time into the future and in most instances this is the case.

Considering chartered accountants' point of view, value of things should be recognized, valued, and placed on a firm's balance sheet as an asset. Valuing human beings, however, creates a tremendous dilemma because they do not conform to the traditional definition of 'asset'. The classical definition that 'something owned by a firm' cannot be applied to human beings. Otter (2008, p.3) had similar view and said that since employees are not **owned** by the company and that the balance sheet purports to

reflect what a company owns, it would be wrong to include employees as an asset, even if it were possible to place a value on the human asset. Supporting to the view R. Narayan (2010, p.240) said that the ownership of human resources is practically impossible; therefore, it cannot be considered at par with other assets.

This is true even in professional sports. A firm may own a player's contract but not the player. When defined in terms of characteristics, assets should have utility, scarcity, and exchangeability. Arthur Andersen & Co. applied this definition to human resources and concluded that human beings lack exchangeability and thus are not assets.

"Soft" assets are not recognized in financial statements. Another argument by John Stuart Mill (Schultz 1961), is that people should not be considered as assets, because assets exist for the service of people and to treat people as assets is demeaning them.

As an answer to all these problems there are supporters of the concept who contradicted the above arguments more logically:

If we consider a broader, more philosophical point of view, humans can be classified as assets. The word "asset" can have many different meanings. Human Beings fall into a large and complex category of assets known as intangibles. Included among such assets are patents, copyrights, trademarks, and a variety of intangible assets commonly listed under the term "goodwill," such as a favorable business name or location, or a group of knowledgeable or skilled employees? While important to the success and value of a firm, many of these intangible assets do not appear on a firm's balance sheet because there is usually no objective cost basis at which to value them. In addition, tax laws discourage the allocation of costs to goodwill because goodwill, unlike equipment and other tangible assets, cannot be depreciated (Edmonds and Rogow, 1986, p.42). According to Flamholtz said traditional financial statements are less illuminating with respect to the assets that create wealth than they were in the past. Intangible assets such as brand names, intellectual capital, patents, copyrights and expenditures for research and development now generate an increasing amount of wealth for firms.

The first requirement presents a constraint that is surely not met by human resources, since these resources are neither owned nor acquired. Indeed, it has been legally, as well as morally, improper to own other human beings for some time. On the other hand,

it may be argued that human resources are quasi-assets since they are in a sense possessed or controlled by the firm (Rhode, Lawler and Sundem, 1976, p.16). Or if assets should be subject to control by the firm, that control need not be absolute. For instance, goodwill is currently considered an asset, but it is subject to many forces outside the firm.(Edmonds and Rogow, 1986, p.43)

Hermason argues that there is a precedent found in accounting practices which indicates that it is logical to consider human resources as an asset. The issue, defined by Hermason, is not the legal rights involved but rather a firm's "Operational right to receive benefits" (Ebersberger, 1981). Thus, assets are something that possess utility or value. They are acquired not for their own sake, but for what they can contribute to a firm's cash flow. This definition avoids controversies over ownership, control, and exchangeability. (Edmonds and Rogow, 1986, p.43)

According to Wright (1960, p.52) regarding man as a capital asset may cause managers to be more selective in making investments in human resources

Assets represent expected future economic benefits, rights to which have been acquired by the enterprise as a result of some current or past transaction. The assets must have been acquired through a transaction and it should have future economic benefits.

The magnitude of the people component of the entity is such that it is essential for it to be recorded and properly understood through conceptualizing it as an asset and including it in the financial statements. The definition per generally accepted accounting practice might therefore be made more flexible to accommodate the argument advanced earlier or a revised definition could be compiled (Otter, 2008, p.5).

Accountants have, however, found ways to recognize the human asset in special circumstances, such as accounting for the registrations of professional soccer players (Szymanski & Kuypers: 1999:197), accounting for patents, copyrights and other intangible assets, within the framework of generally accepted accounting practice (Jim Otter, 2008, p.6). The crux of the problem lies in searching for and applying accounting like formulae to people. (Raju, Kumar, Sangeeta, 2004, p.183)

2.1.1.3 HR Costs

Narayan (2010, p.239) defined HR Cost Accounting (HRCA) as the measurement and reporting of the costs incurred to acquire and develop people as organizational resources. It deals with accounting for investments made by an organization to the acquisition and development of human resource as well as the replacement cost of the people presently employed.

HR Value Accounting (HRVA) is the concept based on the view that difference in present and future earnings of two similar firms is due to the difference in their human capital or assets. The economic value of the firm can be determined by obtaining the present value of future earnings.

There are many costs involved in Human Resource Investment Subsystem such as Acquisition Cost, Training Cost, and Welfare Cost and so on. The costs of these activities cannot be correctly ascertained. For example, if training costs are considered, the costs involved in execution of training such as training staff salary, circulation material, plant and equipment, off-site expenses etc. but the costs like training intervention development costs, cost of lost productivity, time and opportunity cost etc. cannot be measured in monetary terms. This may distort or misrepresent an employee's value to a great extent, which may lead to mistakes in Decision making.

According to Edmonds and Rogow (1986), the Human resource valuation data was found to be useful for managers, analysts, investors, and appraisers, accountants have spent much of their efforts on how they can be measured. The accuracy of such measurements has been overly debated to the detriment of financial statement users who need human resource information to make informed investment and business decisions. If accuracy were the main issue, a strong case could be made for deleting from financial statements depreciation and inventory valuations, which are based on arbitrary historical cost assumptions. Some contemporary accounting literature suggests that efforts to measure the exact value of human assets is not only unnecessary but also impossible. According to them, the issue is not whether the costs are measured perfectly or allocated exactly but whether human resources receive the value they deserve. This objective can only be accomplished if human resources are recorded and integrated with information about other assets.

2.1.1.4 Acceptance in Accounting Standards

Chartered accountants are very reluctant towards the accepting human beings as asset because of many reasons as discussed earlier in 3.1.1 above.

The traditional accounting procedures practiced from a long time is acceptable norms. Hence, whenever a new accounting system is developed, it is opposed against the strengths of the traditional system, which is considered to be comparatively objective and free from any bias. Similarly, in the case of HR accounting also, it is argued that it lacks symmetry with traditional resource as it cannot be included within the traditional definition of an asset (Narayan, 2010, p. 239).

The concept of Human Resource Accounting is not recognized by tax authorities and therefore, it has only academic utility. If the accounting standards board makes it mandatory to disclose the values of Human Capital or Human Assets, then only the Director of Indirect Tax Authorities will take into concern of HR Accounting. (Narayan, 2010, p. 240)

2.1.2 PROBLEMS FACED BEFORE IMPLEMENTATION

Problems encountered by the management before HRA implementation:

2.1.2.1 Requirement of Expertise

For understanding and implementation of human resource accounting, expertise and knowledge is required. Not many people know about human resource accounting and hence there is a crunch of people who can implement it. Additionally, for any person to know the concept, he need to be expert in accounting to understand the calculations and implement the formulae, HR expert to understand HR processes and costs involved, statistical expert to analyze results and strategic expert to use the results in tactical decision making. It is indeed difficult for a person to be connoisseur in all these fields.

2.1.2.2 Which model to use?

There are two approaches to human resource accounting.

a. Under the *cost approach*, also called human resource cost accounting method or model, there are 'acquisition cost model' and 'replacement cost model'.

b. Under the *value approach*, there are 'present value of future earnings method', 'discounted future wage model', and 'competitive bidding model'.

The measurement of Human Resources is subjective as different firms will use different methods for this purpose. Till date there is no model for valuation of Human Assets, which is widely acceptable and used worldwide (R. Narayan, 2010, p.240). Managers are not sure about, out of available models, which model to use for their organization to gain better results. There is little agreement concerning the procedure in accounting for human assets. There are proponents and critics of the various approaches like cost and value approaches. This factor has become responsible for the slow development of the concept of human resource accounting.

1.2.2.3 Costs involved in implementing human resource accounting

A human resource accounting system is likely to be expensive; human resource accounting can be justified only if its benefits exceed its costs. There is no proper procedure or guidelines for finding costs and value of human resources of an organization. It is not economical for small business units as it involves heavy costs if the firms desire to install the HR accounting package in their organization (Narayan, 2010, p.240).

1.2.2.4 How is depreciation or appreciation calculated?

(Narayan, 2010, p.240) Another issue which has not been settled so far is about the rate at which the prospective stream of contribution is to be discounted or compounded to calculate its present and future value to the organization. A number of applications are available in this process. Organizational needs constant change as today's valuable employee may be valueless tomorrow.

One major difficulty with human resource accounting calculation is how the depreciation can be calculated? Physically and mentally, individuals may grow and deteriorate at different rates.(Rhode, Lawler and Sundem, 1976, p.18) The historical cost approach to develop measures of human resource accounting uses an amortization rate, which provides the figure of amortization to be charged to the profit and loss account every year. But it is very difficult to develop norms in this regard. Some grow more capable as a result of their work experience whereas others may not. Given the difficulty of predicting such changes, it is even more difficult to develop means of writing off an individual's value. So far, precise measures for amortization of human assets have not

been developed. Edmonds and Rogow (1986, p.44), said that although the model reveals the interrelationship between many variables, it is not complete. For instance, it offers no solution to questions about what discount rate should be used to derive present value. In addition, the model treats an individual's value as an independent or marginal phenomenon. The validity of this approach depends upon several variables, including the nature of the organization and the interdependence of organizational goals and roles.

Whereas Narayan (2010, p.240) says human resources is an appreciating asset since manpower improves with time, with due regard to their ageing constraint, but for physical asset its increasing value at the time of its installation, starts immediately depreciating.

1.2.2.5 Basis of Calculation

Human resource accounting uses salary data as a measure of values; clearly some people are paid more than they are worth and others less. Secondly, it measures only the value of individual employees and does not place a value on their ability to work as a team, morale, or commitment to the organization (Rhode, Lawler and Sundem, 1976, p.19). A firm merely capitalizes the salary it pays its employee and assumes that what employee is doing will be of some future benefit to the firm and that one can determine the appropriate rates of capitalization. In many instances, they are completely erroneous presumptions, since there is absolutely no correlation between the salary paid and actual value of employee to the corporation.

Should individual value be reported for each employee or should value be calculated for groups of employees? Information from individual values is potentially more useful than that derived from group values. (Rhode, Lawler and Sundem, 1976, p.17) Although it is difficult to isolate an individual's contribution to a group task or goal, when making personnel decisions, information from individual values is potentially more useful than that derived from group values.

Narayan (2010, p.240) says in the recent past, it has been observed that the value based measures of HRA are finding more acceptances with Flamholtz approach being progressively used. However, this approach depends heavily on the measurement of an

individual's or a group's contribution of valuation. But, measurement of contribution, especially at the managerial levels, is quite a difficult task. As a result, this factor proves to be a hindrance in the development of the concept of HRA.

2.1.3 POST IMPLEMENTATION PROBLEMS

Problems faced by management after implementation of HRA:

2.1.3.1 Gimmicks of HR

According to Rhode, Iii, Lawler and Sundem (1976) managers may use human resource accounting as a means of manipulating the employee. He or she may decrease the human resource value of an employee as a form of punishment or control. Managers may also transfer people at the end of the fiscal year to make the department balance sheet look better.

According to Rhode, Lawler and Sundem (1976, p.21) Human resource accounting may also affect control systems. Managers are frequently evaluated by the profits ascribed to investments under their control. Usually these profits are reported as rates of return, and these rates may be increased either by increasing profits or by reducing investments. Where investments are relatively fixed, e g, machinery and equipment, manipulation of the amount of the investment may be difficult. However, human assets are relatively mobile. Unless control systems are changed, the manager may be motivated to fire or transfer his high value human resources just before the end of the accounting period and so improve the apparent rate of return, a costly manipulation over the long run.

Contrary to this opinion Wright (1970, p.53) says that normally while dealing with an ineffective employee, manager has four alternatives

1) Relegate the man to less sensitive position.

2) Terminate him

3) Continue to accept substandard performance

4) Reorient and redevelop the man to integrate his abilities with the position.

If management considers the employee first as a valuable asset and second as an asset necessitating an operating expense and it has employees that are not yielding an acceptable return in the form of contribution to productivity. The first three alternatives would fail to maximize the return on investment. The forth solution becomes the

optimum solution of the problem. Lawler's survey of the literature on control systems concludes that ignoring human resource values sometimes leads a manager to decisions which in effect liquidate an organization's human resources. For example, training may be suspended and people mistreated to increase short-term profits because profits are measured and human resource values are not (Rhode, Lawler and Sundem, 1976, p.14)

2.1.3.2 Beware the Programmed Society

According to Ebersberger (1981, pg.40), the greatest social threat of human resource accounting is the potential it has for creating a programmed society. People will be permanently stamped with a human resource value. One would be able to predict from that initial value the entire rest of one's "value" for life! This graded, structured society will leave little to individuality and creativity!

Other social effects like placing a human resource value on an employee may have a demoralizing effect on large segments of the worker population. If one's human resource value is not in congruence with one's self-image or not equal to one's peers, the effect on the employee's self-image could be devastating. Also, depreciation in human resource value will harm self-image.

One possible solution to this problem would be to keep managers from knowing the human resource values assigned to particular subordinates, but managers might then object to evaluation based on unknown criteria. A more reasonable solution would require educating managers to look at human resource information differently than they look at physical asset data.

From the Literature and Expert opinion, it is evident that the main and unanswered problem of HRA is lack of knowledge about its utility to the organization. Also, no concrete idea about its impact on employees is given. Hence, the further literature talks about the same.

2.2 HUMAN RESOURCE ACCOUNTING AS A MANAGEMENT DECISION TOOL

An executive's job is to allocate and administer scarce resources to achieve a goal—that is, maximize owner wealth. But if investments in assets are distorted, decisions of managers, investors, and appraisers may not be the optimum ones. Recognition of this has stimulated interest in the valuation of intangible assets, especially human assets (Edmonds and Rogow, 1986, p.42). The question that remains is whether provision of human resource accounting data can improve the decisions. Unfortunately the human resource accounting literature has not provided an answer. The much needed empirical evidence is yet to be found to support the hypothesis that human resource accounting as a tool of management facilitates better and effective management of human Resources.

2.2.1 INVESTMENT DECISIONS

A few initial studies in HRA attempted to test the effect of HRA information on decision makers. HRA proponents such as Flamholtz (1985), Sackman et al. (1989), Elliot (1991), Wallman (1996), and Lev (1997) imply that the presence of human resource information on financial statements will influence analysts' performance assessments of companies and will therefore potentially affect their judgments (Stovall, 2001, pg.41). Few other studies examined whether the presence of human resource information made a difference in investment decisions. Elias (1972) used survey methodology to investigate differences among investment decisions of various accounting users based on the presence or absence of HRA information. The results of his study indicated that human resource data would make a difference in the investment decision. The study was reported with the limitation that the relationship between HRA information and the adopted decisions was not strong. Hendricks (1967) performed an experiment in which he used MBA students as subjects in a repeated measures design to analyze **financial** statements given the presence or absence of human resource data. His results suggested that HRA data had an effect on decision outcomes in the experiment. Perera A. (2012) conducted a study in commercial banks of Sri Lanka. Findings of this study revealed that measuring and reporting human resources information influence corporate investor's for the acquisition and disposal of shares. But, in the case of influence of non-financial human resources information to the corporate investor's for similar decisions did not imitate same finding. Avazzadehfath F. and Raiashekar H. (2011)

explored whether investment decisions were affected by HRA information and factors which interfered this effect. 68 Iranian companies were studied wherein results indicated that HRA information is relevant and effect on optimal investment decision. Historical method or Original Cost Method was suggested as best method for HR valuation.

2.2.2 HR DECISIONS

Even though lot of researches has been conducted on HRA, but it is disappointing to state that not many research talk about impact of HRA on HR decisions. The literature contains testimonials from corporate officers that the data helped improve decision making, but these reports are difficult to evaluate. It is extremely unfortunate that systematic research was not undertaken, since this might help answer the questions raised about HRA's value (Rhode, Lawler and Sundem, 1976, p.22).

Reference to previous research shows that the problems associated with the concept of recording human resource value are non-acceptance, unawareness of the concept and the absence of demonstrations substantiating its usefulness (Rhode, Lawler and Sundem, 2001).

A study by MiinHuui Lee (2012) revealed that one of the reasons why the slow development of the concept of human resource disclosure was, according to the respondents, the unawareness of the concept.

The findings show that 55.3% of the respondents heard about the concept. 80.9% of the respondents indicated that human resource value should be accounted for as asset in the balance sheet. This finding support the literature discussed that in the era of knowledge-based economy, human resource disclosure, knowledge accounting, measurement of intellectual capital are important tools for management.

Knowledge about employee value is of utmost importance not only to investors but also for other roles in the organisation. Edmonds and Rogow (1986, p.44) say Human resource valuation is of concern to people in many professions: the plant manager with high employee turnover, the financial analyst making investment recommendations, the investor deciding between alternative investment opportunities, and the business

appraiser. There are no simple or exact solutions on how to appropriately report and use human resource valuations.

2.2.2.1 Human Resource Planning

Craft J.A. and Birnberg H.G (1976) suggested that HRA can assist the human resource manager in developing measures for cost of hiring new employee which may prove beneficial in choosing best alternatives in selection process.

Sen D., Jain S., Jat S. and Saha R. (2008) investigated to find impact of HRA on internal personnel management decision-making in relation to recruitment and employee turnover control in 14 Bangladesh Banks. A pretest and posttest research was conducted on 96 personnel executive through questionnaire without and with HRA information. They were asked if HRA information has impacted their decision. Using Q-test, researcher proved that use of HRA information is useful in internal decision making related to Human Resources.

Cherian and Farouq (2013), from their research concluded that the HRA implementation helps to improve managerial decisions like layoffs, better performance evaluation measures of the firm.

Flamholtz, E. G. 1976, designed a laboratory experiment to determine whether human resource value numbers influence a selected human resource management decision related to job allocation. The results indicate that nonmonetary human resource value numbers may influence decisions. However, it could not be established that monetary human resource value numbers make a difference in decisions. The results also indicate that human resource value measures may influence the decision-maker's mindset and criterion used in decision-making. HRA could aid managers through providing information on the cost of specific personnel behaviors, such as training and turnover, and also through encouraging better assessment and development of people (Rhode, Lawler and Sundem, 1976, p.14).

Brummet, Flamholtz and Pyle (1968) identified few challenges faced by managers. One of those is management needs more information on the costs of personnel turnover. Currently, the losses through employee attrition cannot be assessed. Adding to this, Rhode, Lawler and Sundem (1976, p.20) said one factor that presently mitigates against turnover is that employees' values are not known outside their immediate work group. This lack of information makes it difficult for an organization to know who to recruit from competitors and may also make it difficult for the employee who wants to leave to establish his or her value on the outside.

2.2.2.2 Performance Management System:

In many HRM books, HRA has been portrayed as one of the best methods of Performance Appraisal. Performance appraisal focuses on long-term results and has a long-term focus (Krishnan and Singh, 2004, p-5). Wright (1970, p.52) says that promotions are currently based, in large measure on attrition, and the ability of men with high earning potential to perform is often thwarted by low employee turnover. In turn, the enterprise fails to realize a payoff from its investment.

Management needs information about the categories of its human resource investments. Standard costs and replacement costs can be established for the use in recruitment, hiring, orientation, training and integrating new employees to a sufficient level of interaction with fellow workers. These costs would provide management with guidelines to estimate the replacement cost for persons in various positions so that manpower acquisition could be planned.

Flamholtz et al. (2003) used HRA value as a measurement tool and found that employees' participation in a Management Development Program increased the value of the individuals towards the organisation. Researchers portrayed HRA as an alternative accounting system to measure the cost and value of employees for management decisions. Though investments in training and development are sound, certain individuals do not show any evidence of increased value. It seems reasonable that if, after fair deliberation, it was found that efforts to further develop an employee were in

vain, resources should be diverted to employees whose performance and potential could be enhanced.

Puett and Roman (1976) concluded that HRA information can be used in guazing Potential worth of individuals.

HRA can be useful in the evaluation process by developing reliable methods of measuring the value of people of an organization (Sharma, 2012, pg 29).

2.2.2.3 Training and Development

Brummet, Flamholtz, and Pyle (1968) say that management needs to be able to estimate the value of training and development programs. Most successful enterprises invest heavily in training and development programs for employees throughout the organization, without even an estimate of expected payoffs or return on investments.

Craft J.A. and Birnberg H.G (1976) suggested the use of HRA in Training decisions. HRA can assist the human resource manager in developing measures for cost of training new employee which may prove beneficial in choosing best alternatives training programs. Researchers concluded that human resource accounting will obtain greatest acceptance as an aid in personnel management operations analysis (e.g., turnover cost analysis, training cost analysis, costing out selection procedures, and the like) and in evaluating managerial performance, especially in service-oriented industries.

Puett and Roman (1976) concluded form their research that 61% respondents say that HRA information is useful in training related decisions.

2.2.2.4 Compensation Management System

Rhode, Lawler and Sundem (1976, p.20) questioned, should individual employees be allowed to earn their imputed values? Doing this possibly might lead to greatly increased dissatisfaction with pay unless pay rates and human resource values were directly proportional to each other. On the other hand, HRA might be a blessing to salary administrators, if it would provide them with the kind of information they have long needed to place salary administration on an objective footing. Knowledge of individual human resource values could also affect employee bargaining power, both within and outside the company. Further, they (p.16) said that under marginal productivity theory

human resources are paid a wage equal to their marginal productivity. As more human resources are added to a fixed amount of physical capital, the marginal (and average) productivity of the human resources falls. Therefore, the average product (value in dollars) of the human resources is higher than the marginal product (cost in wages). In equilibrium and under perfect markets, and assuming that the only relevant exchange is employees' time and effort for monetary remuneration, the difference between average and marginal productivity for human resources represents the appropriate return to the physical capital employed. Under such idealized conditions the gross value of a firm's human resources is equal to the wages it must pay to retain them. As a result, according to marginal productivity theory, net human resource value in equilibrium should be zero.

Rakholia and Makwana (2102, p.115) said that human resource evaluation permits rewards to be administered in relation to a person's value to an organization. Puett and Roman (1976) concluded that HRA information can be used in salary reviews.

Committee on accounting for Human Resource in the Accounting Review gave the matrix which portrays the behavioral impact in terms of cognitive and decision behaviour. Decision behaviour shows the areas in which HRA has been hypothesized to have an impact, such as selection, transfer, promotion and performance evaluation.

Figure 2.1: Matrix showing Behavioural Impact of HRA
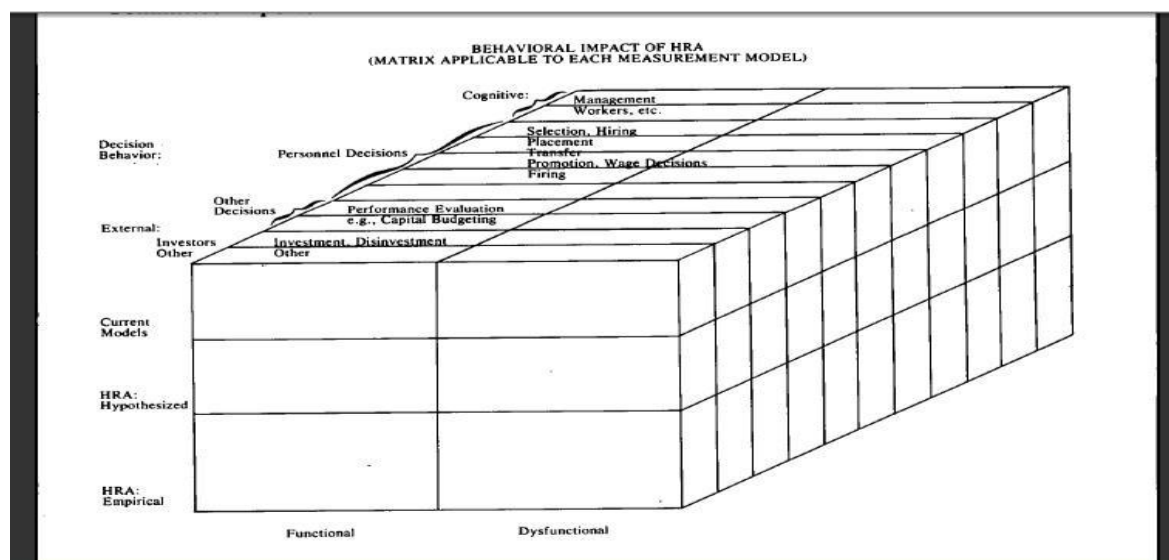
Source: Committee of Accounting for Human Resource, p.121

2.2.3 EMPLOYEE MOTIVATION

Motivation plays a key role in employee job performance. Thus, employee motivation has long been a central research topic for researchers and practitioners. As a result, an abundance of theories and approaches were developed in order to explain the nature of employee motivation both in the private and the public sector. However, most of these studies focus on the materialistic gain based motivation level of employees such as compensation, rewards, etc. However, literature falls short of motivating factors that are based on employee feelings which is called perceived equity. It includes Fairness in the financial and non-financial rewards, Adequate pay, Adequate recognition, Freedom at work, Feedback from colleagues, Perceived equity with their peers, Equitable environments, Organizational justice, Performance is linked to rewards (Julie, M. H., Arthur V. H., 2001). The problem is that with the effects of the latest IT revolution and rise in income levels of the employees, management need to practical ways that can help motivate employees to be productive and get "more for less".

According to the research conducted by A. Ali and M. Akram (2012), the result showed a positive impact of financial rewards on employee's motivation and satisfaction. Financial rewards leads to employee's motivation. Ali R. and Shakil (2009) proved that there is a statistically significant relationship between reward and recognition respectively, and motivation and satisfaction. Prasetya A. and Kato M. (2011) also analyzed that there are significant influences from both financial and nonfinancial compensations to the employee performance.

Khan F. (2013), said on an average 85% of the employees in an organization are motivated by performance appraisal. The predictions of the model are consistent with various empirical findings. These comprise (i) the observation that managers tend to give positive appraisals, (ii) the finding that on average positive appraisals motivate more than negative appraisals, and (iii) the observation that the effects of appraisals depend on the employee's perception of the manager's ability to assess performance accurately. Although many factors contribute to productivity, job performance is viewed to be the most influential one (Mitchell, 1982, p.82). As it is clear that work motivation does not determine employee's level of performance, but it does influence his/her effort toward

performing the task (Ahlstrom, Bruton, 2009, p.198). The role of motivation in performance can be summarized in the following formula:

Performance = **Ability** x **Understanding of the task** x **Motivation** x **Environment**

Accordingly, in order to perform well employees need first to have the knowledge and skills that are required for the job. Then, they must understand what they are required to do and have the motivation to expand effort to do so. And last, employees need to work in an environment that allows them to carry out the task, e.g. by allocating sufficient resources (Mitchell, 1982, p.83). The multiplication sign in the equation emphasizes the importance of motivation – if motivation is equal to zero, even the most talented employee will not deliver. Similarly, an energized and highly motivated employee can reach good performance despite having some knowledge gaps (Landy, Conte, 2010, p.365). A good example for the latter situation is a new worker or trainee, who joins the organization fully motivated to work, yet lacks skills and experience. The motivation to learn and develop will quickly outweigh the weaknesses (R. Yair, 2011).

Effects of HRA on Employee's mindset

Employees and unions may not like the idea, because HRA may lead to division among the ranks of employees. A group of employees may be valued lower than their real worth owing to reasons beyond the control of management. The employees may resist the idea of being treated like second class citizens, despite their contribution over a period of time (Narayan, 2010, p.241). The notion of viewing people as resources and attempting to measure their value may be offensive to some people. It may seem to run counter to an increasingly humanistic orientation in management theory (Flamholtz, n.d.). Whereas Wright (1970, p.53) says that measuring human resource value is not dehumanising them. Instead, it can restore the personality of each man in complex organization and lead the way to more humanistic treatment of employee. When managers are informed on financial facts, and thereby enabled to act as "economic men," the results are often consistent with sound human relations.

(Narayan, 2010, p.240) It is possible that apprehension regarding the effect of HRA on human behavior may have forced the organization to be reluctant to use this system. HR accounting may lead to alienation as the people might feel that they have been reduced

to as industrial input commodity. Adding to this, Rhode, Lawler and Sundem (1976, p.20) said that publicizing human resource data could also have a disastrous impact on the attitudes of employees whose resource values are declining. These employees may leave the organization or suffer loss of self-esteem.

2.3.4 ORGANISATIONAL STRATEGY

Roos, Fernsrtom and Pike (2004) has linked human resource management (HRM) and business performance. The paper studies the change of the HR function into HRM taking on its current strategic role. Lawler (2009) said that Corporate Boards need metrics that accurately report on the condition of the organization's human capital. They also need analytics that show how the management metrics drive corporate performance. Flamholtz, Bullen and Hua, (2002, p.948) said 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.

Ogan (1988) reported the results of a field experiment designed to assess the impact of HRA information on layoff decisions made by managers. The findings of this study indicates that HRA information does make a difference in personnel layoff decisions and enables managers to increase their level of confidence regarding decisions of this sort.

Singh (2003) gives a broader approach to looking at SHRM by integrating various functions and establishing the linkage of these functions with the business plan. It is important not only to identify HR competencies in concurrence with the business needs and develop selection and development practices to secure those competencies, but also to evolve and implement a performance evaluation plan that links the performance of the employees to the strategic goals. It is essential to have strategically-linked compensation system to improve firm performance and to retain employees with required competencies.

According to Lawler (1984), once the strategic plan is developed it is necessary to design reward systems that will attract the right kind of people, motivate them to perform optimally, and create a supportive climate and structure. In strategic scenario, the compensation offers more variety in terms of benefits like stock options and bonuses

(Krishnan and Singh, 2004). A later study (Yeung and Ulrich 1990) found that the manner of alignment between HR and business strategy had an impact on organisational performance.

Brummet R.L., Flamholtz E.G. and Pyle W.C. stated that non existence of cost, current condition or value of orgnisation's manpower assets have long term consequences on process of acquiring, developing, allocating and utilizing human assets which affects the ultimate objective of long term profit maximization. Non-availability of human asset information makes acquisition and development decisions of human resources difficult to justify in terms of a cost-value calculus. Similarly, return on investment on human resource investments is difficult due to unavailability of data. Availability of human resource accounting information will enable managers to make decisions differently and human assets will be managed more effectively. This is a testable hypothesis rather than an arbitrary assumption.

2.3.5 HR's CONTRIBUTION IN PROFITS

Theeke and Mitchell stated that human resource managers are at an inherent disadvantage as they have difficulty showing a tangible result of their expenditures. By creating a framework for reporting human resource liabilities, more accurate valuation of the firm can be done to help human resource managers compete for resources, and provide data about how human resource practices affect firm value. In the end, what matters is the effect human resource managers have on firm value. For example, by increasing employee loyalty and reducing attrition, the benefits of training programs remain within the firm. Similarly, better manager training may result in reduced negligent hiring and employee harassment. A human resource liability paradigm helps us to quantify financial effects of human resource practices and contribute to a better understanding of the practices' value.

HRA is also assumed to be a management tool for effective decision making. Thus, quick and correct decisions save lot of time and money.

Schuler and Jackson (1987 cited in Krishnan and Singh, 2004) discussed the kind of HRM system needed to align the human resources to three kinds of competitive strategies, namely innovation, quality enhancement and cost reduction strategy.

Managers need estimates of their firm's ratios of investment in human resources to total assets as an indicator of profit making potential. A positive correlation exists between investments in the acquisition, orientation, training, retraining, and retention of human resources, and the future profitability of corporations. The idea suggests that, atleast in enterprises in which the human resources are critical factor of production; high profits can be ultimately expected from a high human asset investment ratio. (Brummet, Flamholtz, and Pyle, 1968)

Thus, there are many ways in which HRA helps in saving costs and influences employee to be productive thereby increasing the profitability of the organization.

2.3 GAPS IN RESEARCH

As discussed, in the first part of literature review, one main problem is non-acceptance of Human Resources as Assets. However, a lot of literature is available that discussed about the parameters of their acceptance and non-acceptance. Thus, from the discussion it is inferred that 'asset' needs to be redefined so as to include human resource in it and quantify human resource.

Other problems also have realistic and simple solutions.

* The minor costs involved in HR processes can be approximately ascertained while calculating human resource value.

* HR Accounting is required to be made mandatory by Indian and International accounting standards.

* Companies can train internal staff or outsource HRA to ensure that expert requirements are met.

* ROI of human resource accounting is intangible but has lot of potential to stop wastage of money. Group performance is needed to be considered to determine a performance of an individual.

* Appreciation or depreciation of employees can be ascertained based on the employee's performance. Performance of an employee will be a better base for calculation of value of human resources instead of salary.

* Involving unbiased experts in using human resource value would help to avoid the HR gimmicks.

* HRA value of employees need not be disclosed, to avoid programmed society.

However, unawareness of the concept is a concern. HRA definitely has a utility in making various decisions but it needs to be systematically proved.

Lack of awareness

Very few IT Companies have successfully adopted and consistently declared the value of its human resources to the stakeholders. Despite the importance attached to human capital in the IT Industry HRA is still at an infancy stage in India. From the literature, it is evident that the awareness level about the HRA is less among the Indian companies. *Lack of awareness* is one of the main reasons for the slow growth of this concept.

Lack of knowledge about the utility of the HRA information in HR decisions

Andrew Mayo (2004) comments that the desire to be more professional in the area of measurement is a growing interest for today's HR function. The universal desire of the HR function for stronger business partnership is a stimulus to be more "business-like" - and that requires a more numeric approach to HR management. Hence, a few companies have implemented HRA. But taking a look at the practical aspects in Indian scenario, an analysis of big companies like BHEL, SAIL, ACC, etc, revealed that the HRA is implemented and displayed on balance sheet just to improve their image in society and pose cosmetic transparency in their working to win awards of give a feel good factor to employees. There were no traces of use of HRA information on any of the organizational decisions. Supporting the fact Narayan (2010, p.241) said there is no empirical evidence to support the idea that HRA is an effective tool to measure the economic value of people to their organization. There is very little data to support the contention that it facilitates better and effective management of human resource. The most apparent reason for the non acceptance of HRA is an absence of demonstrated usefulness. (Rhode, Lawler and Sundem, 1976, p.13)

No study has been attempted in the Indian IT context to understand the reasons for adoption of such valuation practices by these few Companies. Few research paper talk about the said fact but are more of theoretical and from researcher's perspective.

From the literature, it is evident that one of the major reasons for non-implementation of HRA is the ***lack of knowledge about the utility*** of the said information. It is obvious for the organization to not invest in something which has no utility or its use is not known or confirmed. As it is assumed that HRA value and HR practices are correlated, a link can be created between the two. Researcher needs to find out whether they are positively correlated or negatively correlated.

Organizational Profitability

For a long time now, HR function has been considered as a staff function as it never was a part of strategic decisions nor it could show its ***contribution to profitability***. No traces of it were found in literature. HR managers have long been waiting for a method that would evaluate the performance of HR function and prove its role in organizational performance and thereby profitability. The answer to this is HRA. HRA do not directly impact the profitability of the organization, but an indirect relation can be shown between the two. With the knowledge that they are being valued, employees are motivated to contribute higher towards the organization. They become more productive and loyal thereby reducing attrition rate which in turn reduces recruitment, training and other related costs. However, there is dirt of researches which talks about the said fact.

Impact of HRA on Employee Motivation

As discussed lot of researches talk about the impact of HRA on investor's decision, few papers have shown impact on manager's decision. However, no research is available that would show ***the impact of the HRA implementation on the most important stakeholder of the company i.e. employee.*** Literature talks about the

change in mind set of employees either positive or negative, but it is more of opinion based.

This research is an attempt to bridge this gap in literature, especially from an

Indian IT context.

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RESEARCH METHODOLOGY

3.1 RESEARCH GOALS

Based on the analysis of the literature (Chapter 2), the major dark area of Human Resource Accounting was the lack of concrete knowledge about its utility to the organization. Thus, this research would attempt to address the issue of impact of HRA on HR decisions. It would explain the impact of HRA information of Managerial Decisions with special reference to Strategic Human Resource Management. Also, a study of employee motivation on account of HRA practices is undertaken.

Table 3.1: OBJECTIVES FROM RESEARCH GAP

No.	RESEARCH GAP	OBJECTIVES
1	Unawareness of HRA	To make an overall analysis of HRA practices in IT sector in India
2	No reference of use of HRA on Strategic Decisions	To find the impact of HRA on Strategic Decision Making
3	Lack of knowledge about the Utility of the HRA information	To find the impact of HRA on HR Decision Making
4	No reference of use of HRA on Profitability Decisions	To prove the role of HRA practices in profitability of the organisation
5	No literature was available on impact of HRA on employees	To find the impact of HRA on motivation level of employees

3.1.1 OBJECTIVES OF RESEARCH

Primary Objectives:

1. To make an overall analysis of HRA practices in IT Sector in India
2. To find the impact of HRA in Strategic decision making
3. To find the link between HRA and HR practices
4. To find the impact of HRA on Motivation level of employees
5. To prove the role of HRA practices in profitability of the organization

Secondary Objective:

To suggest HRA models to other IT companies which have not yet implemented HRA

3.1.2 HYPOTHESES OF RESEARCH

H_1: HRA positively influences decision making with respect to Human Resource Planning

H_2: HRA positively influences decision making with respect to Performance Management System

H_3: HRA positively influences decision making with respect to Training and Development

H_4: HRA positively influences decision making with respect to Compensation Management

H_5: HRA positively impacts the decisions related to Strategic HRM

H_6: HRA positively influences Profitability of the Organisation

H_7: Human Resource Accounting positively influences Motivation Level of Employees

Research Variables

This research strives to reach its objectives and understand impact of HRA application on following variables:

a)   Dependent Variables

1. Human Resource Planning
2. Performance Management
3. Compensation Management
4. Training and Development
5. Employee Motivation

b)   Independent Variable

Human Resource Accounting practices implemented in IT companies

Figure 3.1: Research Conceptual Framework
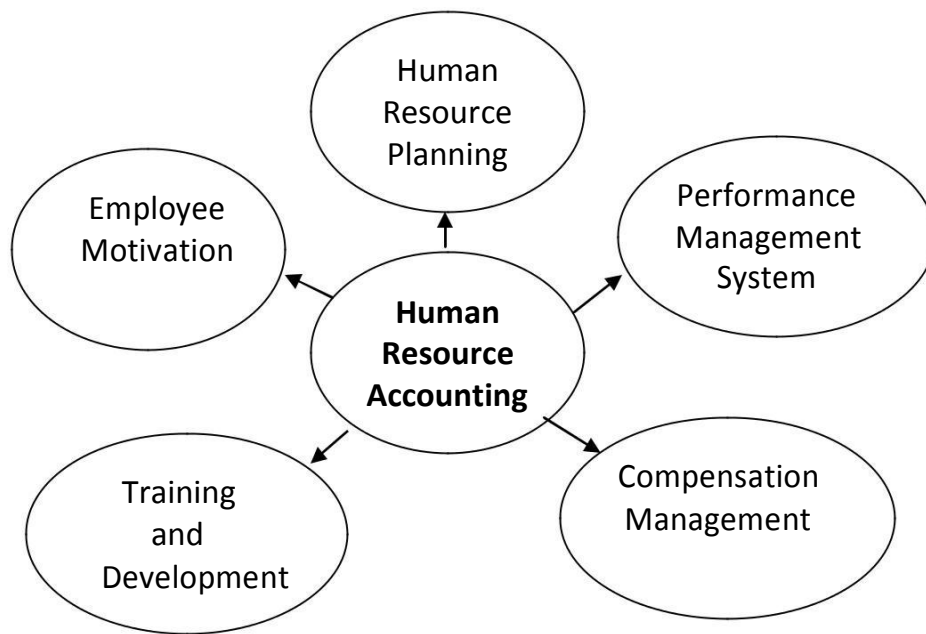
Source: Articulated by the Researcher

3.2 THE RESEARCH ONION

Saunders' research onion is a generic research procedure which helps the analyst, depict issues underpinning the selection of data collection and research methods. Saunders made an important contribution in terms of his research onion. According to his research onion, there are six stages in the onion- namely philosophies, approaches, strategies, choices, time horizons, techniques and procedures.

The essence of the research onion approach is to peel away the various layers of the onions to arrive at the core. In order to reach the core, you are required to follow a step by step method.

The research methodology followed is based on the concept of "research onion".

Figure 3.2: Research Onion
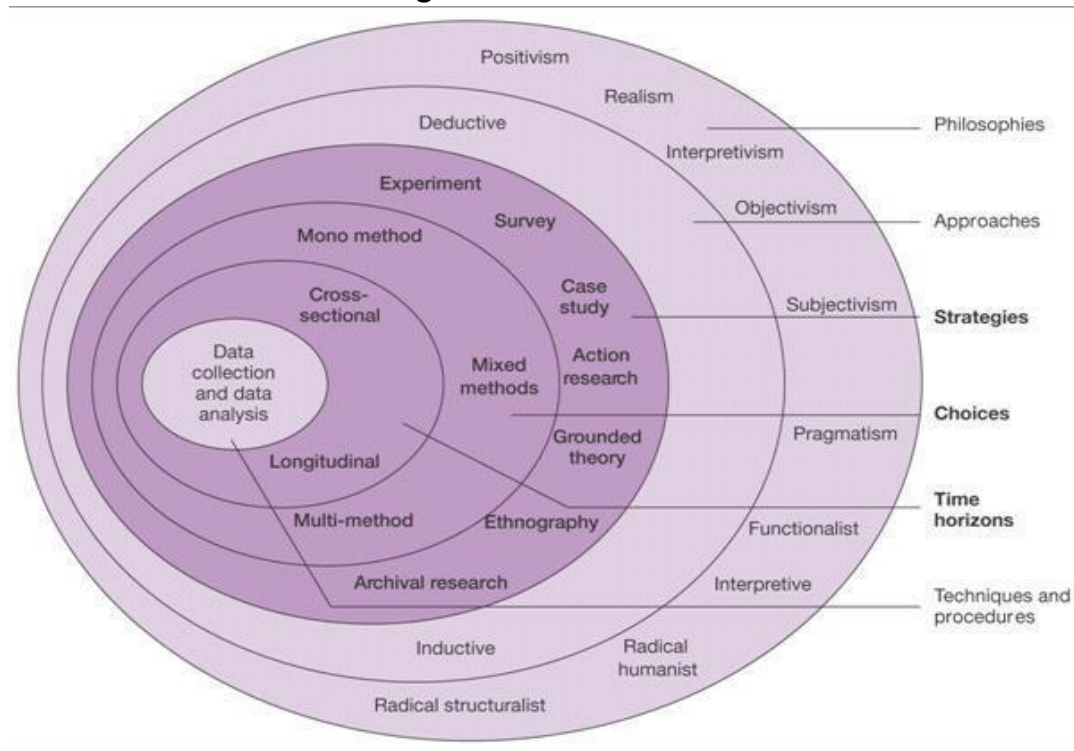
Source: Mark Saunders, Philip Lewis and Adrian Thornhill 2006

3.2.1 RESEARCH DESIGN

The research has multiple objectives with varied expected outcomes. The first objective tries to analyze IT industry in India to find which companies practice HRA. Second, third and fifth objective attempts to study impact of Human Resource Accounting on organizational decision making, tactical decision making and profits respectively. Fourth objective tries to find impact of HRA information on motivation level of employees. The research design was thus accordingly made to complement the objectives.

3.2.2 RESEARCH PHILOSOPHY

Researcher's values have an important impact on the research one decides to pursue and the way in which it is pursued. Research philosophy adopted contains important assumptions about the way in which one views the world. These assumptions will underpin the research strategy and the methods choosen as part of that strategy. There are four types of philosophies viz. Positivism, Realism, Interpretivism and Pragmatism.

Social world of business and management is far too complex to lend itself to theorising by definite 'laws' as in positivism. Business situations are complex and unique. They are a function of a particular set of circumstances and individuals coming together at a

specific time. Researcher attempts to study the business world form their perspective. Thus, it can be said that **Interpretivism Research Philosophy** is applicable in this Research.

Interpretivism Research Philosophy emphasizes conducting research among people rather than objects. The legacy of this string of interpretivism comes from two intellectual traditions: phenomenology and symbolic interactionism. Phenomenology refers to the way in which humans make sense of the world around us. In symbolic interaction researcher is in a continual process of interpreting the social world in that he interprets the actions of others with whom he interacts and this interpretation leads to adjustment of his own meanings and actions.

3.2.3 RESEARCH APPROACH

Though Human Resource Accounting is not a new concept in India but its awareness is very low. Lot of are debates are happening for the acceptance of the concept. Also, its challenges of implementation and benefits gained out of it are unable to strike a balance. Additionally, lack of literature on the topic lead to work inductively by generating data amid analyzing and reflecting upon what theoretical themes the data are suggesting.

This research follows Inductive Approach. After understanding the concept of Human Resource Accounting, the inductive thinking exercise started with understanding the views of experts about the concept of Human Resource Accounting, searching theoretical literature in support or contrasting views, which involves appreciating and designing themes, getting national and international insights of HRA implementation, until theoretical sufficiency has been achieved, which led to theoretical generalizations.

Initially, lot of experts from Finance and HR field have been interviewed, researcher was interested in their views on HRA. When these interview data was analyzed, it was clear that HRA concept had lot of challenges, and one of the major reasons for its non-implementation was unavailability of enough information about its utility to managers. There is a relationship between HRA and HR decisions.

Research using an inductive approach is likely to be particularly concerned with the context in which such events were taking place. Therefore, the study of a small sample of subjects might be more appropriate (Saunders 2009, p.126).

3.2.4 RESEARCH STRATEGY

Survey research strategy was used to test the hypothesis. A survey was carried out with HR managers in selected IT companies to study the impact of HRA information on decisions of HR managers. The decisions related to specific HR functions such as human resource planning, training and development, performance appraisal and compensation management both at strategic and tactical level were studied.

Second survey was conducted with IT employees of the same companies to understand the impact of HRA implementation on motivation level of employees.

3.2.5 RESEARCH CHOICES

Mono Method – Single data collection technique i.e. Questionnaire was used and corresponding analysis procedure is used to answer research question.

3.2.6 DATA COLLECTION TOOLS AND TECHNIQUES:

The tools and techniques used for collecting data are observation, interview and questionnaire.

i) SOURCES OF DATA

For the study of the Human Resource Valuation practices used in the IT companies in India (Objective 1), the research has relied on the secondary source of data in the form of empirical articles explaining various aspects of Human resource accounting and Annual Reports of top 20 IT companies. To study the impact of HRA on decision making of HR Professionals, primary source of data in the form of survey was used. Further to study the impact of HRA on motivation level of employees, survey was undertaken with IT professional to obtain primary data.

ii) DATA COLLECTION INSTRUMENTS

For the first objective of the study, the information was gathered from the Annual Reports of the Organisations and various empirical articles about the HRA Models. Owing to the quantitative nature of the data & data collecting instruments, they are reliable and valid.

In case of the second objective, a questionnaire was emailed across to HR professionals. The questionnaire employed was based on an earlier instrument developed by Sen D.K., Sugan C.J., Sanwar L.J. and Saha R.K. (2008) to explore the impact of HRA on HR functions. The questionnaire was modified for this research and included questions on the importance and relevancy of the information.

For the last objective, an opininnior was developed to catch the views of IT professionals on HRA information.

3.2.7 SAMPLING DESIGN
i)   **Objective 1**

As mentioned above, descriptive research typology has been used for studying the Human Resource Accounting (HRA) practices used in Indian IT Companies. Hence, the size of the universe included only companies which are currently using HRA as additional information for their Investors in their Annual Reports. The unit of study here in this case is the IT Companies. The criteria for the selection of sample were the following:

1. Adoption and/or disclosure of HRA information in Annual Statements.
2. One of the top 20 players in IT sector as per NASSCOM list.

Out of this universe size, four IT Companies were selected for the sample because these satisfied the criteria. Since the samples were chosen based on the researcher's above mentioned criteria, hence, Purposive sampling or Judgmental Sampling (Non-Probability Sampling) has been used.

ii)   **Objective 2**

Sample Universe: For the perception study of HR Professionals, the size of the Universe includes all the HR managers of IT Organisations of India which have or had adopted Human Resource Valuation practices. Examples could be HRA disclosure in their Annual reports or other HR metrics.

Sample Unit: The unit of study is the HR Professionals.

Sampling technique: The Sampling technique used here is Snowball Sampling. "The method is well suited for a number of research purposes and is particularly applicable

when the focus of study is on a sensitive issue, possibly concerning a relatively private matter, and thus requires the knowledge of insiders to locate people for study". (Biernack and Waldorf, 1981, p.141). The topic of research is suffices the above mentioned criterion.

HR mangers were discovered through the various contacts viz. family, friends, students, college placement cell, ex-students and linked-in. Then those managers were asked to refer others who possess similar characteristics and who in turn identify others. This is based on concept description by Thompson (2002, p.183 cited in Handcock M.S and Gile K.J., 2011, pg.3) in his book 'Sampling' which says "The term 'snowball sampling' has been applied to two types of procedures related to network sampling. In one type ..., a few identified members of a rare population are asked to identify other members of the population, those so identified are asked to identify others, and so, for the purpose of obtaining a non-probability sample or for constructing a frame from which to sample."

From November 2013 to April 2014, the questionnaires were mailed to 90 HR Professionals representing 4 different IT Companies of India. These 4 IT Companies are the leading IT Companies in India as per NASSCOM raking. Of the 90 questionnaires were mailed, 10 responses were received, a response rate of 11%. Moreover, understanding the time constraints and internet security problems of HR managers, the hard copy of questionnaires were administered to them. Out of 85 questionnaires given, only 17 questionnaires were received filled. Researcher met 18 managers personally to get the questionnaires filled. These 45 responses of the HR Professionals, thus, formed the sample size of the study.

iii)   Objective 4

Sample Universe: For the perception study of HR Professionals, the size of the Universe includes all the IT employees of IT Organisations of India which have or had adopted Human Resource Valuation practices. Employees chosen for study were strictly Management Graduates or Engineers with at least 5 years of experience. **Sample Unit:** IT employees

Sampling technique: The Sampling technique used here is Convenience Sampling.

3.3 SAMPLE SIZE DETERMINATION

According to Israel G.D. (1992, pg.1) three criteria usually will need to be specified to determine the appropriate sample size: the level of precision, the level of confidence or risk, and the degree of variability in the attributes being measured (Miaoulis and Michener, 1976). Level of precision sis also called sampling error.

Sample Size was determined using the proportion method (since most variables were measured using nominal scale with two response options).

Formula $n = \dfrac{Z^2 (p \times q)}{e^2}$

where, n = sample size

pxq= variability of data set

p = proportion of respondents choosing category 1 (0.5)

q = proportion of respondents choosing category 2 (0.5)

e = tolerable error (12% in this case)

z = standard score associated with chosen level of confidence (90% in this case)

(90% = 1.63)

Error is decided on the basis of precision and sample size feasibility.

p and q is decided on the basis of worst case scenario.

Therefore, $n = \dfrac{1.63^2 \times (0.5 \times 0.5)}{0.12^2} = 46$

Hence, 46 questionnaires were administered from the respondents out of which 1 was invalid. Hence, the sample size decided was 45.

Motivation Questionnaire: 47 questionnaires were administered with IT employees.

3.4 MEASUREMENT SCALES
i)   Scenario Scale
Scenarios consist of concrete business situations and behavioral options. According to Konig et.al (2007, p-215)scenarios are less affected by the reference group effect because people do not have to refer to the standards of their reference groups to give their behavioral preferences in concrete social situations (Peng et al. 1997).Scenarios were created that consisted of business situations and behavioral options. The business

situations describe decision making situations the managers encounter in their businesses. Each business situation represents one of the five functional orientations. For example, the situation whom would you select for job based on two scenarios. The behavioral options describe behaviors managers may show to take the decision. The first option represents a low score on the HRA information, whereas the second option represents a high score.

The scenario from which the examples are taken is presented in the Appendix. To complete the scales, owners have to make themselves aware of how they generally behave in their businesses and how they would behave if given situations are encountered. Going through the scenarios, they have to make mental simulations of their behaviors in the business situations. For each business situation, they have to decide which of the two behavioral options applies more to them. They can indicate their decision by ticking a point on the respective five- point scale.

ii)   Likert Scale

Likert scale is developed by Rensis Likert. With the Likert scale, the respondents indicate their attitudes by saying how strongly they agree or disagree with carefully worded statements that range from very positive to very negative towards the attitudinal object. Respondents generally choose from five alternatives (say strongly agree, agree, neither agree nor disagree, disagree, strongly disagree). To measure the attitude, the researcher has assigned weights/ scores to the responses. In this research the scores 5 to 1 are assigned to the responses. Strong agreement of the respondent indicates the most favourable attitudes on the statement, and the score 5 is assigned to it. On the other hand, strong disagreement of the respondent indicates the most unfavourable attitude on the statement, and the score 1 is assigned to it. The very purpose of Likert's Scale is to understand and discriminate among those with positive and negative attitudes. The data gained is in the form of interval scale.

iii)   Interval Scale

In Interval Scale the numbers are used to rank attributes such that numerically equal distances on the scale represent equal distance in the characteristic being measured. An interval scale contains all the information of an ordinal scale, but it also one allows to

compare the difference between attributes. In this research, **Interval Scale in Semantic Format** is used. The five points scale from 1 to 5 (that is, 1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree)

iv) Comparative Scales

This scale is used for comparing one option with another. Therefore, in many situations, comparative scaling presents 'the ideal situation' as a reference for comparison with actual situation. In this research, comparative scale was used to understand which kind of information is preferred by the managers i.e. information without HRA values or information with HRA values. Also, this scale was used to find whom would HR managers prefer for job and training among Mr. Keshav Shahane and Mr. Bhushan Patil under two circumstances i.e. availability and non-availability of HRA information.

3.5 DATA ANALYSIS: STATISTICAL TESTS USED

i. Binomial Test

Sign Binomial is non-parametric test used to study whether proportion of respondents agreeing or disagreeing is different or equal to 50%. An equilibrium situation indicates agree-disagree proportion as 50-50. Proportion of respondents agreeing if >50% indicates more agreeableness. In the current study, Binomial test was used to ascertain if the proportion of respondents agreeing to statements related to HRA influence on HR decisions is >50%.

ii. Friedman Chi Square Test

The **Friedman test** is a non-parametric statistical test developed by the U.S. economist Milton Friedman. It is used for for treatment differences in a randomized complete block design. Each block of the design might be a subject or a homogeneous group of subjects. If blocks are groups of subjects, the number of subjects in each block must equal the number of treatments. Treatments are randomly assigned to subjects within each block. If there is one subject per block, then the subjects are repeatedly measured once under each treatment. The order of treatments is randomized for each subject

iii.   Logistic Regression

Logistic regression is multiple regression predictive analytical technique with an outcome variable that is a categorical variable and predictor variables that are continuous or categorical. In simple words, one can predict which of two categories a person is likely to belong to given certain other information.

Predictive analysis is used to predict the value of dependent variable (continuous) from a set of independent variables. However there are situations where the Dependent variable is not continuous but categorical.

In the current research, the dependent variable was a categorical variable with two binary options i.e. decisions by majority and decisions by minority.

iv.   Wald Test

A Wald test is used to test the statistical significance of each coefficient (β in the model.

A Wald test calculates a *Z* statistic, which is:

$$z = \frac{\hat{B}}{SE}$$

This z value is then squared, yielding a Wald statistic with a chi-square distribution. However, several authors have identified problems with the use of the Wald statistic. Menard (1995) warns that for large coefficients, standard error is inflated, lowering the Wald statistic (chi-square) value. Agresti (1996) states that the likelihood-ratio test is more reliable for small sample sizes than the Wald test.

v.   Likelihood-Ratio Test

The likelihood-ratio test uses the ratio of the maximized value of the likelihood function for the full model (L_1) over the maximized value of the likelihood function for the simpler model (L_0). The likelihood-ratio test statistic equals:

$$-2\log(\frac{L_0}{L_1}) = -2[\log(L_0) - \log(L_1)] = -2(L_0 - L_1)$$

This log transformation of the likelihood functions yields a chi-squared statistic. This is the recommended test statistic to use when building a model through backward stepwise elimination.

vi.   Omnibus test

It tests whether the explained variance in a set of data is significantly greater than the unexplained variance, overall. The test, among the other parts of the logistic regression procedure, is a likelihood-ratio test based on the maximum likelihood method.

vii. Multinominal Regression Analysis

Multinomial Logistic Regression is used when there are multiple factors to be tested. It is used to predict the probabilities of the different possible outcomes of a categorically distributed dependent variable, given a set of independent variables (which may be real-valued, binary-valued, categorical-valued, etc.).

3.6   VALIDITY OF THE QUESTIONNAIRES

Validity is defined as the extent to which the instrument measures what it purports to measure.

Content validity pertains to the degree to which the instrument fully assesses or measures the construct of interest. The development of a content valid instrument is typically achieved by a rational analysis of the instrument by raters (ideally 3 to 5) familiar with the construct of interest. Specifically, raters will review all of the items for readability, clarity and comprehensiveness and come to some level of agreement as to which items should be included in the final instrument (Miller). The questionnaire was checked for its content validity by 12 experts out of which 50% were doctorates, 3 Chartered Accountants, other were experts with industry and academics with more than 10 years of experience.

Face validity is a component of content validity and is established when an individual reviewing the instrument concludes that it measures the characteristic or trait of interest. It means, it looks as if it is indeed measuring what it is designed to measure. The above mentioned raters have checked the questionnaire for its face validity as well as linguistic validity.

Linguistic Validity is to check whether the wording of the questionnaire is understood in the same way by everyone who completes it.

3.7   CODING PATTERN FOR DATA ANALYSIS

1. HR Managers were asked to choose one section out of the given two. As discussed, Section II is the section with HRA information and hence was rated higher.

Preferring the Section	
Section I	1
Section II	2

2. For the questions where HR managers were asked to rate the importance of HRA information on five point likert scales. Data was coded in a way that 5 points to Most Important while 1 point to Unimportant.

Importance of Information	
Most Important	5
Important	4
Neutral	3
Less Important	2
Unimportant	1

3. For the questions where HR managers were asked to rate the relevancy of HRA information on five point likert scales. Data was coded in a way that 5 points to Most Relevant while 1 point to Irrelevant.

Relevance of Information	
Most Relevant	5
Relevant	4
Neutral	3
Less Relevant	2
Irrelevant	1

4. Likert scale was again used to understand the level of agreement of HR managers in Questionnaire 1 and employees in Questionnaire 2 about the utility of HRA information. The scale was coded as 5 being strongly agree and 1 being strongly disagree.

Likert Scale	
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

5. Two information sets were given to HR managers, one with and other without HRA information. HR managers were asked to pick one out of two candidates. Hence, following scale was used.

Selecting a Candidate	
Mr. Keshav Shahane	1
Mr. Bhushan Patil	2

6. Two questions pertaining to attrition control were asked. In these questions, managers had to select one proposal to be implemented for employee turnover control. The five proposals were serially coded.

Turnover Control Proposals	
Proposal I	1
Proposal II	2
Proposal III	3
Proposal IV	4
Proposal V	5

7. HR mangers were asked to select one employee for promotion, our of the given five. The 5 employees were serially coded from 1 to 5.

Selecting candidate for Promotion	
Manoj Desai	1
Nitin Sinha	2
Aditya Desai	3
Vishal Tembre	4
Tushar Patil	5

8. Respondents were asked their years of experience on job. Employees with more experience were rated higher.

Years of Experience	
0-3 years	1
3-6 years	2
6-9 years	3
9 and more years	4

9. The respondents were asked if they knew the concept of Human Resource

    Accounting. They had to answer on dichotomous scale where 'Yes' was coded 2

    and 'No' as 1.

Awareness of HRA concept	
Yes	2
No	1

3.8   DESIGNING the HR MANAGER'S QUESTIONNAIRE
QUESTIONNAIRE 1: TO FIND THE IMPACT OF HRA INFORMATION ON HR DECISIONS

The entire questionnaire is scenario based.

Scenarios were created that consisted of business situations encountered and behavioral options. The business situations describe decision making situations the managers encounter in their businesses. Each business situation represents one of the five functional orientations.

For example, the situation "whom would you select for job" based on two scenarios. The behavioral options describe behaviors managers may show to take the decision. The first option represents a low score on the HRA information, whereas the second option represents a high score.

The scenario from which the examples are taken is presented in the Appendix. To complete the scales, managers have to make themselves aware of how they generally behave in their businesses and how they would behave if given situations are encountered. Going through the scenarios, they have to make mental simulations of their behaviors in the business situations. For each business situation, they have to decide which of the two behavioral options applies more to them. They can indicate their decision by ticking a point on the respective five- point scale.

Cross-cultural scholars have recently suggested that culture and cultural orientations should be measured using scales based on scenarios rather than using scales based on

Likert items (Heine et al. 2001, 2002; Kitayama 2002; Peng et al. 1997). Likert items and scenarios differ in the measurement of culture and cultural orientations (Peng et al. 1997). Likert items consist of general abstract statements, such as I care for my family members, and standardized scale responses, such as strongly agree or strongly disagree. Hence, Likert items measure culture and cultural orientations via people's self-evaluations on general abstract statements. In contrast, scenarios consist of concrete social situations, such as your poorly qualified nephew asks you to employ him in your business, and behavioral options, such as you employ your poorly qualified nephew or you don't employ your poorly qualified nephew. Hence, scenarios measure culture and cultural orientations via people's behavioral preferences in concrete social situations (Konig et.al, 2007)

QUESTIONNAIRE FORMAT

The questionnaire was divided in parts (scenario), where each part talks about a separate function of HR department or different activities under same function. In each part, information was provided in two sections. Section I was the Traditional Information section and Section II was section with HRA information in addition to traditional information. Certain questions were asked to the respondents based on the information given in these sections and other questions were opinion based to understand the behavioural patterns of the managers.

This form of making a questionnaire was chosen as respondents were not aware of the concept of HRA. They did not know how the HRA information is shown. In the form of these Sections, an attempt was made to show them the kind of information they currently get for various decisions is Section I. Section I is the way in which traditionally information was and is provided (i.e. without HRA). Practical books of HR such as HRM by Stone R., HRM –Text and Cases by Kanka S.S. etc. were used to make this section. It is made by the researcher based on the information secured from the mangers during inductive research and from management books on HR and strategy. Whereas, Section II shows kind of information they will get when HRA is implemented in their organization. This information is gathered from various research paper (discussed further in this chapter), company's documents where HRA is implemented, List of output of HRA Information (discussed above). An opportunity of direct comparison between

HRA and Non-HRA information is made available to respondents.

Colour scheme and smilys are used in the questionnaire to avoid boredom and to highlight important lines. Section I and Section II are highlighted in red colour to easily differentiate between two sections. Main information in those sections is highlighted in green colour.

HRA OUTPUT INFORMATION:

Agarwal R.S. in research paper titled Disclosure of Human Resource Information by Central Public Enterprises (a case study) has given the output of HRA. Disclosure patterns of human resource accounting information were studied

1. Disclosure of employee statistics:
   a. Employee Classification
   b. Age-wise Distribution
   c. Geographical Distribution
   d. Information of Employees on weaker section
   e. Segment-wise distribution

2. Disclosure of Employees Cost:
   a. Information of Salary with Sub-breaks
   b. Employee cost for Different Segment
   c. Manpower Development Cost
   d. Production Hours lost

3. Disclosure of Productivity/ Performance Ratios
   a. Production per employee
   b. Value-Added per Employee
   c. Employee Cost to Output Value
   d. Value-Added to Human Resources
   e. Turnover to Human Resources
   f. Value of Human Resources to Fixed Assets (at current cost)
   g. Value of Human Resources/Employee
   h. Human Resources to Total resources
   i. Capital Investment per Employee
   j. Average Age per Employee
   k. Turnover per Employee
   l. Utilisation Ratio
   m. Profit per Employee
   n. Output Value per employee
   o. Profit Before Tax to Human Resources

Part 1   IMPACT OF HRA ON HUMAN RESOURCE PLANNING

a) Framing Recruitment Budget

In this Section of the questionnaire, an attempt was made to find the impact of HRA information on Human Resource Planning decisions precisely related to Formulating a Recruitment Budget. 45 respondents (HR managers) were provided with the information required for framing recruitment budget in two Sections. Section I has traditional information required for making recruitment budget. They are provided with all the cost required for recruitment process and selection process. All the costs written in this table are not related to any organization. Costs are deliberately kept low for HR managers to understand and calculate easily.

Table 3.2: RECRUITMENT BUDGET
SECTION I

Sr. No	ACTIVITY	COST INCURRED
	RECRUITMENT COST	
1	Advertising Cost	50,000
2	Agency Fees	1,00,000
3	Personnel Dept. Cost	20,000
4	**SELECTION COST**	
5	Selection Board Expenses	50,000
6	Test Material Expenses	30,000
7	Expenses on Medical Exam.	50,000
	Other Expenses	1,00,000
		4,00,000

Section II was the section with HRA information which included traditional information as well as all the direct and indirect costs involved in recruitment and selection process. It was in the form of all the indirect costs involved in recruitment and selection process such as Cost of identifying a job vacancy, cost of locating a source of manpower, Cost incurred in contacting candidates, Cost of time spent in processing applications, cost of designing a test material, Cost of conducting test (invigilator's fees, infrastructure cost, electricity used, etc).

Table 3.3: RECRUITMENT BUDGET WITH HRA INFORMATION
SECTION II

Sr. No	ACTIVITY	Cost Incurred		Total
	RECRUITMENT COST	**Direct**	**Indirect**	
1	Cost of Identifying Job Vacancy		10,000	
2	Cost of Locating the source of manpower		5,000	
3	Advertising Cost	50,000		
4	Cost incurred in contacting candidates		10,000	
5	Agency Fees	1,00,000		
	SELECTION COST			
5	Cost of Application Blank	5,000		
6	Cost of time spent in processing applications		8,000	
7	Cost of Designing a Test Material		7,000	
8	Cost of Test Material	10,000		
9	Cost of conducting test (invigilator's fees, infrastructure cost, electricity used, etc)		10,000	
10	Selecting Board Members sitting fees	1,00,000		
11	T.A and Food and other expenses of Selection Board	50,000		
12	T.A. and D.A paid to the candidate	25,000		
13	Expenses on Medical Examination	20,000		
	TOTAL	3,50,000	50,000	**4,00,000**

Based on these two sections, five questions were asked to them related to their opinion about utility of HRA information framing recruitment budget.

Q.1) "Based on above mentioned information, which section gives you the clear picture of the money required for recruitment process?"

HR managers were asked which information section gives them the clear understanding of the money needed to complete the recruitment process. The question was on dichotomous scale with options Section I and Section II. The motive was to find if HRA information proves as unambiguous base for HR managers in making recruitment budget.

Q.2) "Which information section do you think will help you to prepare an appropriate budget?"

HR managers were asked which information section, out of the given two, are more reliable while preparing an appropriate budget for the recruitment process. The question was asked on dichotomous scale with options Section I and Section II.

Q.3) "Considering the cost cutting initiatives, which information do you think will help you to understand which cost can be saved?"

HR managers were asked which information section will help them to undertake cost cutting initiatives. They were asked to answer the question on dichotomous scale with options Section I and Section II. The motive was to find if HRA information is helpful to HR managers in finding the unwanted cost incurred during the process and to save the same.

Q.4) "How important was the Section II information in making recruitment budget?" HR managers were asked to rate the importance of Section II information in making recruitment budget. The rating was required on the Likert Scale. The motive was to understand the level of importance managers give to such kind of information.

Q.5) "Please indicate the level of relevancy of the Section II information supplied to you for making recruitment budget?"

HR managers were asked to rate the relevancy of Section II information in making recruitment budget on Likert Scale. The objective is to know from manager's perspective, as to what extent the information is pertinent in such decisions.

ii) Selecting a Candidate for Interview

In this Section of the questionnaire, an attempt was made to find the impact of HRA information on Human Resource Planning decisions precisely related to Selecting a Candidate for job. HR managers were provided with the resumes of two candidates' viz. Mr. Keshav Shahane and Mr. Bhushan Patil, in two Sections. Section I was the way in which currently the resume is given (i.e. without HRA). Section II was the resume with HRA information which additionally included expected contribution of employee and probability of leaving the organization

The resume format were taken from the research paper by Sen D.K., Sugan C.J., Sanwar L.J. and Saha R.K. (2008, Pg. 47) titled "Human Resource Accounting information: Its Impact on Internal Decision Making,".

The biodata's have been modified to suite Indian resume format, IT industry

requirement. Indian Names were chosen as candidates. Few points such as Father's Name, Date of Birth and Nationality were removed as they are not of prime consideration in Indian Scenario. Educational qualifications were changed from Commerce to Management as per the need of IT sector and the point of research paper publication was removed as it is not important for the sector. The modified resume is given below:

Table 3.3: RESUMES OF CANDIDATES WITH HRA INFORMATION

<p style="text-align:center">**SECTION II**</p>

Following are the Resume supplied to you a long with additional Human Resource Accounting Information of each candidate:

	Mr. KESHAV SHAHANE		**Mr. BUSHAN PATIL**
1	Experience: **6 years**	1	Experience:**4 years**
2	Academic Qualification:	2	Academic Qualification:
	a) MBA – **60%**		a) MBA – **80%**
	b) BBA – **66%**		b) BBA – **82%**
	c) HSC –**62%**		c) HSC – **81%**
3	Result of **written test** out of 10 points – **8 points**	3	Result of **written test** out of 10 points – **10 points**
4	**Interview** Score out of 10 points – **10 points**	4	**Interview** Score out of 10 points – **8 points**
5	Probability of **Staying** with Organisation– **60%**	5	Probability of **Staying** with Organisation–**90%**
6	Probability of **Leaving** Organisation – **40%**	6	Probability of **Leaving** Organisation – **10%**
7	**Expected Contribution** to the organisation: **50 Crore**	7	**Expected Contribution** to the organisation: **90 Crore**

Q.6) and Q.7) "Whom would you Select for your organisation?"

Based on those information sections, they were asked to select the candidate for job. They were asked to choose one of the two candidates based on both information sections separately. The motive was to find if the after giving HRA information, HR managers are able to take correct decisions.

Q.8) "Which information table do you think will help you to take better selection decision?"

HR managers were asked which information Section was more useful to them in selecting a candidate for job. They were asked to answer the question on dichotomous scale with options Section I and Section II. The motive was to find if HRA information helps HR managers in making selection decisions.

Q.9) "How important was the Section II information supplied to you in making selection decision?"

HR managers were asked to rate the importance of Section II information in selecting a candidate. The motive was to find if HRA information is helpful and significant in such decisions.

Q.10) "Please indicate the level of relevancy of the Section II information supplied to you for selection decision."

HR managers were asked to rate the relevancy of Section II information in selecting a candidate. The motive was to understand, to what extent managers find the HRA information pertinent in decisions related to selecting a candidate for job.

Q.11) "If the monetary contribution of an employee is given to you (in addition to traditional parameters), will it help you to decide the salary of that employee during the interview?"

Salary of an employee is decided based on the perceived value of that employee. This value is more of judgmental. If expected monetary contribution is known to managers, it can act as a base for deciding salaries of the employees. Hence, HR managers were asked to rate the utility of HRA information in deciding the salary.

Q.12) "Will you consider monetary contribution of an employee while allotting benefits and allowance to him/her?"

Benefits are provided to employees irrespective of their performance in the organization. While certain special benefits and allowances can be considered which vary as per the designation such as magazine allowance, dental insurance, etc. HR managers were asked to rate their opinion about can HRA value help HR managers while allotting benefits and allowance to their employees. The motive was to find if respondents really logically think while answering the questions.

Q.13) "Do you think HRA information can be used for Job Evaluation (for comparing various jobs to fix pay structure)?"

Job Evaluation is a systematic way of determining the value/worth of a job in relation to

other jobs in an organization for the purpose of establishing a rational pay structure. It includes a huge process from creating job evaluation committee, preparing job descriptions, selecting evaluation method, classifying jobs, installing programme to reviewing periodically. Comparison between jobs is based on range of criteria such as skill requirement, experience needed, job conditions, responsibilities shouldered, amount of stress caused, etc. Whereas, if HRA value is considered as a job evalution criterion, the process would be easier. The opinions of HR managers were required on the same thought.

iii)   Turnover Control Proposal

The HR managers were provided with four Employee Attrition Control Proposals in two Sections. In first section proposals were given with the information of percentage reduction in employee turnover and cost of proposal. Section II was the section with HRA information.

From the same research paper, a table of turnover control proposals is taken for other Human Resource Planning related decisions.

Table 3.4: ATTRITION CONTROL PROPOSALS

No	Proposal	Expected CostofProposal	ExpectedTurnover	Proportionate No.of turnover	Cost PerTurnover	TurnoverCost	AdditionalT&D	Total CostsInvolved
I	Increase number of employees to reduce workload	96,000	30	60% of 30 = 18	11,000	11,000 X 18 =1,98,000	20,000	**3,14,000**
II	Reduce Working Hours of Employees	1,13,000	30	50% of 30 = 15	11,000	=1,65,000	-	**2,78,000**
III	Increase salaries of all the employees	1,30,000	30	40% of 30 = 12	11,000	=1,32,000	-	**2,62,000** **(Lowest Investment)**
IV	Implement Engagement Techniques	1,45,000	30	30% of 30 = 9	11,000	= 99,000	-	**2,78,000**
V	If none of the proposals are selected	-	30	100% of 30 = 30	11,000	= 3,33,000	32,000	**3,33,000** **(Highest Investment)**

Q.14) and Q.15) "Based on the above information, which proposal will you choose?"

HR managers were asked to choose one proposal out of four in both cases. The motive was to find if after giving HRA information to HR managers, their decisions get concentrated towards one particular option. It means to understand if HRA increase the probability of HR managers taking right decision. Therefore, we can simple say, to find the impact of HR information on HR decisions related to turnover control.

Q.16) "Which information helped you for better decision making?"

HR managers were asked select one section from the two, as to which of those helped them for better decision making. The motive was to understand as to does HRA information assists them in attrition control decisions.

Q.17) "Do you think, providing Section II information enable you to save cost otherwise invested in incorrect decisions?"

Implementing Turnover Control Proposal requires a huge investment. Moreover, much information is also not available about how much attrition would be controlled on implementing a particular Proposal. Whereas, as mentioned in table, HRA provides all such information related to attrition control proposal. Hence, managers were asked if this information is useful in taking correct decisions related to attrition control. Managers were asked to select one out of two sections which enables them to save cost.

Q.18) ""How important was the Section II information in making turnover control decisions?"

HR managers were asked to rate the importance of Section II information in turnover control decisions. The motive is to understand the level of importance HR managers give to such information while taking decisions related to turnover control.

Q.19) "Please indicate the level of relevancy of the Section II information supplied to you for making turnover control decisions."

HR managers were asked to rate the relevancy of HRA information in making turnover control decision. The objective is to understand to what extent HRA information is pertinent in decisions related to attrition control.

Part 2   IMPACT OF HRA ON PERFORMANCE MANAGEMENT SYSTEM

Taking the inspiration from the information tables showing HRP and T&D information, a table for promotion related decision is framed. It gives the comparative investments, contribution, profit, probability of leaving the organization and cost of replacing an employee.

Since, no prior research was available on impact of Human Resource Accounting on Performance Appraisal System, the table made was with the hypothetical information. Many research papers explained about the Human Resource Cost Accounting and Human Resource Value Accounting, its calculations and utility.

HRCA (HR Cost Accounting) – Acquisition Cost, T & D Cost, Welfare Cost, etc

HRVA (HR Value Accounting) – Contribution to organization

Human Resource Cost Accounting is the sum total of cost incurred by organization on an individual which ranges from acquisition cost to separation costs. Human Resource Value Accounting is the contribution of an individual made to an organization. The difference between two costs gives the profit per individual which can be deciding factor for performance appraisal of employees.

So same were the base for portraying performance information to be supplied to HR managers for promotion decisions.

Table 3.5: PERFORMANCE RECORD OF EMPLOYEES

Sr. No	Name of Employee	**Money spent** by organization on employee	**Contribution** (in Rs.) of individual employee to organization	**Profit** from each employee	Cost of **replacing** each employee	Probability of **leaving** the organisation
1	Manoj Desai	1 lakh	4 lakh	3 lakh	2 lakh	40%
2	Nitin Sinha	1.5 lakh	5 lakh	3.5 lakh	3 lakh	50%
3	Aditya Desai	2 lakh	5 lakh	3 lakh	2 lakh	40%
4	Vishal Tembre	2 lakh	6.5 lakh	4.5 lakh	3 lakh	60%
5	Tushar Patil	2.5 lakh	7 lakh	4.5 lakh	2 lakh	40%

HR managers were provided with information need for selecting an employee for promotion and HRA information such as money spent by organization on the employee, contribution of individual employee, profit from each employee and probability of the employee leaving the organization.

Q.20) "Based on above information, whom would you select for next promotion?"

HR managers were asked to select an employee for promotion. Researcher wanted to see if majority of HR managers select same candidate for promotion. The objective was to understand if HRA information leads managers towards taking right decisions related to promotion.

Q.21) "Can above mention information help you in planning incentive system (performance based incentives) for individual employee?"

Main part of compensation that drives employee motivation to perform well in the job is the performance based incentive system of the organization. Employees feel happy when their work is recognized and rewarded fairly. Hence, managers were asked if HRA information can help in planning the incentive system for individual employee.

Q.22) "How important was the information supplied to you in making promotion decision?"

Managers were asked to rate the level of importance of HRA information in making promotion decision. This would show, to what extent is HRA information useful for decisions pertaining to promotion decision.

Q.23) "Please indicate the level of relevancy of the information supplied to you for promotion decision."

Opinion of HR managers was needed to understand if such HRA information has in relevancy in their decisions related to Performance Management System.

Q.24) "This information help you to some extent to decide the compensation of employee after his promotion decision"

A purely opinion based question was asked based on performance management system to see if HRA can help decisions in this HR function to another level. As discussed earlier, HRA value gives the monetary contribution of employee, which can frame a base for compensation elevation decisions during his/her promotion. Hence, they were asked if HRA information can help them to decide the compensation of the employee on account of his promotion.

Q.25) "If value of employee is the criteria for performance appraisal, it will help you compare employees of different designations and across different departments." Normally, performance system has multiple factors of evaluation. These factors vary as per the designation or job of the employee. It depends on KRA of employee which differ for each job profile or even from person to person. Hence, performance is compared only between employees of similar designations. But for situations like from nomination of employee of the year to selecting a manager for top management position, performance has to be compared across different designations, different departments or different professions altogether. Can a common platform of monetary value (HRA value) of employee be considered as a base for such comparisons?

Q.26) "Do you think use of numerical HRA value of an individual will help in performance decisions as compared to subjective evaluations conducted in Performance Management System?"

Many of the performance methods such as Confidential Reports, Essay Evaluation, Critical Incidents, etc are based on subjective evaluations. The output of these methods is a theoretical performance report, which is difficult to assess. Whereas, HRA gives the numerical interpretation of employee's performance. Hence, managers were asked if this HRA information is more useful in Performance Management System as compared to subjective evaluations.

Q.27) "Employees would be motivated to work well if the performance criteria are fair and transparent."

Many of the performance methods such as Graphic rating scale, MBO, Forced choice method, etc. have a single person, normally immediate boss of the employee, as a performance assessor. The methods are based on judgments of the senior authorities. Hence, possibility of biasness is high. Whereas, HRA gives the numerical interpretation of the employee's contribution and there are numerous people involved at various stages of the process, hence possibility of biasness is minimal. If HRA is accepted as a PMS method, the results would be fair and transparent. HR managers were asked if they would be motivated if such a process is used in PMS.

Q.28) "If HRA value of an individual is high, can management set high performance target for him?"

HRA value of a good performer is always high as his contribution towards organization is more. So, an opinion was needed as to can management set high performance target for employees who have high HRA value.

Q.29) "Will HRA information give you an idea about how effectively are your company resources used?"

HRA information here is the detailed information of all the activities performed in the organization, as seen in recruitment budget part of this questionnaire. One of the main jobs of managers is the effective utilization of organizational resources. If such details of all the activities are available, will it help HR managers to understand if resources are effectively used.

Q.30) "HRA value of an employee should be directly proportional to rank (job level) of an employee."

As an employee whose HRA value is high, is obviously a good performer. So linking performance to the promotion prospects, managers were asked if HRA value and rank of an employee should be equal. It means employee with high HRA value should be at a higher position in organizational hierarchy.

Q.31) "Availability of Performance data of each employee will allow me to predict the organizational performance."

Organizational performance is an aggregate of individual performance of all the employees. If HRA value of all the employees is known, it would be easier for managers to analyze the current performance of the organisation and thereby predict the future performance of the employee. Opinion of managers was needed on the same.

Q.32) "Performance Appraisal method are costly and time consuming, do you think employee with higher value should be appraised based on Human Resource Accounting method and other employees can be appraised based on simpler performance appraisal

methods?"

HRA is a sophisticated way to measure (in financial terms) the effectiveness of personnel management activities and the use of people in the organization. But implementation of HRA is a costly affair. Hence, an opinion of managers was needed if they feel PMS of higher authorities can be undertaken based on HRA value.

Part 3   IMPACT OF HRA ON TRAINING AND DEVELOPMENT DECISIONS

Flamholtz E.G., Searfoss G.D. and Coff R. (1988) in their research paper titled Developing Human Resource Accounting as a Human Resource Decision Support System explained about the full and marginal replacement cost of employees. The inclusions of replacement cost are thoroughly explained and calculations are given to reach to full cost. The transition matrix at all the service states is explained in detail. It helps to understand how to interpret the numbers in the table and what they signify, also, how they are calculated. But the same tables are not adopted in current questionnaire as they are bit complicated.

Two tables were prepared based on the information given in the paper to examine the impact of HRA information on decisions related to training programme.

Table 3.7: INFORMATION FOR TRAINING DECISIONS
SECTION I

You as an HR manager have to send a candidate for company sponsored Business Communication training program worth Rs. 20,000. Following data is available in addition to the traditional information given for training decisions.

	Mr. KESHAV SHAHANE		Mr. BUSHAN PATIL
1	Designation: Project Manager	1	Designation: Project Manager
2	Experience: **8 years**	2	Experience: **10 years**
3	Performance Points out of 10: **6.0**	3	Performance Points out of 10: **4.0**
4	Total investment made till date: **10 lakhs**	4	Total investment made till date: **15 lakhs**

SECTION II

For the same training investment decision, in addition to above information, Human Resource Accounting information of each candidate is given below:

	Mr. KESHAV SHAHANE		Mr. BUSHAN PATIL
1	Designation: Project Manager	1	Designation: Project Manager
2	Experience: **8 years**	2	Experience: **10 years**
3	Performance Points out of 10: **6.0**	3	Performance Points out of 10: **4.0**
4	Contribution to organization: **5 Crore**	4	Contribution to organization: **3 Crore**
5	Probability of leaving an organization: **30%**	5	Probability of leaving an organization: **50%**
6	Total investment made till date: **10 lakhs**	4	Total investment made till date: **15 lakhs**
7	ROI on training: **8 lakhs**	7	ROI on training: **5 lakhs**

Q.33) and Q.34) "Whom would you select for training?"

Two information sections are given to HR managers to select an employee for training program. Section I have traditional information but is devoid of HRA information, whereas Section II has both traditional and HRA information. Based on the two information tables, managers were asked to select one employee for training. The motive is to find if manager's decision change in presence of HRA information and do HRA information leads them to correct decision.

Q.35) "Which information section helped you for better training related decision?"

Managers were asked to choose one section out of the given two, to understand if traditional information or HRA information helps them in decisions related to training.

Q.36) "How important was the information supplied in Section II in making training investment decision?"

Managers were asked to rate the level of importance of HRA information in training investment decision. This would show, to what extent is HRA information useful for decisions pertaining to investment in training programs.

Q.37) "Please indicate the level of relevancy of the information supplied in Section II for training investment decision."

Managers were asked to rate the level of relevancy of HRA information in training investment decision.

Flamholtz, E.G., Sullen, ML., and Hua, W. (2003) in their research paper title Measuring the ROI of management development: An application of the stochastic rewards valuation model, have shown how HRA model can be implemented and used for training related decision.

A table showing value of participants and non-participants of management development program:

Table 3.6: PARTICIPANT's ROI ON TRAINING

1	Participant:	$ 80,931
2	Non-Participant:	$ 93,541
3	Increase	$ 12,610

The table has been modified to show the value of before and after attending a training program.

Table 3.9: IMPACT OF TRAINING ON EMPLOYEE VALUE

1	Value of employee **before** attending training program	$80,931
2	Value of employee **after** attending training program	$93,541
3	**Increase** in employee value after attending the training program	**$12,610**

Based on the table, questions related to training and development decisions are asked.

Also, importance and relevancy of information is gazed.

Q.38) "Adding this information to traditional training related information, help you to take a decision about the training program for employees?"

The above table shows the value of an employee before and after attending a training program. It also shows the increase in employee value post training. Such information can be of great help to managers. So they asked to rate their level of agreement about use of above information in training related decisions.

Q.39) "Does this information help to analyse Return on Investment of training program?"

The main analysis that a manager has to foresee is the ROI on the training program. The important question is "Is it worth investing in this training program?" Based on their perception of the ROI of training program, decisions are taken. Managers were asked in such monetary impact of the training programs is made available to them, will it help them to analyse ROI for further decisions.

Q.40) "If comparative ROI of all the training programs (like the one mentioned in table above) are given to you, will it help you choose between the various training programs available and take a correct and cost effective decision."

Many training programs are available for employee development. Managers have to ensure that they choose a right training program for their employees, as a single ineffective training incurs a huge loss. Hence, they were asked if comparative ROIs of all the training programs are made available to them, will it help them in choosing a right training program.

Table 3.7: TRANSITION MATRIX

Following are the promotions record of the employees. First table is promotion record of non-participant employees of training programs and second table is promotion record of employees who have participated.

Transition Matrix for Non-Participants in Management Development Program

Year T	Year T + 1			
	Program Manager	*Project Director*	*Engineer*	*Exit*
Program Manager	60%	0	0	40%
Project Director	35%	35%	0	30%
Engineer	0	25%	50%	25%
Exit	0	0	0	100%

* Table shows that a Project Director has 35% chances of becoming a Program Manager and 35% chances of remaining a Program Director, and 30% chances of leaving an organisation.

Transition Matrix for Participants in Management Development Program

Year T	Year T + 1			
	Program Manager	*Project Director*	*Engineer*	*Exit*
Program Manager	65% (5% increase)	0	0	35% (5% decrease)
Project Director	45% (10% increase)	35%	0	20% (10% decrease)
Engineer	0	40% (15% increase)	40%	20% (5% decrease)
Exit	0	0	0	100%

* Table shows that, after attending the Management Development Program, the chances of Project Director of becoming a Program Manager has increased by 10% and his chances of leaving an organisation has decreased by 10%

Q.41) "This information give a clear picture of the impact of training programs on employees."

The above mentioned training matrix shows the Transition Matrix (Promotion chart) of the employees who have attended the Training program and of the employees who have not attended the training program. This matrix was shown to the HR managers and they were asked if such matrix can help them gaze the impact of training program on employees.

Q.42) "If comparative promotion charts of all the training programs are given, it will help you choose between the various training programs available and take a correct and cost effective decision."

If training matrix of promotions on account of attending a training program is made, and if such matrix of all the training programs are made separately; it will be easy for HR managers to compare the impact of various trainings. If such comparisons are possible, HR managers will be able to choose apt training programs for their employees. So, they were asked if such information can help them in correct and cost effective decisions.

Q.43) "Above Promotion charts if shown to employee, it will motivate them to attend the training program."

Normally, employees are not interested in attending a training program as they have a perception that it is mandatory for management to do such programs. Moreover, they are not aware about the impact of the training programs. Also, they feel that attending these programs will delay their current work. But, showing these promotion charts will give them idea about the importance of training program in their future jobs. If such matrix is shown to them, employees will not only be interested to attend the training program but also try to implement or use the learnings in their jobs.

Q.44) "All the above information tables will help you save cost by investing in correct training program and correct person."

Most of the training programs are very costly. The two important decisions that HR managers have to take is, one which training should be provided to employees and second who will attend the training program. They have to choose a training program that have positive impact on employee's performance and choose an employee who would be able to absorb the training and implement it effectively. Mistake in any one decision, may incur huge loss. Hence, HR managers were asked if such training matrix can help them save cost by investing in correct training program and correct person.

Part 4   IMPACT OF HRA OF COMPENSATION DECISIONS

Based on the HRA output information, questions were asked to gaze the impact of HRA on Compensation related decisions. However, a separate section in the questionnaire for Compensation Management is not framed. The questions are distributed in 3 parts of questionnaires viz. HRP, PMS and T&D.

For instance, compensation package of an employee is decided during interview, so the question was asked about the use of HRA information in such decision. It was asked in HRP part of questionnaire. Similarly, increase in compensation is decided during the process of performance review. Hence, the question was asked in PMS part of questionnaire. Also, incentives are always linked to performance, so the related questions were asked in the same part.

Two questions related to compensation, one of policy and second on individual salary was asked in motivation questionnaire.

Part 5   STRATEGIC DECISION MAKING WITH HRA INFORMATION

The title of the research indicates to find the impact of HRA on strategic decisions. Thus, each part of questionnaire has questions related to strategic decision making. In HRP part, questions related to framing recruitment budget are asked. It also has a decision regarding selecting a strategy to control employee attrition in the organization.

In T&D part, question related to framing training budget is asked. Also, selecting one training program from amongst the various programs available is the next big decision. In PMS part, questions on deciding the best performance appraisal method for different level of employees is asked. Also, using the HRA information as performance appraisal method can be suggested or not is asked.

Also, in questionnaire of motivation, employees were asked their opinion about can HRA be considered as a part of compensation philosophy.

Part 6   HRA AND PROFITABILITY OF ORGANISATION

Currently, HR cannot portray the direct impact of HR initiatives on profitability of the organization. To study the impact of HRA on organization's profit, questions related to various cost cutting and costs saving initiatives are asked in the above mentioned questionnaire. They are asked about if HRA information help them take correct and unbiased decisions. Wrong decisions lead to losses, so correct decisions will definitely

contribute to profits.

Moreover, if by implemented HRA, employees are motivated to work better and contribute more to the organization, it will lead to higher productivity which in turn lead to profits.

3.9 DESIGNING QUESTIONNAIRE FOR EMPLOYEES
QUESTIONNAIRE 2: TO FIND THE IMPACT OF HRA ON MOTIVATION LEVEL OF EMPLOYEES

OPINIONNAIRE:

An opinionnaire (opinion based questionnaire) is designed to understand the motivation level of employees, if HRA is implemented in the organization and their HRA value is known to them. An attempt was made to seek the opinion of the employees.

The questionnaire used two main theories of motivation to frame a base for designing questions. The theories are Maslow's Theory of Motivation and Herzberg Theory of motivation which are discussed in detail in Introduction Chapter.

Maslow's Theory of Motivation:

1. Physiological needs
2. Safety needs
3. Needs for love, affection and belongingness
4. Needs for esteem
5. Needs for self-actualization

Herzberg Theory of Motivation:

The following are the motivation factors:

1. Achievement
2. Recognition
3. Work itself
4. Responsibility
5. Advancement
6. Possibility of Growth

The following are the hygiene factors:

1. Company Policy or Administration
2. Personal or Working Relationships
3. Working conditions
4. Salary
5. Personal Life
6. Feeling a Job Security

Questions pertaining to all the Motivation Factors are asked to gaze the impact of human resource accounting practices on motivation level of employees. Additionally, three more questions based on compensation and team work.

Q.1) Were you aware that your organisation is undertaking Human Resource Accounting?

This question was asked to employees to check the awareness about the concept of HRA in the organization. The question was to be answered on the dichotomous scale viz. Yes or No.

Q.2) I feel recognized by the organization and management when they value my services.

As discussed by Herzberg, "Recognition" is a motivator for a person. When an organisation is putting efforts to value the services of their employee, what is the feeling of employee about the same. The question was to understand if employees have a feeling of recognition if company adopts HRA practice.

Q.3) I will take more interest in my work if I understand that it is being fairly valued. Researches prove that motivated employees take more interest in their work. And employees are motivated to work when they know that their efforts are valued on fair basis i.e free form biases. So, they were asked to rate their level of agreement on whether they would take more interest in work if valuation is unbiased.

Q.4) Awareness of investments made by organisation on me makes me responsible to contribute services worth higher than the investments.

As per Herzberg's theory, "Responsibility" is a motivating factor. An employee takes responsibility when he/she is motivated to work for organization. Organisation invests heavily on the employees in terms of trainings, development programs, loyalty programs, various facilities, etc. But rarely employees are aware about such investments. If these investments made known to them, it becomes a moral responsibility of an employee to contribute services which are worth more than the amount invested by the organization on him/her.

Q.5) Knowing about my money value in the organization will give me an idea about increase in the performance required for my career advancement.

"Growth or Career Advancement Opportunities" is another motivator which motivates an employee to work with the organization and produce good results. Knowing the self-worth and also knowledge about how to enhance it more, makes an employee get motivated.

Q.6) Knowing my value in the organization will increase my willingness to develop my skills to reach at higher level of valuation

An employee's willingness for self-development arises from his satisfaction from job. Knowledge about self worth in the organization, motivates employees to increase their worth by enhancing their skills to reach higher postion. Opinion of employees was required on the same.

Q.7) I would be happy if Human Resource Accounting value is considered as one of the parameters for defining company's compensation philosophy.

Compensation System and Performance management System are the two processes with which an employee is normally never happy. The reason being, both have an element of biasness. Introducing a parameter of HRA in the system, removes the element of biasness and can make employee happy.

Q.8) If my Human Resource Accounting value is known to me, it would remove the dilemma as to am I getting right salary for the services rendered.

Looking at the current scenario of employment in all the sectors, attrition of the employees is the prime concern of the companies. Mainly IT and Retail are facing the major challenge. Prior studies reveal that, a major cause of attrition among fresh recruits is their monetary requirements. They feel that they are paid low for their job. If they get the knowledge of their actual contribution in the organsation, they can easily compare between the money raised by them in company and money gained by them from the company. Thus, this question was asked to understand if giving such calculation will remove their salary dilemma.

Q.9) Knowing the fact that every individual is evaluated and paid based on common, fair and transparent criteria, will improve interpersonal relationships for better teamwork.

In IT industry, rarely are the cases were individual work of employee is useful. Every IT company works on projects which are handled by teams. Hence, it is important for an IT employee to work in teams. A fair evaluation of their performance and compensating them accordingly, individually of in groups, will create a healthy competition among the employees which will ensure better team work.

Q.10) Understanding my monetary contribution towards organisation gives me a feeling of self- contented.

Self-Contentedness or Self-Actualisation is the highest level of motivation of an individual. When employee understands that he/she is of good use to their organization, they may experience this feeling. Openion of employees were needed on the same.

Q.11) I have a feeling of self-respect when I know I am fairly contributing towards the profitability of the organisation.

As per the Maslow's theory of Need Hierarchy, second top most need of a person is "Self-esteem". A person needs to be respected by society and by self. Similar is the situation in the organization. The question tries to understand the level of motivation an employee feels, when in the organization, he/she understands his contribution towards organisation's goal or success or profits.

3.10   QUESTIONNAIRE ANSWER OPTION PATTERN

Almost all the questions are to be answered on Likert Scale. This helps better analysis in SPSS.

Since the questionnaire is very lengthy, some emoticons are added to likert scale to avoid boredom. The emoticons based scales are as follows:

1) This scale checks the importance of information in HR decisions.

Most Important   More Important   Neutral   Less Important   Least Important

2) This scale checks the relevance of information in HR decisions.

Most Relevant   More Relevant   Neutral   Less Relevant   Least Relevant

3) This scale checks the agreement level of HR managers for various decisions.

Strongly Agree   Agree   Neutral   Disagree   Strongly Disagree

Additionally, to avoid boredom, the question pointers are alphabets instead of numbers. This will not let the candidate know that he is answering a big list of questions.

3.11 LIMITATIONS OF THE STUDY

This research has its own limitations.

1. Owing to lack of awareness about HRA, lack of responses from respondents and time constraints, the sample size was limited.

2. The study is limited to Indian IT companies.

3. The measures used were perception based measures which have their own limitations.

4. Responses from only two stakeholders' viz. HR managers and employees are studied.

5. The HR functions selected for study were limited.

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DATA ANALYSIS

The aim of this chapter is to analyze the empirical data which was collected through the questionnaire, in order to provide a real picture about the impact of HRA on various organisational decisions and functioning.

This chapter includes 2 parts

Part 1) Analysis of HR Managers responses

Part 2) Analysis of Employees responses

Each Part has 2 main sections. The first section is Test of Normality and Descriptive analysis (the organizational and personal characteristics) which will be presented and discussed. The second section is about Hypothesis Testing and Data analysis (Means and Test values for each field).

PART 1: ANALYSIS OF HR MANAGERS RESPONSES

4.1 DESCRIPTIVE STATISTICS

The descriptive statistics is used to present the data. Graphical representation is done in the form of Pie Charts and Bar Diagrams.

4.1.1 PIE CHARTS

Pie chart is used to show the preferences of HR managers between the two sets of information, i.e. Section I (Non-HRA) and Section II (HRA) information. It also represents their preference for candidate between two available options i.e. Mr. Keshav Shahane and Mr. Bhushan Patil.
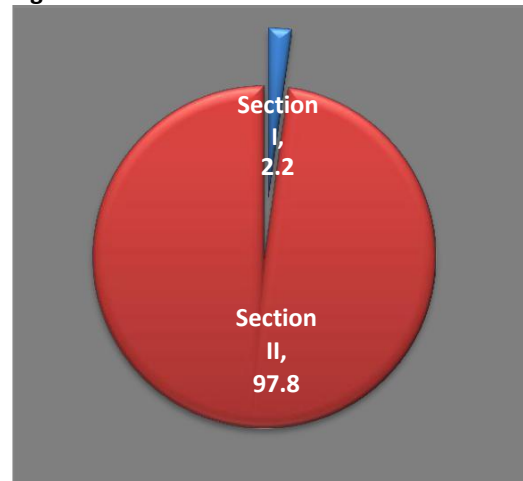
4.1.1.1.HUMAN RESOURCE PLANNING: Formulating Recruitment Budget

Q.1) Based on above mentioned information, which section gives you the clear picture of the money required for recruitment process?

Table 4.1: Recruitment Process

Sections	Frequency	Percent
Section I	1	2.2
Section II	44	97.8
Total	45	100

Figure 4.1: Recruitment Process

From the above pie chart it is clear that only 2.22% HR managers say that Section I information gives them clear picture in making recruitment budget; whereas 97.78% HR managers say that Section II (HRA) information gives them clear picture in making recruitment budget. Thus, 97% of HR managers support that HRA information is an unambiguous base for preparing recruitment budget.

Q.2) Which information Section do you think will help you to prepare an appropriate Budget?

Table 4.2: Recruitment Budget

Sections	Frequency	Percent
Section I	3	6.67
Section II	42	93.33
Total	45	100

Figure 4.2:Recruitment Budget
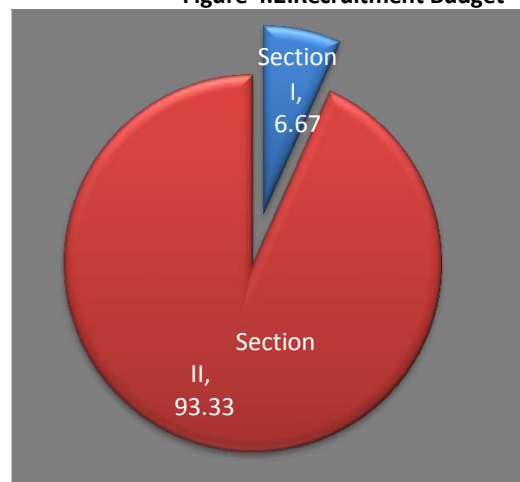
From the above pie chart it is clear that only 6.67% HR managers say that Section I information help them to prepare an appropriate recruitment budget; whereas 93.33%
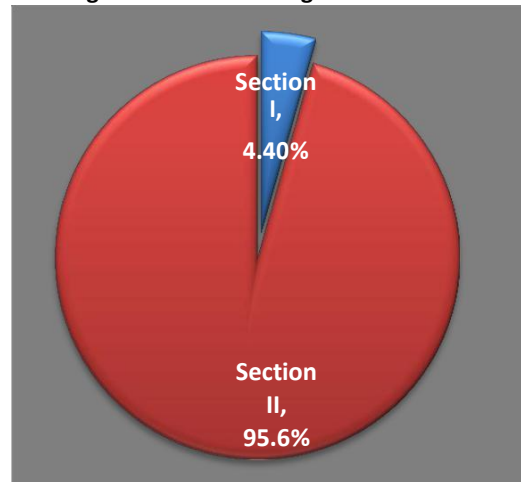
HR managers say that Section II (HRA) information help them to prepare an appropriate recruitment budget. Thus it can be said that, 93.33% of HR managers support the use of HRA information in making recruitment budget.

Q.3) Considering the cost cutting initiatives, which information do you think will help you to understand which cost can be saved?

Table 4.3: Cost Cutting Initiatives

Sections	Frequency	Percent
Section I	2	4.4
Section II	43	95.6
Total	45	100

Figure 4.3: Cost Cutting Initiatives

From the above pie chart it is clear that only 4.44% HR managers say that Section I information will help them to understand the costs to be saved while making recruitment budget; whereas 95.56% HR managers say that Section II (HRA) information will help them to understand the costs to be saved while making recruitment budget. Thus, 95.56% HR managers support the use of HRA information in cost cutting initiatives of the organisation.

4.1.1.2 SELECTING A CANDIDATE FOR JOB

Q.4) Whom would you select for job based on Section I?

Q.5) Whom would you select for job based on Section II?

Table 4.4: Selecting A Candidate For Job when HRA information is NOT available

Candidate	Frequency	Percent
Mr. Keshav Shahane	18	40
Mr. Bhushan Patil	27	60
Total	45	100

Table 4.5 Selecting A Candidate For Job when HRA information is available

Candidate	Frequency	Percent
Mr.Keshav Shahane	2	4.4
Mr. Bhushan Patil	43	95.6
Total	45	100

Figure 4.4: Selecting A Candidate For Job when HRA information is NOT available
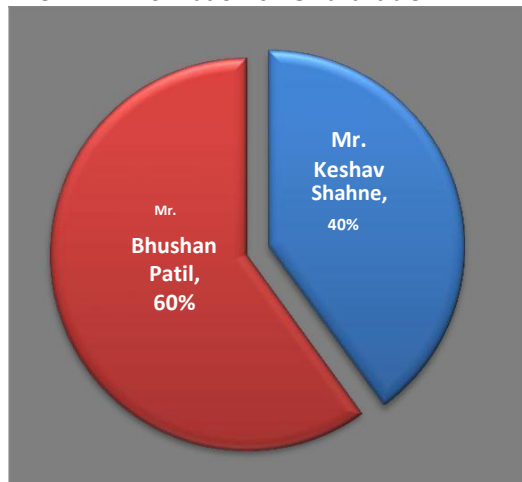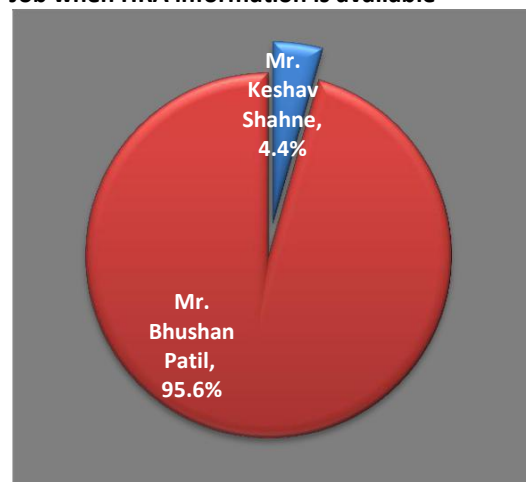
Figure 4.5: Selecting A Candidate For Job when HRA information is available
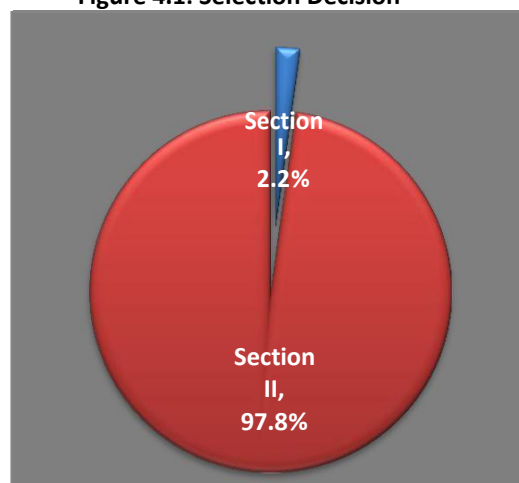
From the above pie chart it is clear that when HRA information was not available 40% HR managers have selected Mr.Keshav Shahane and 60% HR managers have selected Mr.Bhushan Patil. But when HR managers were provided with the HRA information, only 4.4% HR managers have selected Mr.Keshav Shahane and 95.6% HR managers have selected Mr.Bhushan Patil. Hence, it can be said that on availability of HRA information; decisions of HR managers get concentrated towards one particular option or choice.

Q.6) Which information table do you think will help you to take better selection decision?

Table 4.6: Selection Decision

Sections	Frequency	Percent
Section 1	1	2.2
Section 2	44	97.8
Total	45	100

Figure 4.1: Selection Decision

From the above pie chart it is clear that only 2.22% HR managers say that Section I information help them to take better selection decision; whereas 97.78% HR managers say that Section II (HRA) information help them to take better selection decision. Thus, 97.78% HR managers support the use of HRA information while selecting a candidate for job.

4.1.1.3 SELECTING A CANDIDATE FOR TRAINING

Q.7) Whom would you select for training?

Table 4.7: Selecting A Candidate For Training when HRA Information Is Not Available

Candidate	Frequency	Percent
Mr. Keshav Shahne	31	68.9
Mr. Bhushan Patil	14	31.1
Total	45	100

Table 4.8: Selecting A Candidate For Training when HRA Information Is Available

Candidate	Frequency	Percent
Mr. Keshav Shahne	38	84.4
Mr. Bhushan Patil	7	15.6
Total	45	100

Figure 4.7: Selecting A Candidate For Training when HRA Information Is Not Available
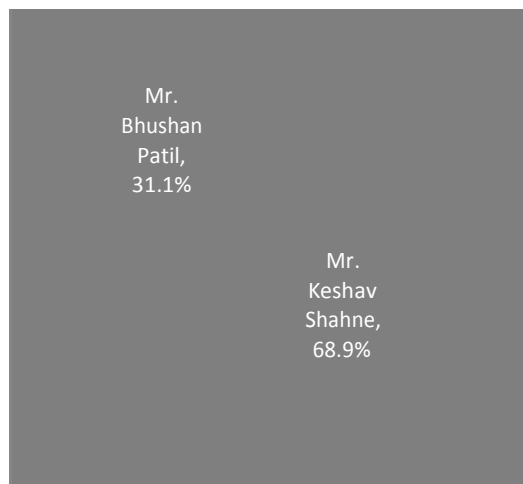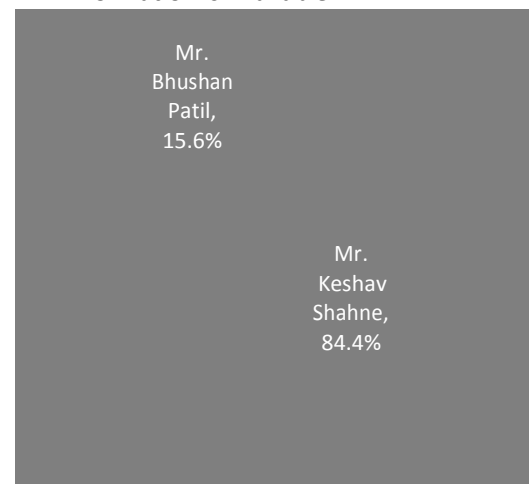

**Figure 4.8: Selecting A Candidate For Training when HRA Information Is Available**

From the above pie chart it is clear that when HRA information was not available 31.11% HR managers have selected Mr.Bhushan Patil and 68.99% HR managers have selected Mr.Keshav Shahane. But when HR managers were provided with the HRA information, only 15.54% HR managers have selected Mr.Bhushan Patil and 84.44% HR managers have selected Mr.Keshav Shahane. Hence it can be said that on availability of HRA information; decisions of HR managers get concentrated towards one particular option or choice while selecting a candidate for training.

Q.8) Which information section helped you for better training related decision?

Table 4.9: Training Related Decision

Sections	Frequency	Percent
Section I	3	6.7
Section II	42	93.3
Total	45	100

Figure 4.9: Training Related Decision
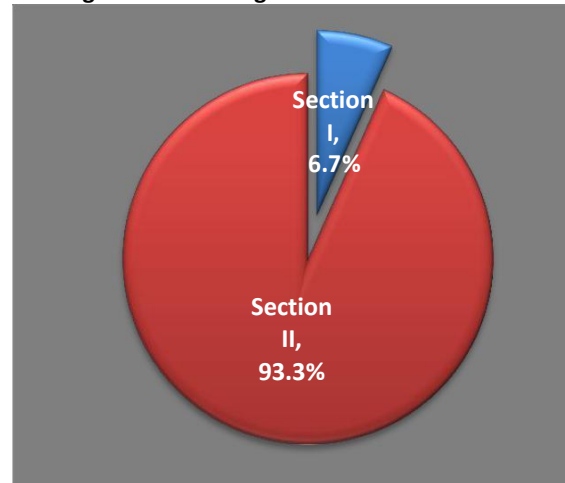
From the above pie chart it is clear that only 6.67% HR managers say that Section II information is useful in making training related decisions; whereas 93.33% HR managers say that Section II (HRA) information is useful in making training related decisions. Majority of HR managers support the use of HRA information.

4.1.2 BAR DIAGRAM
The data with multiple answer options are shown through Bar charts.

4.1.2.1 EMPLOYEE TURNOVER CONTROL

Q.9) Based on the above information, which proposal will you choose?

Table 4.10: Attrition Control Decisions when HRA information is NOT available

Proposals	Frequency	Percent
Proposal 1	3	6.7
Proposal 2	23	51.1
Proposal 3	7	15.6
Proposal 4	12	26.7
Total	45	100

Table 4.11: Attrition Control Decisions when HRA information is available

Proposals	Frequency	Percent
Proposal 2	13	28.9
Proposal 3	14	31.1
Proposal 4	12	26.7
Proposal 5	6	13.3
Total	45	100

Figure 4.10: Attrition Control Decisions when HRA information is NOT available

Figure 4.11: Attrition Control Decisions when HRA information is available
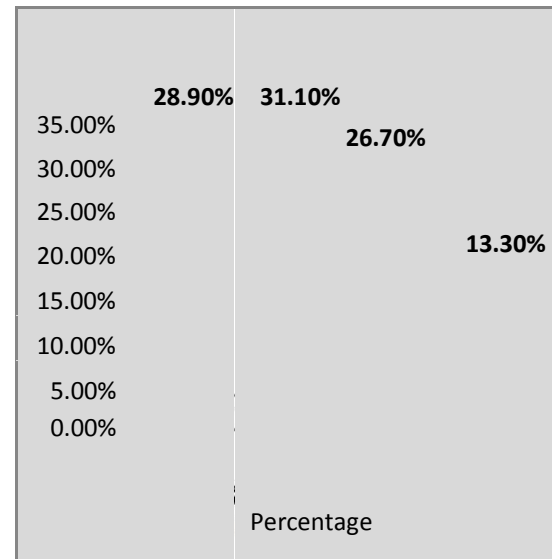
From the above bar chart it is clear that when HRA information was not available 6.667% HR managers choose Proposal 1(Increase number of employees to reduce workload), 51.11% HR managers choose Proposal 2(Allow flexible working hours to employees), 15.56% HR managers choose Proposal 3(Increase salaries of all the employees), 26.67% HR managers choose Proposal 4(Conduct Team Building activities).

However, when HR managers were provided with the HRA information, none of them choose proposal 1 and proposal 5, those being the highest investment proposals. 28.89% HR managers choose Proposal 2, 31.10% HR managers choose Proposal 3 and 26.67% HR managers choose Proposal 4. Thus, decisions of HR managers have changed from perception basis to practical feasibility basis.

4.2.2.2. PERFORMANCE APPRAISAL DECISIONS

Q.10) Based on above information, whom would you select for next promotion?

Table 4.12: Promotion Decisions

| Candidate	Frequency	Percent	Cumulative Percent
Mr. Manoj Desai	5	11.1	11.1
Mr. Nitin Sinha	2	4.4	15.6
Mr. Aditya Desai	2	4.4	20.0
Mr. Vishal Tambre	7	15.6	35.6
Mr. TusharPatil	29	64.4	100.0
Total	45	100.0	100.0

Figure 4.12: Promotion Decisions
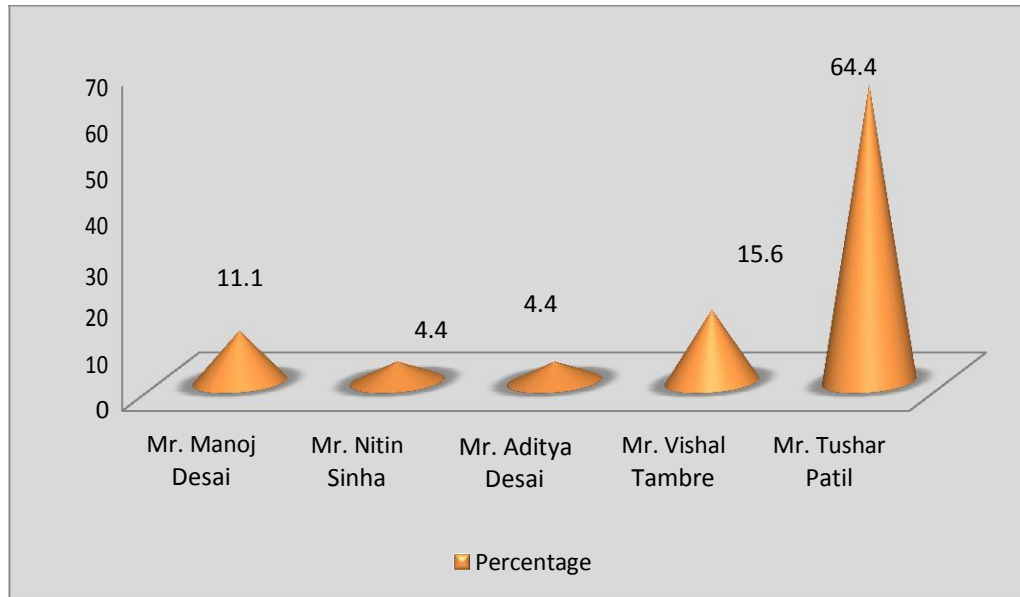
It is clear from the chart that only 11.11% HR managers choose Mr. Manoj Desai, 4.444% managers choose Mr. Nitin Sinha, 4.444% managers choose Mr. Aditya Desai, 15.56% managers choose Mr. Vishal Tembre and 64.44 % managers choose Mr. Tushar Patil for next promotion. This shows that majority of HR managers take same decision on availability of HRA information during promotion decisions.

Q.11) Total Experience of HR managers responding to this questionnaire:

Table 4.13: Total Experience

Years of Experience	Frequency	Percent
0 to 3 years	7	15.6
3 to 6 years	7	15.6
6 to 9 years	9	20
9 and more yrs	22	48.9
Total	45	100

Figure 4.13: Total Experience of Respondents
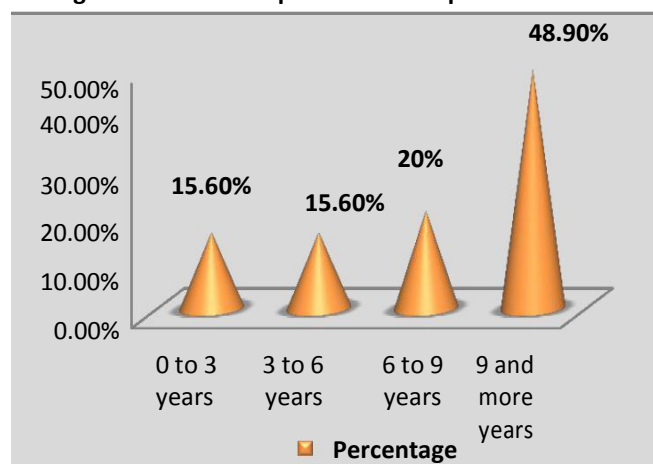
From the above bar chart it is clear that only 15.56% of respondents were with experience of less than 3 years. 15.56% respondents had experience of 3 to 6 years and 20% had 6 to 9 years. Majority of HR managers i.e 48.89% HR managers had more than 9 years of Experience. Thus, we can say that many experienced people were a part of this survey and hence the possibility of getting correct answers is high.

4.1.3 HISTOGRAM TABLE

Q.12) For a majority of questions, descriptive statistics in the form of Histograms were shown. Following is a table showing the Mean Value, Standard Deviation, Kurtosis and Skeweness of the data for respective questions.

Table 4.14: HISTOGRAM TABLE FOR DESCRIPTIVE STATISTICS

No	Question	Mean	S.D	Kurtosis	Skeweness	Interpretation
1	How important was the s-2 information in making recruitment budget?	4.27	0.539	-0.340	0.137	HR managers say that Section II information is important in making recruitment budget
2	Please indicate the level of relevancy of the Section II information supplied to you for recruitment budget.	4.22	0.765	1.47	-1.044	HR managers say that Section II relevant is important in making recruitment budget.
3	How important was the s-2 information supplied to you in making selection decision?	4.38	0.49	-1.81	0.522	HR managers say that Section II information is important in making selection decision.
4	Please indicate the level of relevancy of the 2 information supplied to you for selection decision.	4.29	0.506	-0.604	0.399	HR managers say that Section II information is relevant in making selection decision

5	If the monetary contribution of an employee is given to you (in addition to traditional parameters), will it help you to decide the salary of that employee during the interview?	4.11	0.714	0.501	-0.558	HR managers say that if the monetary contribution of an employee is given (in addition to traditional parameters), it will help them to decide the salary of an employee during the interview.
6	Will you consider monetary contribution of an employee while allotting benefits and allowance to him/her?	3.64	0.933	-0.58	-0.442	HR managers say that they can consider monetary contribution of an employee while allotting benefits and allowance to him/her.
7	Do you think HRA information can be used for Job Evaluation (for comparing various jobs to fix pay structure)?	3.89	0.714	0.901	-0.617	HR managers say that HRA information can be used for Job Evaluation (for comparing various jobs to fix pay structure).
8	Do you think, providing s-2 information enable you to save cost otherwise invested in incorrect decisions?	3.82	0.912	1.214	-0.949	HR managers say that Section II (HRA) information enable them to save cost otherwise invested in incorrect decisions.
9	How important was the s-2 information supplied to you in making turnover control decision?	4.09	0.514	0.927	0.151	HR managers say that Section II information is important in decisions related to turnover control.

10	Please indicate the level of relevancy of the 2 information supplied to you for turnover control decision.	3.96	0.673	2.095	-0.886	HR managers say that Section II information is relevant in making decisions related to employee turnover control.
11	Can above mention information help you in planning incentive system (performance based incentives) for individual employee?	4	0.603	-0.064	0.000	HR managers say that HRA information help you in planning incentive system (performance based incentives) for individual employee.
12	How important was the information supplied to you in making promotion decision?	3.98	0.621	-0.248	0.013	HR managers say that Section II information is important in making promotion decision.
13	Please indicate the level of relevancy of the information supplied to you for promotion decision.	4	0.853	5.452	-1.841	HR managers say that Section II (HRA) information is relevant in making promotion decision.
14	This information help you to some extent to decide the compensation of employee after his promotion decision	3.87	0.894	1.4	-0.925	HR managers say that HRA information help them to some extent to decide the compensation of employee after his promotion decision.
15	If value of employee is the criteria for performance appraisal, it will help you compare employees of different designations and across different departments.	3.91	0.848	4.793	-1.698	HR managers say if value of employee is the criteria for performance appraisal, it will help them compare employees of different designations and across different departments.

16	Do you think use of numerical HRA value of an individual will help in performance decisions as compared to subjective evaluations conducted in Performance Management System?	4	0.853	-0.458	-0.46	HR managers say that use of numerical HRA value of an individual will help in performance decisions as compared to subjective evaluations conducted in Performance Management System.
17	Employees would be motivated to work well if the performance criteria are fair and transparent.	4.38	0.716	-0.704	-0.713	HR managers say that employees would be motivated to work well if the performance criteria are fair and transparent.
18	If HRA value of an individual is high, can management set high performance target for him?	3.89	0.935	-0.589	-0.47	HR managers say that if HRA value of an individual is high, management can set high performance target for him/her.
19	Will HRA information give you an idea about how effectively are your company resources used?	3.98	0.812	3.41	-1.294	HR managers say that HRA information gives them an idea about how effectively are the company's resources used.
20	HRA value of an employee should be directly proportional to rank (job level) of an employee.	3.16	1.021	-0.886	-0.326	HR managers say that HRA value of an employee should be directly proportional to rank (job level) of an employee.

21	Availability of Performance data of each employee will allow me to predict the organisational performance.	4	0.707	0.327	-0.404	HR managers say that availability of Performance data of each employee will allow them to predict the organisational performance.
22	Since Performance Appraisal method are costly and time consuming, do you think employee with higher value should be appraised based on Human Resource Accounting method and other employees can be appraised based on simpler performance appraisal methods?	2.96	1.205	-1.262	-0.074	HR managers say that since Performance Appraisal method are costly and time consuming, employee with higher value should be appraised based on Human Resource Accounting method and other employees can be appraised based on simpler performance appraisal methods.
23	How important was the information supplied in s-2 in making training investment decision?	4.27	0.58	-0.408	-0.085	HR managers agree that HRA information is important for making training investment decision
24	Please indicate the level of relevancy of the information supplied in 2 for training investment decision.	4.22	0.56	-0.155	0.044	HR managers agree that HRA information is relevant for making training investment decision.

25	Adding this information to traditional training related information, help you to take a decision about the training program for employees?	4.2	0.661	1.63	-0.733	HR managers agree that adding HRA information to traditional training related information; help them to take a decision about the training program for employees.
26	Does this information help to analyse Return on Investment of training program?	4.18	0.65	-0.59	-0.187	HR managers agree that HRA information help them to analyse Return on Investment of training program.
27	If comparative ROI of all the training programs (like the one mentioned in table above) are given to you, will it help you choose between the various training programs available and take a correct and cost effective decision.	4.11	0.647	-0.523	-0.106	HR managers agree if comparative ROI of all the training are given to them, it will help them choose between the various training programs available and take a correct and cost effective decision.
28	This information gives a clear picture of the impact of training programs on employees.	4.11	0.611	2.506	-0.681	HR managers agree that HRA information gives a clear picture of the impact of training programs on employees.

29	If comparative promotion charts of all the training programs are given, it will help you choose between the various training programs available and take a correct and cost effective decision.	4.16	0.706	0.738	-0.636	HR managers agree that if comparative promotion charts of all the training programs are given, it will help them choose between the various training programs available and take a correct and cost effective decision.
30	Above Promotion charts if shown to employee, it will motivate them to attend the training program.	3.93	0.837	2.474	-1.089	HR managers agree that if Promotion charts are shown to employee; it will motivate them to attend the training program.
31	All the above information tables will help you save cost by investing in correct training program and correct person.	4.04	0.706	7.096	-1.687	HR managers say that if information related to progression of employees on account of attending the training programs; it will help them to you save cost by investing in correct training program and correct person.

A) Normality of Data

Normality is tested using the criterion suggest by George and Mallery (2003). According to George and Mallery variable with Skewness and Kurtosis values between -1 and +1 indicate normal distribution. From the above table it can be seen that all variables have values within the threshold range excluding the questions of importance and relevancy as they are not of much use in hypothesis testing. Hence it is concluded that data is normally distributed for these variables and assumption of normality is tenable.

3 questions are seen which are a part of hypotheses testing but data distribution is not normal

1) Will HRA information give you an idea about how effectively are your company resources used?

2) Above Promotion charts if shown to employee, it will motivate them to attend the training program.

3) All the above information tables will help you save cost by investing in correct training program and correct person.

Hence, Skeweness of the data for these questions is accepted.

B) Interpretation of Descriptive Statistics

Since SD is less than mean. Mean is a meaningful value. The mean value and Standard Deviation value indicates that HR managers say that Section II information is useful in various HR decisions.

Data where skeweness is negative, the curve is left skewed curve and data is piled on Right-side of 'X' axis. However, data where skeweness is positive, the curve is right skewed curve and data is piled on Left-side of 'X' axis. This further confirms the above finding.

4.2 HYPOTHESIS TESTING

4.2.1 H$_1$: HRA POSITIVELY INFLUENCES DECISION MAKING WITH RESPECT TO HUMAN RESOURCE PLANNING

4.2.1.1 Purpose: To study if proportion of managers who select or prefer Section II information over Section I information is more that 50% for recruitment budget related decisions.

Statistical Test: SIGN BINOMIAL TEST

In the following variables, researcher used Sign Binomial test to examine whether Manager's response to this variable (opinion about the impact of HRA on HR decisions –

observed proportion > 50% and P value is <0.05) or the opinion is negative - observed proportion < 50% and P value is <0.05)

Variables and Measurement: 45 HR managers were presented with two situations, one with and other without HRA information. Section I missed the HRA information while Section II included the HRA information. Further respondents were asked to select one out of two sections.

H0: P = 0.5, proportion of managers who select or prefer Section II over Section I information for recruitment budget related decisions is equal to 50%.

H1: P≠ 0.5, proportion of managers who select or prefer Section II over Section I information for recruitment budget related decisions is not equal to 50%

Level of Significance α = 0.05

Table 4.2: Sign Binomial Test

	ObservedProp.	Asymp.Sig. (2-tailed)	H0	Inference
Based on above mentioned information, which section gives you the clear picture of the process?	0.98	.000^a	Rejected	More than 50% Managers removes ambiguity. believe HRA information
Which information section do you think will help you to prepare an appropriate budget?	0.93	.000^a	Rejected	More than 50% Managers say it helps to prepare recruitment budget.
Considering the cost cutting initiatives, which information do you think will help you to saved?	0.96	.000^a	Rejected	More than 50% Managers say it helps in cost cutting initiative related decisions of recruitment

How important was the s-2 recruitment budget? information in making	0.96	.000^a	Reject ed	More than 50% Managers say s-2 information is important in making recruitment budget
Please indicate the level of relevancy of the 2 information supplied to you for recruitment budget.	0.89	.000^a	Reject ed	More than 50% Managers say s-2 information is relevant in making recruitment budget

The above table shows the Binomial test statistics for the mentioned variables. The observed proportion, Test Proportion and P value is mentioned in the table. Since for all variables, the P value is less than level of significance, the null hypothesis is rejected. Hence, it is concluded that proportion of managers selecting Section II information over Section I is more than 50%. This proves majority HR managers find HRA information useful in framing recruitment budget.

SELECTION OF A CANDIDATE FOR JOB: Impact of HRA on Selection Decision

4.2.1.2 Purpose: To study if HRA information can direct Selection decision of HR managers.

Statistical test: **STANDARD BINARY LOGISTIC REGRESSION**

Logistic Regression is a predictive analysis technique where the dependent variable is a categorical variable. Predictive Analysis is used to predict the value of dependent variable (Decision of HR managers - continuous) from a set of independent variables. However, there are situations where the dependent variable is not continuous but categorical. In the current research, the dependent variable was a categorical variable with two binary options viz. Decision by Majority and Decision by Minority.

Variables and measurement: Dependent variable: Selection decision by HR managers had two outcomes (1) decision by majority (0) decision by minority

Independent variables: HRA information was a categorical variable with two response options

(1) HRA (0) non HRA

In order to achieve the objective of studying the impact of HRA information on selection decision by HR managers 44 respondents were presented with two situations one with HRA information another without HRA information. The motive was to understand if HRA information simplifies the task of decision making in selecting a candidate for job – do majority of them take similar decision.

Table 4.3: Classification Table[a,b]

Observed			Predicted		
			Decision		Percentage
			Keshav (Decision by Minority)	Bhushan (Decision by Majority)	Correct
Step 0	Decision	Keshav (decision by minority)	0	20	.0
		Bhushan (decision by majority)	0	70	100.0
	Overall Percentage				77.8

a. Constant is included in the model.

b. The cut value is .500

The classification table shows that with no predictor in the model the guess would be Mr. Bhushan (decision by majority) would be selected over Mr. Keshav (decision by minority). This classification would be 77.8% correct.

Table 4.4: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.253	.254	24.413	1	.000	3.500

The Wald test suggests that there is no difference between the frequencies to two categories [Wald (1) 24.413, P< 0.05]

Table 4.58: Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	HRAStatus	16.457	1	.000
	Overall Statistics		16.457	1	.000

The Roa's test statistic is significant (16.457, p = 0.000) indicating that the inclusion of the predictor variable (HRA information) will do a job of predicting the Dependent variable (selection decision by HR managers).

Table 4.6: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	18.412	1	.000
	Block	18.412	1	.000
	Model	18.412	1	.000

χ^2 (5) = 18.412, p < 0.05, these results suggest that the model has predictive power and that the coefficients of the variables not in model are significantly different from zero.

Table 4.7: Iteration History a,b,c

Iteration		-2 Log likelihood	Coefficients Constant
Step 0	1	95.667	1.111
	2	95.348	1.248
	3	95.347	1.253
	4	95.347	1.253

a. Constant is included in the model

b. Initial -2 Log Likelihood: 95.347

c. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001

When the model includes the predictors the $-$ 2LL is reduced to 76.935 from 95.667 (value of $-$ 2LL when only constant was included in the model). This indicates that the model is better at predicting whether or not HR managers will be able to take better selection decision based on HRA information. Subtracting 76.935 from 95.347 gives 18.412 a value of chi-square in the table "Omnibus Tests of Model Coefficients".

Table 4.8: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	76.935[a]	.185	.283

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001

The model summary table presents three measures of how well the logistic model fits the data: - 2 Log likelihood, Cox and Snell R Square and Nagelkerke R Square. Out the three the value of Nagelkereke is what is reported largely. The Nagelkerke value is 0.283, which indicates that about 28.3% of the variance in the dependent variable (selection decision) is explained by the predictor (HRA information).

Table 4.9: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª	HRAStatus	2.663	.785	11.512	1	.001	14.333
	Constant	.405	.304	1.776	1	.183	1.500

a. Variable(s) entered on step 1: HRAStatus.

To estimate the impact of the predictor HRA information on selection decision we refer to the table "Variables in the Equation".

It is interesting to note that the Wald's test statistic for HRA status is significant (p = 0.001), the 'b' coefficient is 2.663 this indicates that if HRA status is increased by 1 unit the log odds of Selection decision will go up by 2.663. Exp (B) is the odds ratio (14.33) since this value is greater than 1 it indicates that the increase in HRA information by 1 unit the odds ratio is 14 times as large, hence the there is 14 time more likelihood of decision by majority if HRA information is available than not available.

Based on the above information the logistic regression can be presented as follows:

Log odds (selection decision) = 0.405 + 2.663 (HRA information)

4.2.1.3 Purpose: To study if proportion of managers select or prefer Section II information over Section I information is more that 50% for selection decision.

Variables and Measurement: 45 HR managers were presented with two situations, one with and other without HRA information. Section I missed the HRA information while Section II included the HRA information. Further respondents were asked to select one out of two sections.

H0: P = 0.5, proportion of managers who select or prefer Section II over Section I information for selection decisions is equal to 50%

H1: P≠ 0.5, proportion of managers who select or prefer Section II over Section I information for selection decisions is not equal to 50%

Level of Significance α = 0.05

Table 4.10: Binomial Test

	Observed Prop.	Sig. (2-tailed)	H0	Inference
Which information table do you think will help you to take better selection decision?	0.98	.000[a]	Rejected	98% Managers prefer HRA information for decisions related to selection of a candidate for job.

4.2.1.4 Purpose: To see if HR managers agreeing that HRA information is important or relevant for making Selection Decision are more than 50%.

Statistical Test: SIGN BINOMIAL TEST

Variables and Measurement: Respondents (HR Managers) were presented with two situations. Further, they were asked to rate the importance and relevance of Section II information on five point scale (1= Irrelevant, 2= Less relevant, 3= Neutral, 4= Relevant, 5= Most Relevant / 1= Unimportant, 2= Less Important, 3= Neutral, 4= Important, 5= Most Important). In order to make five point scale relevant to Binomial Test, the 5 point scale was converted to 2 point scale using the cut point option in Binomial Test of SPSS. (Group 1 ≤ 3, Group 2 > 3)

H0: P = 0.5, proportion of managers who agree that Section II (HRA information) is important and relevant for Selection decisions is equal to 50%.

H1: P≠ 0.5, proportion of managers who agree that Section II (HRA information) is important and relevant for Selection decisions is not equal to 50%.

Level of Significance α = 0.05

Table 4.11: Binomial Test

	Observed Prop.		H0	Inference
How important was the s-2 information supplied to you in making selection decision?	1	.000 [a]	Rejected Selecting a candidate	All the managers believe that Section II is important in
Please indicate the level of relevancy of the 2 information supplied to you for selection decision.	0.98	.000 [a]	Rejected	More than 50% Managers believe that Section II is relevant in Selecting a candidate
If the monetary contribution of an employee is given to you (in addition to it help you to decide the traditional parameters), will salary of that employee during the interview?	0.84	.000 [a]	Rejected them to decide the salary of	More than 50% Managers agree that if monetary contribution of employees is given to them, it will help that employee during the interview
Will you consider monetary contribution of an employee while allotting benefits and allowance to him/her ?	0.64	.072 [a]	Rejected	More than 50% Managers agree that they will consider monetary contribution of an employee while allotting benefits and allowance to him/her
Do you think HRA information can be used for comparing various jobs to fix Job Evaluation (for pay structure)?	0.78	.000 [a]	Rejected	More than 50% Managers agreed that they think HRA information can be used for Job Evaluation

The above table shows the Binomial test statistics for the mentioned variables. The observed proportion, Test Proportion and P value is mentioned. Since for all variables, the P value is less than level of significance, the null hypothesis is rejected. Hence, it concludes that proportion 100% managers agree that HRA information is important and 98% managers agree that HRA information is relevant in selection decisions.

TURNOVER CONTROL PROPOSALS

4.2.1.5 Purpose: To find impact of HRA information on Attrition control decisions

Statistical Test: MULTINOMIAL LOGISTIC REGRESSION

A Standard Multinomial Logistic Regression was used to predict "Proposal preferred" based on the "HRA information" available and not available. The dependent variable (Proposal preferred by HR managers) was a categorical variable with four response options (proposal one, proposal two, proposal three and proposal four). Cox and Snell, Nagelkerke and McFadden tests are used to check the percentage variance in the dependent variable (Proposal preferred by HR managers) by the independent variable (Human Resource Accounting Information).

Sample Size: 45 HR managers were presented with two situations (one with HRA information, other without HRA information and were asked which proposal would they prefer in both situations). Since 45 subjects participated in two different situations, the sample size seen is 90.

Table 4.12: Case Processing Summary

		N	Marginal Percentage
Proposal preferred	Proposal one	3	3.3%
	Proposal two	36	40.0%
	Proposal three	27	30.0%
	Proposal four	24	26.7%
HRA status	HRA	45	50.0%
	NON HRA	45	50.0%
Valid		90	100.0%
Missing		0	
Total		90	
Subpopulation		2	

The case processing summary shows that the Independent variable was categorical with two response option (1 = HRA, 2 = NON HRA). The Dependent variable was also categorical with four response option (one, proposal two, proposal three and proposal four). Total number observations in the study were 90. The table further gives information on frequency for each category under study in the column labeled N along with marginal percentage for each.

Table 4.13: Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	31.915			
Final	18.414	13.500	3	.004

The chi-square value for difference between -2 log likelihoods of null and full models is significant *χ^2 (3) = 13.5, p = 0.004]. Thus the model with predictors better compared to the model with just intercept only.

Table 4.14: Pseudo R-Square

Cox and Snell	.139
Nagelkerke	.153
McFadden	.063

The pseudo r-square table provides with r-square values computed by Cox and Snell, Nagelkerke and McFadden. Based on the pseudo r square value provided by Nagelkerke it is inferred that 15.3% of the variance in the dependent variable (proposal preferred) is explained by the independent variable (HRA information status).

Table 4.15: Likelihood Ratio Tests

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	18.414[a]	.000	0	.
HRA status	31.915	13.500	3	.004

The chi-square statistic is the difference in -2 log- likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all the parameters of that effect are 0.
a. This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.

Likelihood ratio tests table gives significant value for the independent variable HRA information status. This value is significant *χ^2 (3) = 13.5, p = 0.004]. Hence it is inferred that HRA information status is a significant predictor of the Dependent variable (proposal preferred).

Table 4.16: Parameter Estimates

Proposal preferred[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp (B)	
								Lower Bound	Upper Bound
Proposal one	Intercept	-.847	.690	1.508	1	.220			
	[HRAstatus=1]	-20.816	.000	.	1	.	9.117E-10	9.117E-10	9.117E-10
	[HRAstatus=2]	0[b]	.	.	0	.	.	.	.
Proposal two	Intercept	1.190	.432	7.594	1	.006			
	[HRAstatus=1]	-1.620	.560	8.382	1	.004	.198	.066	.593
	[HRAstatus=2]	0[b]	.	.	0	.	.	.	.
Proposal four	Intercept	.539	.476	1.284	1	.257			
	[HRAstatus=1]	-1.050	.600	3.066	1	.080	.350	.108	1.134
	[HRAstatus=2]	0[b]	.	.	0	.	.	.	.

a. The reference category is: Proposal three.

b. This parameter is set to zero because it is redundant.

Since Proposal three was selected as a reference category, the Parameter Estimate table is divided into three rows:

- Proposal one vs. proposal three

- Proposal two vs. proposal three

- Proposal four vs. proposal three

- Proposal one vs. Proposal Three

The Wald statistic is not computed for this combination because of very few preferences for proposal one (3)

Proposal two vs. proposal three

b = -1.62, Wald (1) = 8.382, p = 0.004

The first thing to note that HRA Information status has a significant impact on log odds of preference to proposal two over proposal three, however the b coefficient is negative. Hence it can be said that HR managers without HRA information are more likely to prefer proposal two over proposal three. This can also be interpreted as HR managers with HRA Information are more likely to prefer proposal three over proposal two.

Proposal Four vs. Proposal Three

Once again HRA information status has a significant impact on log odds of preference to proposal four over Proposal three, again the b coefficient is negative. Hence it can be said that HR managers without HRA information are more likely to prefer proposal four over proposal three. This can also be interpreted as HR managers with HRA Information are more likely to prefer proposal three over proposal four.

Exp(B) column provides the odds ratio associated with each predictor. Odds ratio for HRA information status where proposal two is contrasting proposal three is 0.198. This can be interpreted as HR managers with HRA information are 0.198 as likely to prefer proposal two compared to HR mangers without HRA Information. The other side of the coin is also true, if you flip reference category from proposal three to proposal two the odds ratio would be 5.05 (this can be inferred as HR managers with HRA information are 5 times more likely to prefer proposal three over proposal two). The odds ratio for HRA information status where proposal four is contrasting proposal three is 0.350. This can be interpreted as HR managers with HRA information are 0.350 as likely to prefer proposal four over proposal three. Again the other side of the coin is true, if you flip reference category from proposal three to Proposal four the odds ratio would be 2.85 (this can be inferred as HR managers with HRA information are 2.85 times more likely to prefer proposal three over proposal four).

4.2.1.6 Purpose: To study if proportion of managers select or prefer Section II information over Section I information (for selecting a turnover control proposal) is more that 50%

Statistical Test: SIGN BINOMIAL TEST

Variables and Measurement: 45 HR managers were presented with two situations, one with and other without HRA information related to turnover control proposals. Section I had information regarding the type of proposal, % reduction in turnover and investment required for each proposal. While Section II included the HRA information of each proposal viz. expected turnover cost of each employee, proportionate number of

turnover, additional training costs and sum total of all the costs with a representation of the fact that if none of the proposals are implemented, how much indirect cost is an organization incurring. Also, it shows the proposal with highest and lowest investment.

Respondents were asked to select one out of two sections.

H0: P = 0.5, Proportion of managers who prefer Section II over Section I information for employee turnover control decisions is equal to 50%

H1: P ≠ 0.5, Proportion of managers who prefer Section II over Section I information for employee turnover control decisions is not equal to 50%

Level of Significance α = 0.05

Table   4.17: Binomial Test

	ObservedProp.	Asymp.Sig.(2-tailed)		H0	Inference
Which information helped you for better decision making wrt turnover control?	0.91	.000[a]		Rejected	More than 50% Managers prefer HRA information for decisions related to selecting proposals for attrition control.

4.2.1.7 Purpose: To see if HR managers agree that HRA information is useful in saving cost, and is important and relevant for making decisions related to selecting proposal for Turnover control, are more than 50%.

Statistical Test: SIGN BINOMIAL TEST

Variables and Measurement: Respondents (HR Managers) were presented with two situations. Further, they were asked to rate the importance and relevance of Section II information on five point scale (1= Irrelevant, 2= Less relevant, 3= Neutral, 4= Relevant, 5= Most Relevant / 1= Unimportant, 2= Less Important, 3= Neutral, 4= Important, 5= Most Important). In order to make five point scale relevant to Binomial Test, the 5 point scale was converted to 2 point scale using the cut point option in Binomial Test of SPSS. (Group 1 ≤ 3, Group 2 > 3)

H0: P = 0.5, Proportion of managers who agree that Section II (HRA information) is useful, important and relevant for Employee Turnover Control decisions is equal to 50%.

H1: P≠ 0.5, Proportion of managers who agree that Section II (HRA information) is useful, important and relevant for Employee Turnover Control decisions is not equal to 50%.

Level of Significance α = 0.05

Table 4.18: Binomial Test

	ObservedProp.	Sig.	H0	Inference
Do you think, providing s-2 information enable you to save cost otherwise invested in incorrect decisions?	0.73	.002^a	Rejected	More than 50% Managers would prefer HRA information for decisions related to investments for Turnover control
How important was the s-2 information supplied to you in making turnover control decision?	0.91	.000^a	Rejected	More than 50% Managers believe that HRA information is important in making turnover control decisions.
Please indicate the level of relevancy of the 2 information supplied to you for turnover control decision.	0.16	.000^a	Rejected	More than 50% Managers believe that HRA information is relevant in making turnover control decisions.

4.2.2 H$_2$: HRA POSITIVELY INFLUENCES DECISION MAKING WITH RESPECT TO PERFORMANCE MANAGEMENT SYSTEM

4.2.2.1 Purpose: To study if there is a difference in the perception of HR managers regarding benefits for better Performance Management System resulting from HRA information.

Statistical Test: FRIEDMAN CHI SQUARE TEST

Friedman Chi Square Test is used if there is difference between mean ranks across groups in a repeated measures design.

Variables and Measurement: 45 HR managers were presented with ten commonly resulting benefits from HRA information. HR managers were asked to rate these benefits on five point scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

H0: There is no difference in the perception of HR managers regarding benefits resulting from HRA information for better Performance Management System.

H1: There is significant difference in the perception of HR managers regarding benefits resulting from HRA information for better Performance Management System.

Level of Significance α = 0.05

Table 4.19: Friedman Test

N	45
Chi-square	76.010
Df	9
Asymp. Sig.	.000

a. Friedman Test

Ranks	Mean	Std.Deviation				
	MeanRank	Statistic	Statistic	Statistic	Std.Error	Statistic	Std.Error
Can above mention information help you in planning incentive system (performance based incentives) for individual employee?	5.91	4	0.603	0	0.354	-0.064	0.695
This information help you to some extent to decide the compensation of employee after his promotion decision	5.58	3.87	0.894	-0.925	0.354	1.4	0.695
If value of employee is the criteria for performance appraisal, it will help you compare employees of different designations and across different departments.	5.74	3.91	0.848	-1.698	0.354	4.793	0.695

Do you think use of numerical HRA value of an individual will help in performance decisions as compared to subjective evaluations conducted in Performance Management System?	5.73	4	0.853	-0.46	0.354	-0.458	0.695
Employees would be motivated to work well if the performance criteria are fair and transparent.	7.22	4.38	0.716	-0.713	0.354	-0.704	0.695
If HRA value of an individual is high, can management set high performance target for him?	5.44	3.89	0.935	-0.47	0.354	-0.589	0.695
Will HRA information give you an idea about how effectively are your company resources used?	5.98	3.98	0.812	-1.294	0.354	3.41	0.695
HRA value of an employee should be directly proportional to rank (job level) of an employee.	3.89	3.16	1.021	-0.326	0.354	-0.886	0.695
Availability of Performance data of each employee will allow me to predict the organisational performance.	5.98	4	0.707	-0.404	0.354	0.327	0.695

Since Performance Appraisal method are costly and time consuming, do you think employee with higher value should be appraised based on Human Resource Accounting method and other employees can be appraised based on simpler performance appraisal methods?	3.52	2.96	1.205	-0.074	0.354	-1.262	0.695
Valid N (listwise)	45						

Observed χ^2 (9) = 76.01   P value = 0.000   N = 45

Since P value (0.000) is less than Level of Significance (0.05), the H0 is rejected. Hence, it is concluded that there is significant difference in the perception of HR managers regarding benefits resulting from HRA information.

In order to understand where the difference lies, we refer to Ranks Table. From ranks table, it can be seen that variable "Employees would be motivated to work well if the performance criteria are fair and transparent" has the highest mean rank 7.22 followed by "Will HRA information give you an idea about how effectively are your company resources used?" and "Availability of Performance data of each employee will allow me to predict the organisational performance "has the second highest mean rank 5.98 followed by "Can above mention information help you in planning incentive system (performance based incentives) for individual employee?" has mean rank 5.91 followed by "This information help you to some extent to decide the compensation of employee after his promotion decision" has mean rank 5.58 followed by "If value of employee is the criteria for performance appraisal, it will help you compare employees of different designations and across different departments" has mean rank 5.74 followed by "Do you think use of numerical HRA value of an individual will help in performance decisions as compared to subjective evaluations conducted in Performance Management

System?" has mean rank 5.73 followed by "If HRA value of an individual is high, can management set high performance target for him?" has mean rank 5.44 followed by "HRA value of an employee should be directly proportional to rank (job level) of an employee" has mean rank 3.98 followed by "Since Performance Appraisal method are costly and time consuming, do you think employee with higher value should be appraised based on Human Resource Accounting method and other employees can be appraised based on simpler performance appraisal methods?" has mean rank 3.52.

Hence, it is concluded that the top benefits resulting from HRA are:

1) Employees would be motivated to work well if the performance criteria are fair and transparent.

2) Availability of Performance data of each employee will allow me to predict the organisational performance.

3) Will HRA information give you an idea about how effectively are your company resources used?

4.2.3 H₃: HRA POSITIVELY INFLUENCES DECISION MAKING WITH RESPECT TO TRAINING AND DEVELOPMENT

Impact of HRA on Training decision by HR managers

4.2.3.1 Purpose: To study the impact of HRA information on decision pertaining to selection of candidate for Training, by HR managers. 44 respondents were presented with two situations one with HRA information another without HRA information. The motive was to understand if HRA information simplifies the task of decision making in selecting a candidate for attending training– do majority of them take similar decision.

Statistical Test: STANDARD BINARY LOGISTIC REGRESSION

Standard Binary Logistic Regression Test has been used as it can predict which of two categories a person is likely to belong to given the information. Here, dependent variable was a categorical with two binary options i.e. Mr. Keshav Shahane and Mr. Bhushan Patil.

Variables and Measurement:

Dependent variable: Selection of Candidate for Training by HR managers had two outcomes (1) decision by majority (0) decision by minority.

Independent variables: HRA information was a categorical variable with two response options (1) HRA (0) non HRA

Table 4.20: Classification Table[a,b]

Observed			Predicted		
			Decision Training		Percentage
			Bushan	Keshav	Correct
Step 0 Decision		Bushan	0	21	.0
Training		Keshav	0	69	100.0
Overall Percentage					76.7

a. Constant is included in the model.
b. The cut value is .500

The classification table shows that with no predictor in the model the guess would be that Mr. Keshav would be preferred for training over Mr. Bhushan. This classification would be 76.7% correct.

Table 4. 21: Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 0 Constant	1.190	.249	22.783	1	.000	3.286

The Wald test suggests that there is no difference between the frequencies to two categories [Wald (1) 22.783, P< 0.05]

Table 4. 22: Variables not in the Equation

	Score	df	Sig.
Step 0 Variables HRA stat	3.043	1	.081
Overall Statistics	3.043	1	.081

The Roa's test statistic is significant (3.043, p = 0.081, partially significant) indicating that the inclusion the predictor variable (HRA information) will do a job of predicting the Dependent variable (selecting a candidate for training by HR managers).

Table 4.23:Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step 1 Step	3.090	1	.079
Block	3.090	1	.079
Model	3.090	1	.079

χ^2 (5) = 3.090, p > 0.05, but < than 0.10 hence partially significant, these results suggest that the model has predictive power and that the coefficients of the variables not in model are significantly different from zero.

Table 4.24: Iteration History[a,b,c,d]

Iteration	-2 Log likelihood	Coefficients	
		Constant	HRA stat
Step 1 1	95.339	.756	.622
2	94.704	.795	.868
3	94.699	.795	.896
4	94.699	.795	.897

a. Method: Enter

b. Constant is included in the model.

c. Initial -2 Log Likelihood: 97.789

d.Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

When the model includes the predictors the − 2LL is reduced to94.699 from 97.784 (value of − 2LL when only constant was included in the model). This indicates that the model is better at predicting whether or not HR managers will be able to take better training related decision based on HRA information. Subtracting 97.784 from 94.699 gives 3.05, a value of chi-square in the table "Omnibus Tests of Model Coefficients".

Table 4.25: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	94.699[a]	.034	.051

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

The model summary table presents three measures of how well the logistic model fits the data: - 2 Log likelihood, Cox and Snell R Square and Nagelkerke R Square. Out the

three the value of Nagelkereke is what is reported largely. The Nagelkerke value is 0.051, which indicates that about 5% of the variance in the dependent variable (selection decision) is explained by the predictor (HRA information).

Table 4.26: Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a] HRA stat	.897	.522	2.947	1	.086	2.452
Constant	.795	.322	6.094	1	.014	2.214

a. Variable(s) entered on step 1: HRA stat.

To estimate the impact of the predictor HRA information on selection decision we refer to the table "Variables in the Equation".

It is interesting to note that the Wald's test statistic for HRA status is partially significant (p = 0.086. p is > 0.05 but < 0.1), the 'b' coefficient is 0.897 this indicates that if HRA status is increased by 1 unit the log odds of Training related decision will go up by 0.897. Exp (B) is the odds ratio (2.452) since this value is greater than 1 it indicates that the increase in HRA information by 1 unit the odds ratio 2 times as large, hence the there is 2 time more likelihood of decision by majority if HRA information is available than not available.

Based on the above information the logistic regression can be presented as follows:

Log odds (selection decision) = 0.795 + 0.897(HRA information)

4.2.3.2 Purpose: To see if HR managers agree that HRA information is important, relevant and useful for taking Training related decisions.

Statistical Test: Sign Binomial Test

Variables and Measurement: Respondents (HR Managers) were presented with two situations. They were asked to rate the importance and relevance of Section II information on five point scale (1= Irrelevant, 2= Less relevant, 3= Neutral, 4= Relevant, 5= Most Relevant / 1= Unimportant, 2= Less Important, 3= Neutral, 4= Important, 5= Most Important). . Further, they were asked to rate the usefulness of Section II

information on five point scale (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree). In order to make five point scale relevant to Binomial Test, the 5 point scale was converted to 2 point scale using the cut point option in Binomial Test of SPSS. (Group 1 ≤ 3, Group 2 > 3)

H0: P = 0.5, proportion of managers who agree that HRA information is important, relevant and useful for taking Training related decisions is equal to 50%.

H1: P≠ 0.5, proportion of managers who agree that HRA information is important, relevant and useful for taking Training related decisions is not equal to 50%

Level of Significance α = 0.05

Table 4.27: Binomial Test

	Observed Proportion	Asymp. Sig. (2-tailed)	H0	Inference
How important was the information supplied in S-II in making training investment decision?	0.93	.000[a]	Rejected	More than 50% Managers believe that HRA information is important in making training investment decision.
Please indicate the level of relevancy of the information supplied in S-II for training investment decision.	0.93	.000[a]	Rejected	More than 50% Managers believe that HRA information is relevant in making training investment decision.
Adding this information to traditional training related information, help you to take a decision about the training program for employees?	0.91	.000[a]	Rejected	More than 50% Managers agree that adding HRA information to traditional training information helps them in better decision making

Does this information help to analyse Return on Investment of training program?	0.87	.000^{a}	Rejected	More than 50% Managers agree that HRA information helps to analyse ROI of training programs.
If comparative ROI of all the training programs (like the one mentioned in table above) are given to you, will it help you choose between the various training programs available and take a correct and cost effective decision.	0.84	.000^{a}	Rejected	More than 50% Managers agree that if comparative ROI of all the training programs are given to them, it will help them to choose between the various training programs available and take correct and cost effective decisions.

TRAINING PROMOTION MATRIX

4.2.3.3 Purpose: To see if HR managers agree that HRA information in the form of Training Promotion Matrix helps in taking correct decisions related to training investments.

Standard Test: SIGN BINOMIAL TEST

Variables and Measurement: Respondents (HR Managers) were presented with a Training based promotion matrix. Further, they were asked to rate if matrix help them to motivate employees and take correct training related decisions, on five point scale (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree). In order to make five point scale relevant to Binomial Test, the 5 point scale was converted to 2 point scale using the cut point option in Binomial Test of SPSS.(Group 1 ≤ 3, Group 2 > 3)

H0: P = 0.5, proportion of managers who agree that HRA information in the form of Training Promotion Matrix helps in taking correct decisions related to training investments, is equal to 50%.

H1: P≠ 0.5, proportion of managers who agree that HRA information in the form of Training Promotion Matrix helps in taking correct decisions related to training investments, is not equal to 50%

Level of Significance α = 0.05

Table 4. 28: Binomial Test

	ObservedProportion	Asymp. Sig. (2-tailed)	H0	Inference
This information give a clear picture of the impact of training programs on employees.	0.91	.000^a	Rejected	More than 50% Managers agree that HRA information gives a clear picture of the impact of training programs on employees.
If comparative promotion charts of all the training programs are given, it will help you choose between the various training programs available and take a correct and cost effective decision.	0.87	.000^a	Rejected	More than 50% Managers agree that if comparative promotion charts of all the training programs are given, it will help them choose between the various training programs available and take a correct and cost effective decision.
Above Promotion charts if shown to employee, it will motivate them to attend the training program.	0.78	.000^a	Rejected	More than 50% Managers agree that if Promotion charts are shown to employee, it will motivate them to attend the training programs.
All the above information tables will help you save cost by investing in correct training program and correct person.	0.89	.000^a	Rejected	More than 50% Managers agree that all the above information tables will help them to save cost by investing in correct training program and correct person.

4.2.4 H$_4$: HRA POSITIVELY INFLUENCES DECISION MAKING WITH RESPECT TO COMPENSATION MANAGEMENT

Purpose: To understand if HR managers perceive that HRA information has impact on compensation related decisions.

Statistical Test: SIGN BINOMIAL TEST AND FRIEDMAN CHI SQUARE TEST

The questions that assist in analyzing this hypothesis are given below. The statistical analysis of these questions is complete in earlier part of this chapter. The questions are arranged as per the HR management function (Compensation Management) in order to prove the hypothesis.

Table 4.29: Hypothesis Testing of Compensation Management

Question	Test	Findings
If the monetary contribution of an employee is given to you (in addition to traditional parameters), will it help you to decide the salary of that employee during the interview	Sign Binomial Test	If the monetary contribution of an employee is given to HR managers (in addition to traditional parameters), will it help them to decide the salary of that employee during the interview
Will you consider monetary contribution of an employee while allotting benefits and allowance to him/her?	Sign Binomial Test	HR managers agree to consider monetary contribution of an employee while allotting benefits and allowance to him/her.
Do you think HRA information can be used for Job Evaluation (for comparing various jobs to fix pay structure)?	Sign Binomial Test	HR managers agree that HRA information can be used for Job Evaluation (for comparing various jobs to fix pay structure)
Can above mention information help you in planning incentive system (performance based incentives) for individual employee?	Friedman Chi Square Test	HR managers agree that HRA information help them in planning incentive system (performance based incentives) for individual employee
This information helps you to some extent to decide the compensation of employee after his promotion decision.	Friedman Chi Square Test	HR managers agree that HRA information help them to some extent to decide the compensation of employee after his promotion decision.

4.2.5 H₅: HRA POSITIVELY IMPACTS THE DECISIONS RELATED TO STRATEGIC HUMAN RESOURCE MANAGEMENT

Purpose: To understand if HR managers perceive that HRA information has impact on decisions related to Strategic Human Resource Management.

Statistical Test: SIGN BINOMIAL TEST AND FRIEDMAN CHI SQUARE TEST

The questions that assist in analyzing this hypothesis are given below. The statistical analysis of these questions is complete in earlier part of this chapter. The questions are arranged as per the Top management function (Strategic Human Resource Management) in order to prove the hypothesis.

Table 4.30: Hypothesis Testing of Strategic HRM

Question	Test	Finding
Which information section do you think will help you to prepare an appropriate budget?	Sign Binomial Test	HR managers agree that HRA information helps them in preparing appropriate recruitment budget
If comparative ROI of all the training programs (like the one mentioned in table above) are given to you, will it help you choose between the various training programs available and take a correct and cost effective decision.	Sign Binomial Test	HR agree if comparative ROI of all the training are given to them, it will help them choose between the various training programs available and take a correct and cost effective decision.
If comparative promotion charts of all the training programs are given, it will help you choose between the various training programs available and take a correct and cost effective decision	Sign Binomial Test	HR managers agree that if comparative promotion charts of all the training programs are given, it will help them choose between the various training programs available and take a correct and cost effective decision.
Since Performance Appraisal method are costly and time consuming, do you think employee with higher value should be appraised based on Human Resource Accounting method and other employees can be appraised based on simpler performance appraisal methods?	Friedman Chi Square Test	HR managers say that since Performance Appraisal method are costly and time consuming, employee with higher value should be appraised based on Human Resource Accounting method and other employees can be appraised based on simpler performance appraisal methods.
Do you think use of numerical	Friedman	HR managers say that use of numerical

HRA value of an individual will help in performance decisions as compared to subjective evaluations conducted in Performance Management System?	Chi Square Test	HRA value of an individual will help in performance decisions as compared to subjective evaluations conducted in Performance Management System.
Based on HRA information which Turnover Control proposal will you choose	Friedman Chi Square Test	Availability of HRA information allows HR managers take correct decisions in relation to Attrition control.

4.2.6 H₆: HUMAN RESOURCE ACCOUNTING POSITIVELY INFLUENCES PROFITABILITY OF THE ORGANISATION

Purpose: To understand if HR managers perceive that HRA information has impact on Profitability of the Organisation

Statistical Test: SIGN BINOMIAL TEST AND FRIEDMAN CHI SQUARE TEST

The questions that assist in analyzing this hypothesis are given below. The statistical analysis of these questions is complete in earlier part of this chapter. The questions are arranged as per the Organisational function (Profitability) in order to prove the hypothesis.

Table 4.31: Hypothesis Testing of Organisational Profitability

Question	Test	Finding
Considering the cost cutting initiatives, which information do you think will help you to understand which cost can be saved?	Sign Binomial Test	HR managers agree that HRA information help them to understand which costs can be saved while making a recruitment budget
Do you think, providing s-2 information enable you to save cost otherwise invested in incorrect decisions?	Sign Binomial Test	HR managers agree that HRA2 information enable you to save cost otherwise invested in incorrect decisions.
If comparative ROI of all the training programs (like the one mentioned in table above) are given to you , will it help you choose between the various training programs available and take a correct and cost effective decision.	Sign Binomial Test	If comparative ROI of all the training programs (like the one mentioned in table above) are given to HR managers, it will help them to choose between the various training programs available and take a correct and cost effective decision.
If HRA value of an individual is high, can management set high performance target for him?	Friedman Chi Square Test	If HRA value of an individual is high, mangers can set high performance target for him.
If comparative promotion charts of all the training programs are given, it will help you choose between the various training programs available and take a correct and cost effective	Sign Binomial Test	If comparative promotion charts of all the training programs are given, it will help HR mangers choose between the various training programs available and take a correct and cost effective decision.

decision.		
All the above information tables will help you save cost by investing in correct training program and correct person.	Sign Binomial Test	HRA information tables will help HR managers to save cost by investing in correct training program and correct person.

PART 2: ANALYSIS OF EMPLOYEE RESPONSES

4.2.7 H$_7$: HUMAN RESOURCE ACCOUNTING POSITIVELY INFLUENCES MOTIVATION LEVEL OF EMPLOYEES

4.2.7.1 DESCRIPTIVE STATISTICS

For all the questions, descriptive statistics in the form of Histogram charts were shown.Following is a table showing the Mean value, Standard Deviation, Kurtosis and Skeweness of the data for respective questions.

Table 4.32: HISTOGRAM

No.	Question	Mean	S.D	Kurtosis (K)	Skewen ess(S)	Interpretation
1	I feel recognized by the organization and management when they value my services.	4.21	0.75	1.572	-1.021	Employees feel recognized by the organization and management when their services are valued
2	I will take more interest in my work if I understand that it is being fairly valued.	4.51	0.62	-0.155	-0.895	Employees will take more interest in their work if they understand that it is being fairly valued.
3	Awareness of investments made by organisation on me makes me responsible to contribute services worth higher than the investments.	4.26	0.68	-0.751	-0.356	Employees agree that awareness of investments made by organisation on them makes them responsible to contribute services worth higher than the investments.

4	Knowing about my money value in the organization will give me an idea about increase in the performance required for my career advancement.	4.15	0.66	-0.633	-0.165	Employees agree that knowing about their money value in the organization will give them an idea about increase in the performance required for their career advancement.
5	Knowing my value in the organization will increase my willingness to develop my skills to reach at higher level of valuation	4.36	0.57	-0.717	-0.166	Employees agree that knowing their value in the organization will increase their willingness to develop their skills to reach at higher level of valuation.
6	I would be happy if Human Resource Accounting value is considered as one of the parameters for defining company's compensation philosophy	4.09	0.8	0.251	-0.684	Employees agree that they would be happy if Human Resource Accounting value is considered as one of the parameters for defining company's compensation philosophy.
7	If my Human Resource Accounting value is known to me, it would remove the dilemma as to am I getting right salary for the services rendered.	4.06	0.82	-0.748	-0.369	Employees agree if their Human Resource Accounting value is known, it would remove the dilemma as to are they getting right salary for the services rendered.
8	Knowing the fact that every individual is evaluated and paid based on common, fair and transparent criteria, will improve	4.36	0.71	1.354	-1.039.	employees agree that knowing the fact that every individual is evaluated and paid based on common, fair and transparent criteria, will

	interpersonal relationships for better teamwork.					improve interpersonal relationships for better teamwork.
9	Understanding my monetary contribution towards organisation gives me a feeling of self-contented	4.02	0.77	0.539	-0.643	Employees agree that understanding their monetary contribution towards organisation gives them a feeling of self- contentedness.
10	I have a feeling of self-respect when I know I am fairly contributing towards the profitability of the organisation.	4.28	0.65	1.943	-0.837	Employees agree that have a feeling of self-respect when they know they are fairly contributing towards the profitability of the organisation.
11	Does the knowledge of Self- contribution give me the feeling of achievement?	4.34	0.56	-0.676	-0.091	Employees agree that knowledge of Self-contribution give them the feeling of achievement.

A) Normality of Data:

Normality is tested using the criterion suggest by George and Mallery (2003). According to George and Mallery variable with Skewness and Kurtosis values between -1 and +1 indicate normal distribution. From the above table it can be seen that all variables have values within the threshold range excluding the questions of importance and relevancy as they are not of much use in hypothesis testing. Hence it is concluded that data is normally distributed for these variables and assumption of normality is tenable.

2 questions are seen which are a part of hypotheses testing but data distribution is not normal

1) I feel recognized by the organization and management when they value my services.

2) Knowing the fact that every individual is evaluated and paid based on common, fair and transparent criteria, will improve interpersonal relationships for better teamwork. Hence, Skeweness of the data for these questions is accepted.

B) Interpretation of Descriptive Statistics:

Since SD is less than mean. Mean is a meaningful value. The mean value and Standard Deviation value indicates that HR managers say that Section II useful in various HR decisions.

Data where Kurtosis is positive, the Curve is tall and narrow and if Kurtosis is negative, the Curve is flat and spread.

Data where skeweness is negative, the curve is left skewed curve and data is piled on Right-side of 'X' axis. However, data where skeweness is positive, the curve is right skewed curve and data is piled on Left-side of 'X' axis. This further confirms the above finding.

4.2.7.2 ANALYSIS OF EMPLOYEE MOTIVATION QUESTIONNAIRE

Purpose: To see if employees agree that HRA information has impact on motivation level of employees (proportion of employees agreeing to given variables is more than 50%).

Statistical Test: SIGN BINOMIAL TEST

Variables and Measurement: Employees were asked to rate their opinion on five point scale (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree). In order to make five point scale relevant to Binomial Test, the 5 point scale was converted to 2 point scale using the "cut point option" in Binomial Test of SPSS. (Disagree is ≤ 3, agree is > 3)

H0: P = 0.5, proportion of employees who agree that HRA information has positive impact on their motivation level is equal to 50%.

H1: P≠ 0.5, proportion of employees who agree that HRA information has positive impact on their motivation level is not equal to 50%

Justification for test proportion: for a nominal variable with two response options, a response of 50-50% for each category indicates an equilibrium situation. Hence

proportion of responses more than 50% to a category suggests more agreeableness or disagreeableness. Hence test proportion was taken as 50%

Level of Significance α = 0.05

Table 4.33: Sign Binomial Test

	Observed Proportion	Asymp.Sig. 2-tailed	H0	Inference
Feeling of Recognition	0.89	.000 [a]	Rejected	More than 50% employees feel that they get a feeling of being recognized if their
Interest in Work	0.94	.000 [a]	Rejected	More than 50% employees feel that they take more interest in their work if it is fairly valued
Contribute more than Investment	0.87	.000 [a]	Rejected	More than 50% employees feel that they will feel like contributing services worth higher than the investments made on them by the organization
Career Advancement	0.85	.000 [a]	Rejected	More than 50% employees feel that they knowledge about their value will help them to get idea about increase in the performance required for career advancement
Develop Skill	0.96	.000 [a]	Rejected	More than 50% employees feel that they knowing their value in the organization will increase their willingness to develop skills to reach at higher level of valuation
Use HRA for Compensation Philosophy	0.81	.000 [a]	Rejected	More than 50% employees feel that they would be happy if Human Resource Accounting value is considered as one of the parameters for defining company's compensation philosophy
Salary Dilemma	0.74	.001 [a]	Rejected	More than 50% employees feel that if their Human Resource Accounting value is known, it would remove the dilemma as to are they getting right salary for the services rendered

Better Teamwork	0.91	.000^a	Rejected	More than 50% employees feel that knowing the fact that every individual is evaluated and paid based on common, fair and transparent criteria, will improve interpersonal relationships for better teamwork
Feeling of Self Contentedness	0.81	.000^a	Rejected	More than 50% employees feel that understanding their monetary contribution towards organisation gives them a feeling of self-contented
Feeling of Self Respect	0.94	.000^a	Rejected	More than 50% employees have a feeling of self-respect when they know that they fairly contributing towards the profitability of the organization.
Feeling of Achieve-Ment	0.96	.000^a	Rejected	More than 50% employees have a feeling of achievement when they know about Self- contribution to the organization

The above table shows the Binomial test statistics for the mentioned variables. The observed proportion, Test Proportion and P value is mentioned. Since for all variables, the P value is less than level of significance, the null hypothesis is rejected. Hence, it conclude that majority of employees agree that knowledge of their HRA information would motivate them to perform better in the organisation.

Following is the table of the one stop view of the entire Statistical Analysis of Data Analysis Chapter. It gives a snapshot of hypotheses, statistical tests in SPSS used to analyse the data of the related each hypothesis and whether the hypothesis is accepted or rejected.

Table 4.47 COMPILED HYPOTHESES TEST RESULTS

No.	Hypothesis	Statistical Test	Hypothesis Acceptance Status
H1	HRA positively influences decision making with respect to *Human Resource Planning*	Sign Binomial Test Standard Binary Logistic Regression Multinominal Logistic Regression	**Accepted**
H2	HRA positively influences decision making with respect to *Performance Management System*	Friedman Chi Square Test	**Accepted**
H3	HRA positively influences decision making with respect to *Training and Development*	Sign Binomial Test Standard Binary Logistic Regression	**Accepted**
H4	HRA positively influences decision making with respect to *Compensation Management*	Sign Binomial Test Friedman Chi Square Test	**Accepted**
H5	HRA positively impacts the decisions related to **Strategic HRM**	Sign Binomial Test Friedman Chi Square Test	**Accepted**
H6	HRA positively influences **Profitability** of the Organisation	Sign Binomial Test Friedman Chi Square Test	**Accepted**
H7	Human Resource Accounting positively influences **Motivation Level of Employees**	Sign Binomial Test	**Accepted**

FINDINGS AND CONCLUSIONS

This research had 5 objectives. The first objective was to study the Human Resource Accounting (HRA) practices used in the IT Companies in India. The second and third objective aims to explore the impact Human Resource Accounting information on Human Resource (HR) Professionals decision and Strategic decisions respectively. The fourth objective was to find the impact of HRA practices on motivation level of employees. The last objective deals with showing the impact of HRA practices on the profitability of the organization.

The Data Analysis showed positive results of HRA implementation on various organizational decisions.

5.1 FINDINGS AND OBSERVATIONS

Objective 1: Top 20 IT Companies were selected based on NASSCOM list.

Table 5.1: NASSCOM Top 20 IT Companies

Top 20 players in IT Services			

	2012 -13	2011 -12	2010 -11	2009 -10	2008 -09	2007 -08

S.No	Company Name	S.No	Company Name
1	Tata Consultancy Services Ltd	11	Genpact India Pvt Ltd
2	Infosys Ltd	12	MindTree Ltd
3	Wipro Ltd	13	Robert BOSCH Engineering and Business Solutions Ltd
4	HCL Technologies Ltd	14	KPIT Technologies Ltd
5	Tech Mahindra Ltd	15	Polaris Financial Technology Ltd
6	iGate	16	Hexaware Technologies Ltd
7	Mphasis Ltd	17	Infotech Enterprise Ltd
8	L&T Infotech Ltd	18	NIIT Technologies Ltd
9	Syntel Ltd	19	Zensar Technologies Ltd
10	CSC, India	20	CGI Information Systems & Management Consultants Pvt Ltd

Note: This list does not include some companies whose corporate headquarters are located outside India, but have significant India-centric delivery capabilities, and have not shared their India-centric revenue figures. Had they been ranked based on their India revenues, companies such as Accenture, Cognizant, HP, Capgemini, Oracle and IBM and would also have appeared in this ranking.

The companies which have implemented the HRA, have been identified through various secondary sources of data like Annual Reports, Newspaper Reports, Research Papers, etc, and through primary source like telephonic conversation with HR managers. The theoretical model used for calculation of HRA by the companies, was understood which subsequently became a base to suffice a secondary objective (giving most acceptable HRA model). The research found that only four IT Companies in India (from the NASSCOM list of top 20) were using Human Resource Accounting (HRA) as a tool for valuation of employees.

Table 5.1: IT COMPANIES USING HRA MODEL

	Company	HRA Model Used
1	Infosys Technologies Ltd.	*Lev &Schwartz Model + Flamholtz Model*
2	KPIT Cummins	*Lev &Schwartz Model*
3	Mahindra Satyam	*Lev &Schwartz Model*
4	Zensar Technologies	*Lev &Schwartz Model*

Observations

These companies were publishing the information in their Annual Reports and information was used only at Strategic level. The reason for implementing HRA could be that these IT Companies operate in the highly competitive 'knowledge economy' market where there is lot of emphasis placed on the quality of the skill set of the workforce.

Thus, by publishing such information in the public domain, they hope to send out the message loud and clear to the investor and clients that they have a highly competent and skilled workforce at their disposal, which in the long run, would boost the stock price of their companies. Samrat (2009) holds the same opinion.

All the companies studied in this research have used the Lev & Schwartz Model or Flamholtz Model for HRA calculations. In fact, other Public Sector Undertakings (PSUs) such as BHEL, SAIL, ONGC, etc have also adopted the same model. Owing to the limited scope of the research, their practices have not been made a part of this study. Nevertheless, the information from the HR managers and employees of these IT companies shed enough light about the utility of HRA in decision making and its impact of motivation.

It was observed that Human Resource Accounting Information is reported in annual reports and reported through Directors' report, Profit and Loss Accounts and Chairman's Report.

Objective 2 and 3: This being an Inductive Study, experts from HR and Finance field were consulted to understand the concept and its problems. The experts included people from Academics, Industry (HR managers) and Chartered Accountants. Their awareness level about the concept was gazed. They were asked their opinion about the problem faced by the concept and probable solutions for the same. Research papers have been published on this part of research (Appendix C). Findings from the research show that lot of people may not appreciate the implementation of the concept as utility is unknown to managers. Hence, there was a need to show an impact of HRA on decisions of HR department, both at tactical and strategic level.

In the hypothesis a detailed view of all the functions to be studied are written. It was decided to find the impact of HRA on Human Resource Planning, Performance Management System, Training and Development and Compensation Management System. A Questionnaire survey was administered to HR professionals of those IT companies to find the impact of HRA on HR decisions and thereby on the profitability of the organization. The finding of the impact study does indicate that majority of the respondents indirectly said that measuring of the value of human resources as important and this information does have impact on their decisions. Evidences were provided that there is a strong relation between (human resources decisions related to HRP, PMS, T&D, Compensation Management, etc) and the HRA information provided to take these decisions.

Observations

While dealing with HR managers of the IT companies under study, it was observed that even though HRA is implemented, they were unaware about the fact. Majority HR managers have just heard about the concept but never actually worked on it.

From the conversation with HR managers, while administering the questionnaire, it was clear HR managers are unhappy with Performance Appraisal process. One of the managers quoted:

"As we all know, IT organization employees work in teams. Consider in a team there are five members who are to be appraised based on 'Bell PMS'. It is very obvious that, one employee would be the best performer, one would be non performer and other three would be average performer. The person who has been rated as non-performer may have performed well but as compared to other four members, he might have lacked by one point. Moreover, there is a possibility that he might have performed better as compared to team members of other teams in the organization, but he has to be rated in the same team. Also, since the rating is all given by their immediate superior, there are obvious chances of been biased. All these things bring a lot of dissatisfaction to employee. In addition to this, if a person is a non-performer, he is a kind of on a 'Probation' period, if he don't perform, he has to leave the organization. This is the result of current PMS."

It was evident that there is a requirement of a better system to manage resources properly.

Moreover, managers were apprehensive about filling the questionnaire. They were scared of that action that would be taken against them, if company information is leaked. However, the questionnaire just had opinion based questions. To the researcher's surprise, it was observed that managers of Tech Mahindra were more co-operative as compared to other companies. Infosys, which claims to be the most transparent company, had the least response rate.

Objective 4: Researcher attempted to understand the impact of HRA on motivation level of employees. Second Questionnaire survey was administered to employees of those IT companies to find the impact of HRA on their motivation level. It was expected that this research will provide a reference to managers of Indian IT organizations to implement HRA effectively in order to assess impact on employees' motivation through valuing them as one of the most profitable and important organization's assets. Accordingly, the HRA impact was investigated and discussed in 4 IT companies so as to

assess how far HRA can be helpful in those organizations. The results showed the positive impact of HRA on employee motivation.

Observation

It was observed that employees were quite indifferent with the organization. They just needed to seek experience from a company with good brand image to enrich their resume to get better opportunity outside. A connect between employee and management was absent.

Objective 5: Researcher aimed to find the impact of HRA on profitability of the organization. Through various questions related to cost cutting initiatives, monitoring investments, right and quick decision making, and the said impact was assessed. The results were positive.

Following is a detailed view of the Findings and the Conclusions thus drawn from the research study:

5.2 FINDINGS AND CONCLUSIONS FROM QUESTIONNAIRE

5.2.1 FINDINGS AND CONCLUSIONS ABOUT IMPACT OF HRA INFORMATION ON HUMAN RESOURCE PLANNING DECISIONS OF HR MANAGERS

The first hypothesis was to find the impact of HRA on HRP decisions. As discussed in the chapter of introduction, lot of activities fall under the array of HRP function. But for the purpose of study, recruitment budget making, selection of a candidate and choosing turnover control proposals were selected.

    i. HRA gives a detailed view of of all the direct and indirect costs required for making recruitment budget. Under recruitment head, indirect costs included costs of identifying a job vacancy, cost of locating a source of manpower and cost incurred in contacting the candidates. In selection process the indirect costs are the cost of time spent in processing applications, cost of designing the test material and cost of conducting tests. When HR managers were provided with this information for taking decisions related to recruitment budget, they agreed

that HRA information will prove helpful in taking decisions pertaining to framing recruitment budget.

ii. At individual level, HRA gives information about the candidate such as Total Expected Contribution and Probability of Staying with the organization. This helps HR managers to compare between the candidates on the basis of their expected services and tenure with the organisation. Thus, HR managers are in a better position to select a suitable candidate for their organization.

iii. In case of employee turnover control proposals, HRA gives information about cost borne by the organization with each employee leaving the organization, proportionate number of employee turnover and total cost of the proposal including additional costs. Also, it provides the HR manager with proposal of highest and lowest investment. Additional and most importantly, it tells mangers about the cost the company has to incur if none of the initiatives are taken. All these information helps HR managers to take correct decisions about choosing the appropriate attrition control proposal.

Hence, it can be concluded that the HRA information helps HR managers in making a recruitment budget. It assists HR managers while selecting a candidate during an interview. It also, supports HR managers in taking decisions related to selecting a proposal for turnover control.

5.2.2 FINDINGS AND CONCLUSIONS ABOUT IMPACT OF HRA INFORMATION ON PERFORMANCE MANAGEMENT SYSTEM DECISIONS OF HR MANAGERS

The second hypothesis was to find the impact of HRA on PMS decisions of HR managers. Number of activities fall under the purview of PMS function, but for the purpose of study few were selected. These are discussed below:

i. Presence of HRA information such as expected contribution of the employee, probability of leaving the organization, profit from each employee and cost of replacing the employee along with performance information, leads to HR

manager's decisions to be concentrated towards one particular person. The possibility of human error reduces in decision making.

ii. HRA information helps them in deciding the increase in the compensation at the time of promotion. When asked HR managers about the impact of HRA information on other activities, they opined that it helps HR managers in planning incentive system (performance based incentives) for individual employee

iii. HRA information helps to compare employees of different designations and across different departments.

iv. It helps in better performance decisions instead of subjective evaluations conducted in Performance Management and to set performance target for selected individuals whose HRA value is high.

v. Also, use of numerical HRA value of an individual will help HR managers in performance decisions as compared to subjective evaluations conducted in Performance Management System.

vi. HRA information helps HR managers to decide rank (job level) of an Employee.

vii. Aggregating the performance of all the employees of the organisation, it can help to predict the organizational performance.

Hence, it can be concluded that, HRA information along with performance record benefits HR managers in taking decision about promoting an employee. It helps in framing performance based compensation system. HRA can prove as best Performance Appraisal Method. Also, it can help to predict organizational performance.

5.2.3 FINDINGS AND CONCLUSIONS ABOUT IMPACT OF HRA INFORMATION ON TRAINING AND DEVELOPMENT DECISIONS OF HR MANAGERS

The third hypothesis was to find the impact of HRA on T&D decisions. For the purpose of study, activities such as selecting a candidate for training, ROI of training and training transition matrix were selected.

While selecting a candidate for training, HRA information was given to HR managers in terms of total expected contribution and probability of staying with the organization,

total investment made by the organization on individual employee till date and Individual ROI on training.

i. On account of presence of HRA information along with traditional training related information, HR managers' decisions are concentrated towards one particular person. Thus, it can be said that the possibility of human error reduces in decision making.

ii. If HRA information in the form of 'Value of an employee before and after attending a training program' is given, it will help HR managers to select a correct training program for employees.

iii. Also, HRA information helps HR managers to analyze Return on Investment of training program and motivate employees to attend those trainings by showing them the impact of attending a training program in terms of transition (promotion) matrix.

Hence, it can be concluded that, HRA information along with traditional training related information helps HR managers in selecting a right candidate for Training. It can help HR managers to choose and implement apt training program with higher ROI. It can also help managers to motivate employees to attend training program.

5.2.4 FINDINGS AND CONCLUSION ABOUT IMPACT OF HRA INFORMATION ON COMPENSATION MANAGEMENT DECISIONS OF HR MANAGERS

The fourth hypothesis was to find the impact of HRA on Compensation related decisions. For the purpose of study, activities fixing salary, allocating benefits, deciding the incentive and performing job evaluations were selected.

i. According to HR managers, HRA information helps HR managers to decide the salary of an individual during the interview and during the promotion. The information about the candidate's expected contribution can give them a clear picture about money to be offered to that individual in the form of compensation.

ii. It also helps HR managers to decide the various allowances to be paid to the individual.

iii. HRA information helps HR managers in performing job evaluations and planning incentive system performance based incentives) for individual employee.

Hence, it is concluded that HRA information has a positive impact on Compensation Management Decisions of HR Managers. Moreover, if compensation decisions are made by using HRA system, the possibility of employees being satisfied with their compensation is higher.

5.2.5 FINDINGS AND CONCLUSIONS ABOUT IMPACT OF HRA INFORMATION ON ORGANIZATIONAL PROFITABILITY

HR function was dishonored on account of unavailability of information about its contribution in the profitability. HR function and its output were never measured in monetary terms and HR managers could never show a tangible output in terms of cash generated. HR department is fortunately or unfortunately, is in a function of maintaining the business. Hence, HR managers are unable to portray a concrete output. As it is rightly said that money saved is money earned and right investments made also leads to Profits.

i. HRA information enables HR managers to save cost otherwise invested in incorrect decisions related to making recruitment budget and investing in correct training programs and right person.

ii. If comparative ROI and promotion charts of all the training programs (like the one mentioned in table above) are given to HR managers, it will help them to choose between the various training programs available and take a correct and cost effective decision.

iii. If HRA value of an individual is high, mangers can set high performance target for him.

All these initiatives will help HR managers to show their role in the profitability in the organization. Thus, it can be concluded that HRA implementations helps HR managers to save cost and thereby increase profitability. Also, it is a tool that is capable of showing HR department's contribution in profitability of the organisation.

5.2.6   FINDINGS AND CONCLUSIONS ABOUT IMPACT OF HRA INFORMATION ON ORGANIZATIONAL STRATEGY

HR function in the pursuit of an identity in the Strategic functioning of the organization, have got involved in corporate decision making. Since major decisions are related to the Human Resources (employees) of the organization, HR personnel have found their role in Board of Directors.

In this study, an attempt was made to understand the impact of HRA on Strategic HR decisions. Based on the various questions asked related to recruitment budget, attrition control, performance management methods and selection of training program the impact can be gauzed.

   i.   As discussed in earlier, HRA information helps HR managers in preparing appropriate recruitment budget and take correct decisions in relation to Attrition control.

   ii. If comparative ROI and promotion charts of all the training are given to them, it will help HR managers choose between the various training programs available.

   iii. Human Resource Accounting can be used as a performance appraisal method, as it would give fair performance reports and serves at tool for multiple functions of HR.

   iv. HRA information helps to predict organizational performance.

Thus, it is concluded that HRA is a management tool for array of Strategic decisions such as making Recruitment Budget, Investing in Trainings, Performance Appraisal Method and Predicting Organizational Performance.

5.2.7   FINDINGS AND CONCLUSIONS ABOUT IMPACT OF HRA INFORMATION ON MOTIVATION LEVEL OF EMPLOYEES

From the second questionnaire, researcher tried to find, does implementation of HRA motivate employees. Maslow's, Herzberg and ERG theory of Motivation were taken as base to study the motivation characteristics of the employees.

   i.   Employees get a feeling of recognition and they take more interest in their work if their services are valued.

   ii. Awareness of investments made by organisation on the employees makes them responsible to contribute services worth higher than the investments.

iii. Knowledge about employee's money value will help them to get idea about increase in the performance required for career advancement and will increase their willingness to develop skills to reach at higher level of valuation. Also, it would remove the dilemma as to are they getting right salary for the services rendered

iv. Employees would be happy if Human Resource Accounting value is considered as one of the parameters for defining company's compensation philosophy.

v. Knowing the fact that every individual is evaluated and paid based on common, fair and transparent criteria, will improve interpersonal relationships for better teamwork

vi. Employees have a feeling of self-respect, achievement and self- contentedness when they know that they fairly contributing towards the profitability of the organization.

Thus, it can be concluded that implementation of HRA in the organisation motivates the employees. Motivated employee is a productive employee. Hence, employees would perform better in jobs, employee attrition would decline,

absenteeism would be lower and positive work environment would be seen in the organisation.

5.2.8   Findings and Conclusion about the Sample Characteristics

i. For first questionnaire, the respondents to the questionnaire were HR Managers of IT companies, majority of them have 9 and more years of experience, and they worked at least on two functions of HR.

ii. For second questionnaire, the respondents to the questionnaire were IT employees who had a formal management degree

iii. The personal characteristics of respondents had no effect on the research fields except for the job title characteristic and experience characteristic.

Hence, it is concluded that research has got suitable respondents for answering the questionnaires and thus got accurate results regarding HRA utility in the investigated organizations.

The overall conclusion that can be drawn out of this research is that although there's no doubt that HRA is a new concept which is very new to most HR managers; it is found

that the HR managers find it very useful in decision making both at Tactical and Strategic Level. HRA implementation has positive impact on motivation level of employees. The significant results of almost all the hypotheses can be interpreted as HR managers will definitely benefited if HRA information is made available to them and the results are universally relevant.

5.3 KEY CONTRIBUTIONS OF RESEARCH

The following were the outcomes of the research:

1. The study confirms the positive impact of HRA on various functions of HR department such as Human Resource Planning, Performance Management System, Compensation Management and Training & Development.

2. It also confirms that HRA has positive impact on Strategic Decision Making of the organization.

3. It proved that HRA and organizational profitability are positively related.

4. The study further confirmed HRA implantation leads to employee motivation.

RECOMMENDATIONS

6.1 RECOMMENDATIONS ABOUT HUMAN RESOURCE PLANNING

i)   It has been concluded from the research that HRA information helps HR managers in making a recruitment budget; hence it is recommended that HR managers should be given ***detailed view of all the direct and indirect costs required for making recruitment budget***.

These costs include:

- Cost of identifying a job vacancy
- Cost of locating a source of manpower
- Cost incurred in contacting candidates (telephone cost and human cost)
- Cost of time spent in processing applications
- Cost of conducting test

Giving the detailed view of all the costs required for the recruitment process will help HR managers to keenly scrutinize the money spent and save the unnecessary investments. These individual activity cost may help them to understand which are the areas where activities can be altered to reduce cost and time.

Also, it can be extended to other activities such as, to find is it economical to call a candidate for interview or is it possible to make facility for skype interviews; contacting candidates through telephonic calls or sending letters for interview; written exam or online exam and many other alternatives can be considered depending upon requirement of an organization.

ii)   An application blank can be designed differently to get additional information about the candidate such as probability of a person leaving the organization, his expected tenure with the organization, his expected contribution towards the organization during his probable tenure and opportunity cost an organization has to incur if that candidate leaves the organization and need to be replaced by another candidate. As confirmed by the research, this type of information when used in resume increases the probability of HR managers selecting a best suitable candidate for job.

It can also be used as a resume format, provided HRA related information is known to the candidate.

Table 6.1: Modified Resume Format/ Application Blank

ABC COMPANY - APPLICATION BLANK

<u>**To be Filled by Employee**</u>

NAME: | | |

Career Objective:

Experience: [ ] Years

Academic Qualification:

	Specialization	Board/ University	Percentage/ Grade	Year of Passing
Master Degree -				
Bachelor Degree -				
12th				
10th				
Other Certifications				

Volunteer Experience:

Achievements:

<u>**To be Filled by HR**</u>

Probability of Leaving the organization:

Probability of Working with the organization:

Expected Conditional Value: Rs.

Expected Realizable Value: Rs.

Opportunity Cost of Turnover: Rs.

iii) The conclusion that HRA information assists HR managers in selecting a candidate during an interview, leads to the suggestion that that they should be provided with the information about the candidate such as ***total expected contribution and probability of staying with the organization***. Normally, selecting a candidate for job is moreover based on interviewer's judgments'. Judgments based on various experiential assumptions such as how much a candidate will be able to contribute, tenure of candidate with previous organization, suitable skills of the candidate, etc. Sometimes judgments may prove wrong, but a written numerical calculated data about these would not. It will assist HR managers take better decisions where possibility of taking inappropriate decisions would be less.

iv) Attrition is one of the major concerns that IT industry is facing for a long time. Companies invest a huge amount to ensure that employees stay with them. There are multiple initiatives which can be undertaken to reduce the attrition. But while taking decisions about selecting one proposal for attrition control out of the available options, all the information such as exact amount to be invested, proportionate turnover control, etc. is not made available to HR managers. Hence, possibility is that even after implementing good attrition control measures, the expected results are not achieved. Therefore, it has been inferred through research that, HRA information supports HR managers in taking decisions related to selection of a proposal for turnover control. Hence, it is suggested that HR managers be given following information:

- ***Cost borne by the organization with each employee leaving the***
- ***organization Proportionate number of employee turnover***
- ***Total cost of the proposal including additional***
- ***costs Proposal with highest and lowest investment***
- ***Cost the company has to incur if none of the initiatives are taken.***

6.2 RECOMMENDATIONS ABOUT PERFORMANCE MANAGEMENT SYSTEM

Researcher concluded that, HRA information along with performance records helps HR managers in taking Performance Appraisal Decisions.

i) Calculations of employee performance using HRA information can be used while selecting a candidate for promotion. Hence, it is recommended that while taking promotion decisions, HR managers should be provided with HRA information such as expected contribution of the employee, probability of leaving the organization, profit from each employee and cost of replacing the employee along with performance information.

ii) Exact contribution of employees towards the organization should be considered in deciding salary of employee at the time of promotion and for planning incentive system (performance based incentives) for individual employee.

iii) A comparison between performances of employees of different designations and across different departments should be done to understand the departments and employees that are working effectively.

iv) High performance target should be set for selected individuals whose HRA value is high, so that their actual competence can be used.

v) Rank (job level) of an Employee should be based on their HRA value.

vi) By calculating HRA value of all the employees of the organization and summing it up gives a picture of organizational performance. Same information can be used to predict the future organizational performance as a whole.

HRA Based Performance Management System

In HRA method, employee performance is evaluated in terms of costs and contributions of employees. Human resource costs include expenditure incurred by the company in hiring, training, compensating and developing people. The contribution of human resources is the monetary value of labour productivity. The cost of human resources may be taken as the standard. Employee performance can be measured in terms of employee contribution to the organization. Employee performance can be taken as positive when contribution is more than the cost and performance can be viewed as negative if cost is more than contribution. Positive performance can be measured in

terms of percentage of excess of employee contribution over the cost of employee. Similarly, negative performance can be calculated in terms of percentage of deficit in employee contribution compared to the cost of employee. These percentages can be ranked to 'Zero Level' as shown in table below:

Table 6.2: HRA Based Performance Rating

Rank	Rating	Surplus/ Deficit of contribution to cost of employee (Figures are in %)
1	Extremely Good Performance	Over 200
2	Good Performance	150-200
3	Slightly Good Performance	100-150
4	Neither poor nor good	0-100
5	Slightly Poor Performance	0
6	Poor Performance	0 to (-50)
7	Extremely Poor Performance	(-50) to (-100)

(VSP Rao, 2007)

Following Format of Appraisal sheet can be used to provide performance information of employees to HR managers for taking decisions related to performance management.

Table 6.3: Performance Appraisal Sheet Format

Total Years of Experience:	Experience with company:
Skills/ Technical knowledge:	Team Size:
Performance Review:	3 years PMS rating:
Upward Feedback:	Competency Rating:
Project Margins:	Assignment Rate:
Special Achievement in 3 years:	Certification and Training:
Education Qualification:	Last date of promotion:
Expected Conditional Value:	***Expected Realizable Value***:
Opportunity Cost of Turnover:	***Probability of Leaving the organization***:

6.3 RECOMMENDATIONS ABOUT TRAINING AND DEVELOPMENT

i) While selecting a candidate for training, HR managers would take decisions based on the past records and performance of the employee according to their own judgments about the person. In such decisions there is a possibility of human error or biasness. On account of presence of HRA information along with traditional training related information, HR managers' decisions are concentrated towards one particular person. Thus, it can be said that the possibility of human error is reduced in decision making.

Hence, it is suggested that HRA information should be given to HR managers in terms of **total expected contribution and probability of staying with the organization, total investment made by the organization on individual employee till date and Individual ROI on training**.

ii) Organizations invest heavily in training programs. Apart from the cost of training, other costs such as infrastructure cost, opportunity cost or cost of lost productivity, etc. are involved. Hence, it is very important for managers to select correct training programs.

In order to assist HR managers to select a correct training program for employees,

HRA information in the form of 'Value of an employee before and after attending a training program' should be given.

Table 6.3: Increase in Employee Value

1	Value of employee before attending training program	Rs. XXXX
2	Value of employee after attending training program	Rs. XXXX
3	Increase	Rs. XX

iii) Transition matrix should be shown to HR managers to analyze Return on Investment of training program and to employees in order to motivate them to attend those trainings.

As discussed by Flamholtz et al. in their research paper Mearsuring ROI of Management Development, here are the Steps for preparing Transition Matrix:

1. Identify service states in your organisation

2. Determine Service States Values

3. Obtain information on the type of state-to state transition made by specific number of employees

4. Separate those individuals who had completed the training program from those who had not

5. Obtain Probabilities of Employee Exit at each level

6. Collate the information in % form as per service states

Table 6.4: TRANSITION MATRIX

Transition Matrix for Non-Participants in Management Development Program

	Year T + 1			
Year T	*Program Manager*	*Project Director*	*Engineer*	*Exit*
Program Manager	60%	0	0	40%
Project Director	35%	35%	0	30%
Engineer	0	25%	50%	25%
Exit	0	0	0	100%

Transition Matrix for Participants in Management Development Program

	Year T + 1			
Year T	*Program Manager*	*Project Director*	*Engineer*	*Exit*
Program Manager	65%	0	0	35%
Project Director	45%	35%	0	20%
Engineer	0	40%	40%	20%
Exit	0	0	0	100%

Researcher seconds the opinion of Flamholtz et.al (1988, pg.9) that the Transition matrix can be used for Personnel Advancement Analysis. This analysis requires developing transition matrices for sub-groups within the firm. It is management's hope that with this information it can determine the characteristics which are evident in those who excel in the organization and in those who do poorly. Management could use these data to determine which characteristics it should emphasize in recruiting and to evaluate the advancement of selected groups within firm.

Thus implementation of HRA and use of its information will lead to selecting right candidate for training. Apt training would be rendered to increase productivity. Moreover, employees would be motivated to attend the training program.

6.4 RECOMMENDATIONS ABOUT COMPENSATION MANAGEMENT

Research concluded that HRA information has a positive impact on Compensation Management Decisions of HR Managers. Hence, following recommendations if implements will help to improve the decisions related to the said function.

i) HRA information should be given to HR managers to decide the salary of an individual during the interview and during the promotion.

ii) The candidate's expected contribution should be given to HR managers, as it gives a clear picture about money to be offered to that individual in the form of compensation. Strauss gave similar opinion in USA TODAY. The information will also help HR managers to decide the special allowances such as magazine allowance, cash allowance, etc. to be paid to the individual.

iii) HRA information should be provided to HR managers while performing job evaluations and planning incentive system performance based incentives) for individual employee.

6.5 EACH EMPLOYEE SHOULD KNOW HIS/ HER HRA VALUE

i) A survey conducted with employees concluded that employees feel motivated if HRA is implemented in the organization and their monetary value is communicated to them. Thus, it is suggested that HRA practices should be implemented in the organization to show employees that organization values them.

Saha (1997, pg. 13) had same opinion that if HRA is implemented, management would be benefited as it would result in developing employees behavior and skill, monitoring their efficiency of performance, lowering turnover and absenteeism and improving human relation.

ii) Employees' value should be communicated to them, in a written format at the very outset of their association with the organization. It can be communicated on the first day of their job through an e-mail and the revision in the value should be shown to them during every performance cycle. They should be explained with the way their value has been calculated and what efforts can be taken by them to enhance their monetary valuation in the organisation. This has to be done in order to get best performance from them.

6.6 RECOMMENDATIONS ABOUT MEASURES TO INCREASE ORGANIZATIONAL PROFITABILITY

HR function was dishonored on account of unavailability of information about its contribution in the profitability of the organisation. HR function and its output were never measured in monetary terms and HR managers could never show a tangible output in terms of cash generated. HR department is fortunately or unfortunately, is in a function of maintaining the business. Hence, HR managers are unable to portray a concrete output.

As it is rightly said "Money Saved is Money Earned" and right investments made also leads to Profits. Following are the recommendations to achieve the said objective:

i) Inappropriate decision making and wastage of resources can occur where there is a lack of relevant and accurate information. HRA information enables HR managers to save cost otherwise invested in incorrect decisions related to making recruitment budget and investing in correct training programs and right person.

ii) Giving comparative ROI and promotion charts of all the training programs (like the one mentioned in table above) are given to HR managers, it will help them to choose between the various training programs available and take a correct and cost effective decision.

iii) Employees with high HRA value, can be given high performance targets.

Also many intangible forces such as motivated workforce, less attrition, healthy work environment, loyalty, commitment to work, etc leads to organizational profitability. Hence, implementing HRA practices will lead to achieve above mentioned effect.

All these initiatives will help HR managers to show their role in the profitability in the organization.

6.7 RECOMMENDATIONS ABOUT BETTER STRATEGIC HR

HR function in the pursuit of an identity in the Strategic functioning of the organization, have got involved in corporate decision making. Since major strategic decisions are related to the Human Resources (employees) of the organization, HR personnel have found their role in Board of Directors.

In this study, an attempt was made to understand the impact of HRA on Strategic HR decisions. Based on the various questions asked related to recruitment budget, attrition control, performance management methods and selection of training program the impact can be gauzed.

i)   HRA information should be used while preparing recruitment budget. It also helps HR managers to correct decisions in selecting a proposal for Attrition control.

ii) Giving comparative ROI and promotion charts of all the training will help HR managers choose between the various training programs available.

iii) Human Resource Accounting method is suggested to be used as a performance appraisal method.

iv) Use of HRA in framing compensation philosophy will motivate employees as they see the framework fair and transparent.

6.8   ORGANISATIONS SHOULD IMPLEMENT HUMAN RESOURCE ACCOUNTING

Every organization should design and implement their own HRA system. It can be tailor made as per the needs of the organisational system. Flamholtz model and Lev & Schwartz Model are the most accepted models. Ray S. (2006,p. 240) described the implementation process of HRA in SAIL. There are four steps in valuation process:

Step 1: *Group all the employees into different service states.*

Each organization has employees in different levels. These levels are divided into different grades based on certain criteria which differ for every company. The combination of these levels with particular grade is called 'service state'. These service states are then re-grouped into various segments on the basis of the age of employees.

Step 2: *Determine the remaining number of years of service of an employee in the company in each service state.*

Assume a retirement age and estimate approximate employee turnover rate. Calculate remaining years of service of an employee using this information.

Step 3: *Remuneration to be spent in future on maintaining each service state is estimated according to relevant age group.*

The remuneration rate to be taken is the average of highest and lowest remuneration in each service state and includes the basic pay, other allowances and social security benefits in future. A provision should be made for normal increase in remuneration and services by including an increment multiplier, approximately 5 p.c.p.a. Another provision need to be made to include occasional or frequent wage hikes and dearness allowances during inflation. Any loss arising out of discrepancies such as leave pay, overtime work can be adjusted by introducing an Employee Efficiency Factor (EEF), which fluctuates between 0.45 to 0.95.

Step 4: *Assessment of total human resources value of the organization.*

Number of employees working in each service state is multiplied with three indices, viz., number of remaining years of service, the remuneration rate and EEF. The total of all the individual service states is aggregated to arrive at the overall value of human resources of the organization.

Implementation of HRA would help managers in getting cost value information of the Human Resources of the organization. It serves as a best management decision making tool and thus, would be very beneficial for the organizations.

6.9 FUTURE SCOPE FOR RESEACH

1. It would be interesting to know the results of the same study with a larger sample size but the result may not vary to the great extent. Research can be conducted to understand the impact HRA has in other Industries.

2. Secondly, the perception study did not capture the views of employees belonging to other functions like Finance, Marketing etc. Their views could have shed some light on the adoption of HRA. This aspect can be further explored by researchers.

3. Also studies can be taken up to understand the HRA impact in the light of various other functions of HR department.

4. It would be interesting to observe the functioning of organization before and after implementation of HRA, this could be an interesting area of future research, especially in Indian IT sector context.

Table 6.6: Summarized Research Gap – Objective – Methodology – Conclusions – Recommendations Grid

RESEARCH GAP	OBJECTIVES	METHODOLOGY	CONCLUSIONS	RECOMMENDATIONS
Unawareness of HRA	To make an overall analysis of HRA practices in IT sector in India	Analysis of Secondary Source to know the companies which have implemented HRA and the model used	4 IT Companies have implemented HRA practices. Mainly Lev and Schwartz or Flamholtz model is used	Every organization should implement HRA practice
No reference of use of HRA on Strategic Decisions	To find the impact of HRA on Strategic Decision Making	A hypothesis to find impact of HRA on Strategic HR functions was framed, and it was analyzed through Questionnaire administered on HR managers	HRA information has positive impact on Strategic HR decisions	HRA information used be used at strategic level for decision making
Lack of knowledge about the Utility of the HRA information	To find the impact of HRA on HR Decision Making	Four hypotheses were framed to check the impact of HRA on major HR functions i.e. HRP, PMS, T&D and Compensation. It is analyzed through Questionnaire administered on HR managers	HRA information has positive impact on HR decisions related to HRP, PMS, T&D and Compensation	HRA information should be given to HR managers for decisions making
No reference of use of HRA on Profitability Decisions	To prove the role of HRA practices in profitability of the organization	Cost Cutting initiative related questions were asked to HR managers and impact of correct decisions was analyzed through questionnaire method	HRA information has positive impact on Profitability of the Organization	HRA information should be used to save cost and avoid incorrect decision making
No literature was available on impact of HRA on employees	To find the impact of HRA on motivation level of employees	A hypothesis to find impact of HRA on Motivation level of Employees was framed, and it was analyzed through Questionnaire administered on IT employees	HRA practices motivates employees	HRA value should be communicated to the employees

REC RUITMENT BUDGET

SECTIO N I:

Sr . No.	ACTIVITY	COST	Sr. No.	ACTIVITY	COST	TOTAL
	REC RUITMENT C OST			S ELECTION COST		
1	Advertising Cost	50,000	4	S election Board	50,000	
2	Agency Fees	1,00,000	5	T est Material Expenses	30,000	
3	Personnel Dept. Cost	20,000	6	E xpenses on Medical	50,000	
			7	Other Expens es	1,00,000	
	TOTAL	1,7 0,000			2,30,000	4 ,00,000

SECTION II:

Sr . No.	ACTIVITY	Co st Incurred		Total
		Direct	Indirect	
	REC RUITMENT C OST			
1	Cost of Identifyin g Job Vacancy		10,000	
2	Cost of Locating t he source of manpower		5,00 0	
3	Advertising Cost	50,000		
4	Cost incurred in c ontacting can didates		10,000	
5	Agency Fees	1,00,000		
	SELECTION COS T			
5	Cost of Application Blank	5,000		
6	Cost of time spent in processing applications		8,00 0	
7	Cost of Designing a Test Material		7,00 0	
8	Cost of Test Material	10,000		
9	Cost of conductin g test (invigilator's fees,		10,000	
10	Selec ting Board M embers sittin g fees	1,00,000		
11	T.A and Food and other expen ses of Selection Board	50,000		
12	T.A. and D.A paid to the candidate	25,000		
13	Expen ses on Medical Examination	20,000		
	TOTAL	3,50,000	50,000	4,00,000

Q 1)	Based on above mentioned information, which section gives you the clear picture of the money required for recruitment process?	◉ Section I	◉ Section II	
Q 2)	Which information section will help you to prepare an appropriate budget?	◉ Section I	◉ Section II	
Q 3)	Considering the cost cutting initiatives, which information do you think will help you to understand which cost can be saved?	◉ Section I	◉ Section II	

Q 4)	How important was the Section II information in making recruitment budget?	◉ Most Important	◉ Important	◉ Neutral	◉ Less Important	◉ Unimportant
Q 5)	Please indicate the level of relevancy of the Se ction II information in making recruitment budget.	◉ Most Relevant	◉ Relevant	◉ Neutral	◉ Less Relevant	◉ Irrelevant

Following are the Resume sup plied to you for final selection of a candidate for your company:

SECTIO N I

	Mr. KESH AV SHAHANE		Mr. BU SHAN PA TIL
1	Experience: **6 years**	1	Experien ce: **4 years**
2	Academic Qu alification:	2	Academic Qualificatio n:
	a) MBA – **60 %**		a) MBA – **80%**
	b) BBA – **66 %**		b) BBA – **82%**
	c) HSC – **62 %**		c) HSC – **81%**
3	Result of **written test** out of 10 points – **8 points**	3	Result of **written test** o ut of 10 poin ts – **10 points**
4	**Interview** Sc ore out of 10 p oints – **10 points**	4	**Interview** Score out of 10 points – **8 points**

Q 1) Whom would you Select for your organis ation?   ◉ Mr. Keshav Shahane   ◉ Mr. B hushan Patil

Following are the Resume sup plied to you a long with ad ditional Hu man Resource Accounting Information of each can didate:

SECTION II

	Mr. KESH AV SHAHANE		Mr. BU SHAN PA TIL
1	Experience: **6 years**	1	Experien ce: **4 years**
2	Academic Qu alification:	2	Academic Qualificatio n:
	a) MBA – **60 %**		a) MBA – **80%**
	b) BBA – **66 %**		b) BBA – **82%**
	c) HSC – **62 %**		c) HSC – **81%**
3	Result of **written test** out of 10 points – **8 points**	3	Result of **written test** o ut of 10 poin ts – **10 points**
4	**Interview** Sc ore out of 10 p oints – **10 points**	4	**Interview** Score out of 10 points – **8 points**
5	Probability of **Staying** with Organisation – **60%**	5	Probability of **Staying** with Organisa tion– **90%**
6	Probability of **Leaving** Organisation – **4 0%**	6	Probability of **Leaving** Organisation – **10%**
7	**Expected Co ntribution** to the organisation: **50 Crore**	7	**Expected Contribution** to the organisation: **90 Crore**

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
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Email: admin@writekraft.com
Web: www.writekraft.com

Q 1) Whom would you Select for your organisation? ◉ Mr. KeshavShahane   ◉ Mr. Bhushan Patil

Q 2) Which information do you think will help you to take better selection decision ?   ◉ Section I   ◉ Section II

		😁	🙂	😐	😞	😡
Q 3)	How important was the Section II information supplied to you in making selection decision?	◉ Most Important	◉ Important	◉ Neutral	◉ Less Important	◉ Unimportant
Q 4)	Please indicate the level of relevancy of the Section II information supplied to you for selection decision.	◉ Most Relevant	◉ Relevant	◉ Neutral	◉ Less Relevant	◉ Irrelevant
Q 5)	If the monetary contribution of an employee is given (in addition to traditional information), it help to decide the salary of that employee during the interview?	◉ Strongly Agree	◉ Agree	◉ Neutral	◉ Disagree	◉ Strongly Disagree
Q 6)	Will you consider monetary contribution of an employee while allotting benefits and allowance to him/her?	◉ Strongly Agree	◉ Agree	◉ Neutral	◉ Disagree	◉ Strongly Disagree
Q 7)	Do you think HRA information can be used for Job Evaluation (for comparing various jobs to fix pay structure)?	◉ Strongly Agree	◉ Agree	◉ Neutral	◉ Disagree	◉ Strongly Disagree

TURNOVER CONTROL PROPOSAL SECTION I

The attrition rate of your company is very high. Top management wants to undertake some initiatives to control the attrition. You as an HR manager of company have received four proposals for controlling attrition. Based on the following information, you have to decide which proposal you will choose.

Sr. No	PROPOSAL	Employee Turnover Reduction	Cost Incur red
I	Increase employees to reduce workload	40%	96,000
II	Allow flexible Working hours to Employees	50%	1,13,000
III	Increase salaries of all the employees	60%	1,30,000
IV	Conduc t Team building activities	70%	1,45,000

Q 1) Based on the above information, which proposal will you choose? (* Please choose the proposal based on numeric information and not the type of proposal)

◉ Proposal I   ◉ Proposal II   ◉ Proposal III   ◉ Proposal IV

TURNOVER CONTROL PROPOSAL SECTION II

For the same Turnover Control decision, additional HRA information along with the earlier information is provided.

Cost borne by organisation with each employee leaving the organisation = Rs. 11,000

Expected Turnover = 30 employees.

Sr. No	Proposal	Expected Cost of Proposal	Proportionate No. of turnove r	Turn over Cost	Additional Training Costs	Total Cos ts Involved
I	Increase emplo yees to reduce workload	96,000	60% of 30 = 18	11,000X 18 =1,98,000	20,000	3,14,000
II	Allow flexible Working hours to Employees	1,13,000	50% of 30 = 15	11,000X 15 =1,98,000	-	2,78,000
III	Increase salaries of all the employees	1,30,000	40% of 30 = 12	11,000X 12 =1,98,000	-	2,62,000 (Lowest In vestment)
IV	Conduct Team building activities	1,45,000	30% of 30 = 9	11,000X 9 =1,98,000	-	2,78,000
V	If none of the proposals are selected	-	100% of 30 = 30	11,000X 30= 3,33,000	32,000	3,33,000 (Highest I nvestment)

Q 1) Based on the above information, which proposal will you choose? (* Please choose the proposal based on numeric information and not the type of proposal)   ◉ Proposal I   ◉ Proposal II   ◉ Proposal III   ◉ Proposal IV   ◉ Proposal V

Q 2) Which information helped you for better decision making?   ◉ Section I   ◉ Section II

Q 3)	Do you think, p roviding Section II information enables you to save cost otherwise invested in inc orrect decisions?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 4)	How important was the information supplied to you in making turnover control decision?	Most Important	Important	Neutral	Less Important	Unimportant
Q 5)	Please indicate the level of relevancy of the information supplied to you for tu rnover control decision	Most Relevant	Relevant	Neutral	Less Relevant	Irrelevant

PERFORMANCE MANAGEMENT SYSTEM

Sr. No	Name of Employee	**Money spent** by organization on employee	**Contribution** (in Rs.) of individual employee to organization	**Profit** from each employee	Cost of **replacing** each employee	Probability of **leaving** the organisation
1	Manoj Desai	1 lakh	4 lakh	3 lakh	2 lakh	40%
2	Nitin Sinha	1.5 lakh	5 lakh	3.5 lakh	3 lakh	50%
3	Aditya Desai	2 lakh	5 lakh	3 lakh	2 lakh	40%
4	Vishal Tembre	2 lakh	6.5 lakh	4.5 lakh	3 lakh	60%
5	Tushar Patil	2.5 lakh	7 lakh	4.5 lakh	2 lakh	40%

Q 1) Based on above information, whom would you select for next promotion?

Manoj Desai   NitinSinha   Aditya Desai   Vishal Tembre   Tushar Patil

Q 2)	Can above mention information help you in planning incentive system (performance based incentives) for individual employee?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 3)	How important was the information supplied to you in making promotion decision?	Most Important	Important	Neutral	Less Important	Unimportant
Q 4)	Please indicate the level of relevancy of the information supplied to you for promotion decision.	Most Relevant	Relevant	Neutral	Less Relevant	Irrelevant
Q 5)	This information help you to some extent to decide the compensation of employee after his promotion decision	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 6)	If value of employee is the criteria for performance appraisal, it will help you compare employees of different designations and across different departments.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 7)	Do you think use of numerical HRA value of an individual will help in performance decisions as compared to subjective evaluations conducted in Performance Management System?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 8)	Employees would be motivated to work well if the performance criteria are fair and transparent.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 9)	If HRA value of an individual is high, can management set high performance target for him?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q10)	Will HRA information give you an idea about how effectively are your company resources used?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q11)	HRA value of an employee should be directly proportional to rank (job level) of an Employee.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q12)	Availability of Performance data of each employee will allow me to predict the organisational performance	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q13)	Performance Appraisal method are costly and time consuming. Do you think employee with higher value can be appraised based on Human Resource Accounting method and other employees can be appraised based on simpler methods?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

TRAINING DECISION INFORMATION SECTION I

You as an HR manager have to send a candidate for company sponsored Business Communication training program worth Rs. 20,000. Following data is available in addition to the traditional information given for training decisions.

|	**Mr. KESHAV SHAHANE**		**Mr. BUSHAN PATIL**
1	Designation: Project Manager	1	Designation: Project Manager
2	Experience: **8 years**	2	Experience: **10 years**
3	Performance Points out of 10: **6.0**	3	Performance Points out of 10: **4.0**
4	Total investment made till date: **10 lakhs**	4	Total investment made till date: **15 lakhs**

Q 1) Whom would you select for training?   Mr. KeshavShahane   Mr. Bushan Patil

TRAINING DECISION INFORMATION SECTION II

For the same training investment decision, in addition to above information, Human Resource Accounting information of each candidate is given below:

	Mr. KESHAV SHAHANE		Mr. BUSHAN PATIL
1	Designation: Project Manager	1	Designation: Project Manager
2	Experience: **8 years**	2	Experience: **10 years**
3	Performance Points out of 10: **6.0**	3	Performance Points out of 10: **4.0**
4	Contribution to organization: **5 Crore**	4	Contribution to organization: **3 Crore**
5	Probability of leaving an organization: **30%**	5	Probability of leaving an organization: **50%**
6	Total investment made till: **10 lakhs**	4	Total investment made till date: **15 lakhs**
7	ROI on training: **8 lakhs**	7	ROI on training: **5 lakhs**

Q 1)	Whom would you select for training?	○ Mr. Keshav Shahane			○ Mr. Bushan Patil	
Q 2)	Which information section helped you for better training related decision?	○ Section I			○ Section II	
		○ Most Important	○ Important	○ Neutral	○ Less Important	○ Unimportant
Q 3)	How important was the information supplied in Section II in making training investment decision?	○ Most Important	○ Important	○ Neutral	○ Less Important	○ Unimportant
Q 4)	Please indicate the level of relevancy of the information supplied in Section II for training investment decision.	○ Most Relevant	○ Relevant	○ Neutral	○ Less Relevant	○ Irrelevant

TRAINING BUDGET FORMULATION

Using the HRA information, the expected value of employee after attending the training program is calculated.

Impact of Training on Employee Value		
1	Value of employee **before** attending training program	$80,931
2	Value of employee **after** attending training program	$93,541
3	**Increase** in employee value after attending the training program	**$12,610**

Q 1)	Adding this information to traditional training related information, help you to take a decision about the training program for employees?	○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree
Q 2)	Does this information help to analyse Return on Investment of training program?	○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree
Q 3)	If comparative ROI of all the training programs are given, will it help you choose between the various training programs available and take a correct and cost effective decision?	○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

MANAGEMENT DEVELOPMENT PROGRAMS

Following are the promotions record of the employees. First table is promotion record of non-participant employees of training programs and second table is promotion record of employees who have participated.

Transition Matrix for Non-Participants in Management Development Program				
	Year T + 1			
Year T	Program Manager	Project Director	Engineer	Exit
Program Manager	60%	0	0	40%
Project Director	35%	35%	0	30%
Engineer	0	25%	50%	25%
Exit	0	0	0	100%

* Table shows that a Project Director has 35% chances of becoming a Program Manager and 35% chances of remaining a Program Director, and 30% chances of leaving an organisation.

Transition Matrix for Participants in Management Development Program				
	Year T + 1			
Year T	Program Manager	Project Director	Engineer	Exit
Program Manager	65% (5% increase)	0	0	35% (5% decrease)
Project Director	45% (10% increase)	35%	0	20% (10% decrease)
Engineer	0	40% (15% increase)	40%	20% (5% decrease)
Exit	0	0	0	100%

* Table shows that, after attending the Management Development Program, the chances of Project Director of becoming a Program Manager has increased by 10% and his chances of leaving an organisation has decreased by 10%

Q 1)	This information gives a clear picture of the impact of training programs on employees.	○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree
Q 2)	If comparative promotion charts of all the training programs are given, it will help you choose between the various training programs available and take a correct and cost effective decision.	○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree
Q 3)	Above Promotion charts if shown to employee, it will motivate them to attend the training program.	○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree
Q 4)	All the above information tables will help you save cost by investing in correct training program and correct person.	○ Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree

Please Specify   A) Designation   B) Name   C) Total Experience

_____   _____   0 - 3 years   3 - 6 years

6 - 9 years   9 and more years

THANK YOU FOR YOUR TIME WISH YOU SUCCESS IN 2014 IN ALL WALKS OF LIFE *

TO FIND THE IMPACT OF HUMAN RESOURCE ACCOUNTING INFORMATION ON MOTIVATION LEVEL OF EMPLOYEES

Human resources have been identified as their main source of competitive advantage by many organisations in today's economy. Building, machines, computers alone cannot run a company without employee. So, **every employee should be valued. The method of valuing employee in monetary (money) terms is called Human Resource Accounting.**

Human Resource Accounting measures both the cost invested by the organisation on employee (recruit, select, hire, train and develop employee) and the value (employee service contribution to organisation) of an employee.

Human Resource Accounting helps the management in Employment and utilisation of Human Resources; it helps in deciding transfers, promotion, training and retrenchment of human resources. If **HRA is implemented** in your organisation**, each employee will know his/ her value in Rs. (money) in the organisation**.

* Please tick (√) in the appropriate box.

E.g	√Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Q 1)	Were you aware that your organisation is undertaking Human Resource Accounting?		Yes		No	
Q 2)	I feel recognized by the organization and management when they value my services.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 3)	I will take more interest in my work if I understand that it is being fairly valued.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 4)	Awareness of investments made by organisation on me makes me responsible to contribute services worth higher than the investments.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 5)	Knowing about my money value in the organization will give me an	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

	idea about increase in the performance required for my career advancement.					
Q 6)	Knowing my value in the organization will increase my willingness to develop my skills to reach at higher level of valuation	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 7)	I would be happy if Human Resource Accounting value is considered as one of the parameters for defining company's compensation philosophy	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 8)	If my Human Resource Accounting value is known to me, it would remove the dilemma as to am I getting right salary for the services rendered.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 9)	Knowing the fact that every individual is evaluated and paid based on common, fair and transparent criteria, will improve interpersonal relationships for better teamwork.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 10)	Understanding my monetary contribution towards organisation gives me a feeling of self- contented	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q 11)	I have a feeling of self-respect when I know I am fairly contributing towards the profitability of the organisation.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Q 12) Please specify your Organisation

_____

Q 13) Please specify your Designation

_____

Q 14) Please specify your Total Experience

_____

Thank you for your valuable time

OPINIONS OF HR MANAGERS/ EXPERTS ON RECOMMENDATIONS OF THE THESIS

- **Sughosh Pramod Tembre** Nov 10, 2014 at 2.31pm

Dear Mam,

Thanks for your mail, at the outset please accept my honest appreciation to all the hard work you have placed during this research.

Below are my thoughts;

It is prudent to implement HRA system customized to organization needs and nature of business, more importantly the employee segments. A careful review of your suggestions made, shows how a HRA can help in strategic HR and decision making, especially with increased focus on cost competitiveness the benefits of implementing HRA in the functions of recruitment, manpower planning and training and development. However, I also feel that its large scale implementation for PMS may become a challenge due to scalability and non-standard goals in large organizations.

I am sure your suggestions would benefit the body of knowledge and as rightly highlighted by you, would improve focus on tangible outcomes and bottom-line.

Wishing you all the very best!

 Warm Regards,
 Sughosh Tembre
HRD, Infosys Ltd.
Mail id: sughosh_tembre@infosys.com | Mobile: +91-9922926336| VOIP: 2040256045

- **Dipti Inamdar**

Oct 31, 2014 at
3.22pm Dear Shripada,

Greeting for the day !

I have been through the HR Accounting suggestions in your Ph D. thesis.

I have found that the recommendations very practical,and they can be implemented by various organisations. It would add an impetus to the decision making at Organisational level by various HRs.

Thanks and Regards
Dipti Deo Inamdar
HR Consultant and Trainer
9623186553

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