Chapter 3: RESEARCH METHODOLOGY

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

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

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

H₁: HRA positively influences decision making with respect to Human Resource Planning

H₂: HRA positively influences decision making with respect to Performance Management System

H₃: HRA positively influences decision making with respect to Training and Development

H₄: HRA positively influences decision making with respect to Compensation Management

H₅: HRA positively impacts the decisions related to Strategic HRM

H₆: HRA positively influences Profitability of the Organisation

H₇: 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
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 3.1: Research Conceptual Framework
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 chosen 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 opinion poll 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 managers 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 is 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 \( n = \frac{Z^2 \cdot (p \cdot q)}{e^2} \)

where, \( n \) = sample size
\( p \cdot q \) = 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, \( n = \frac{1.63^2 \cdot (0.5 \cdot 0.5)}{0.12^2} = 46 \)

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
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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 \((\beta)\) in the model. A Wald test calculates a Z statistic, which is:

\[
Z = \frac{\hat{\beta}}{SE(\hat{\beta})}
\]

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:

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

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.

<table>
<thead>
<tr>
<th>Preferring the Section</th>
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</table>
| 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.

<table>
<thead>
<tr>
<th>Importance of Information</th>
</tr>
</thead>
</table>
| 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.

<table>
<thead>
<tr>
<th>Relevance of Information</th>
</tr>
</thead>
</table>
| 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.
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.

<table>
<thead>
<tr>
<th>Likert Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Agree</td>
</tr>
<tr>
<td>Neutral</td>
</tr>
<tr>
<td>Disagree</td>
</tr>
<tr>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Turnover Control Proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal I</td>
</tr>
<tr>
<td>Proposal II</td>
</tr>
<tr>
<td>Proposal III</td>
</tr>
<tr>
<td>Proposal IV</td>
</tr>
<tr>
<td>Proposal V</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Selecting candidate for Promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manoj Desai</td>
</tr>
<tr>
<td>Nitin Sinha</td>
</tr>
<tr>
<td>Aditya Desai</td>
</tr>
<tr>
<td>Vishal Tembre</td>
</tr>
<tr>
<td>Tushar Patil</td>
</tr>
</tbody>
</table>

8. Respondents were asked their years of experience on job. Employees with more experience were rated higher.
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<table>
<thead>
<tr>
<th>Years of Experience</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 years</td>
<td>1</td>
</tr>
<tr>
<td>3-6 years</td>
<td>2</td>
</tr>
<tr>
<td>6-9 years</td>
<td>3</td>
</tr>
<tr>
<td>9 and more years</td>
<td>4</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Awareness of HRA concept</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
</tr>
</tbody>
</table>

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 managers 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 smilies 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**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>ACTIVITY</th>
<th>COST INCURRED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>RECRUITMENT COST</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Advertising Cost</td>
<td>50,000</td>
</tr>
<tr>
<td>2</td>
<td>Agency Fees</td>
<td>1,00,000</td>
</tr>
<tr>
<td>3</td>
<td>Personnel Dept. Cost</td>
<td>20,000</td>
</tr>
<tr>
<td>4</td>
<td><strong>SELECTION COST</strong></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Selection Board Expenses</td>
<td>50,000</td>
</tr>
<tr>
<td>6</td>
<td>Test Material Expenses</td>
<td>30,000</td>
</tr>
<tr>
<td>7</td>
<td>Expenses on Medical Exam.</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>Other Expenses</td>
<td>1,00,000</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>4,00,000</strong></td>
</tr>
</tbody>
</table>

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

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

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 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

#### SECTION II

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

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

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 evaluation 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>
<thead>
<tr>
<th>No</th>
<th>Proposal</th>
<th>Expected No. of Proposal</th>
<th>Expected Turnover</th>
<th>Proportionate No. of turnover</th>
<th>Per Turnover</th>
<th>Turnover Cost</th>
<th>Additional T &amp; D</th>
<th>Total Costs Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Increase number of employees to reduce workload</td>
<td>96,000</td>
<td>30</td>
<td>60% of 30 = 18</td>
<td>11,000</td>
<td>11,000 X 18 =1,98,000</td>
<td>20,000</td>
<td>3,14,000</td>
</tr>
<tr>
<td>II</td>
<td>Reduce Working Hours of Employees</td>
<td>1,13,000</td>
<td>30</td>
<td>50% of 30 = 15</td>
<td>11,000</td>
<td>=1,65,000</td>
<td>-</td>
<td>2,78,000</td>
</tr>
<tr>
<td>III</td>
<td>Increase salaries of all the employees</td>
<td>1,30,000</td>
<td>30</td>
<td>40% of 30 = 12</td>
<td>11,000</td>
<td>=1,32,000</td>
<td>-</td>
<td>2,62,000 (Lowest Investment)</td>
</tr>
<tr>
<td>IV</td>
<td>Implement Engagement Techniques</td>
<td>1,45,000</td>
<td>30</td>
<td>30% of 30 = 9</td>
<td>11,000</td>
<td>= 99,000</td>
<td>-</td>
<td>2,78,000</td>
</tr>
<tr>
<td>V</td>
<td>If none of the proposals are selected</td>
<td>-</td>
<td>30</td>
<td>100% of 30 = 30</td>
<td>11,000</td>
<td>= 3,33,000</td>
<td>32,000</td>
<td>3,33,000 (Highest Investment)</td>
</tr>
</tbody>
</table>
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

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

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
Chapter 3: RESEARCH METHODOLOGY

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.

<table>
<thead>
<tr>
<th>Mr. KESHAV SHAHANE</th>
<th>Mr. BUSHAN PATIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Designation: Project Manager</td>
<td>Designation: Project Manager</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Experience: 8 years</td>
<td>Experience: 10 years</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Performance Points out of 10: 6.0</td>
<td>Performance Points out of 10: 4.0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Total investment made till date: 10 lakhs</td>
<td>Total investment made till date: 15 lakhs</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Mr. KESHAV SHAHANE</th>
<th>Mr. BUSHAN PATIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Designation: Project Manager</td>
<td>Designation: Project Manager</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Experience: 8 years</td>
<td>Experience: 10 years</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Performance Points out of 10: 6.0</td>
<td>Performance Points out of 10: 4.0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Contribution to organization: 5 Crore</td>
<td>Contribution to organization: 3 Crore</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Probability of leaving an organization: 30%</td>
<td>Probability of leaving an organization: 50%</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Total investment made till date: 10 lakhs</td>
<td>Total investment made till date: 15 lakhs</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>ROI on training: 8 lakhs</td>
<td>ROI on training: 5 lakhs</td>
</tr>
</tbody>
</table>
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, M.L., 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

<table>
<thead>
<tr>
<th></th>
<th>Participant:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$ 80,931</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Non-Participant:</td>
<td>$ 93,541</td>
</tr>
<tr>
<td>3</td>
<td>Increase</td>
<td>$ 12,610</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>Value of employee before attending training program</th>
<th>$80,931</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Value of employee after attending training program</td>
<td>$93,541</td>
</tr>
<tr>
<td>2</td>
<td>Increase in employee value after attending the training program</td>
<td>$12,610</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Transition Matrix for Non-Participants in Management Development Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year T</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>Program Manager</strong></td>
</tr>
<tr>
<td><strong>Project Director</strong></td>
</tr>
<tr>
<td><strong>Engineer</strong></td>
</tr>
<tr>
<td><strong>Exit</strong></td>
</tr>
</tbody>
</table>

*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.*

<table>
<thead>
<tr>
<th>Transition Matrix for Participants in Management Development Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year T</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>Program Manager</strong></td>
</tr>
<tr>
<td><strong>Project Director</strong></td>
</tr>
<tr>
<td><strong>Engineer</strong></td>
</tr>
<tr>
<td><strong>Exit</strong></td>
</tr>
</tbody>
</table>

*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.
Chapter 3: RESEARCH METHODOLOGY

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 position. 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 organisation, 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. Opnion 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.

3.12 REFERENCES


Handcock M.S. and Gile K.J., 2011. On the Concept of Snowball Sampling, August 2, p.3


