THE IMPACT OF HUMAN RESOURCE ACCOUNTING INFORMATION SYSTEM (HRAIS) ON HUMAN RESOURCE MANAGEMENT PRACTICES OF THE BANKING SECTOR IN BANGLADESH

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Abstract

Human Resource Department relies on innumerable information to make policies and decisions for smooth practices of human resource management, such information include accounting information, financial information, economic information, or market information etc. The another newly evolved information system is Human Resource Accounting Information System (HRAIS) which is normally used for human resource accounting information processing, and is rarely used in Bangladesh. But now-a-days some of the firms in Bangladesh use this approach partially to provide benefits for the human resource accounting information to different departments of the firm. This study wanted to explore, whether the human resource accounting information system is familiar in HRM practices in the banking sector of Bangladesh and to analyze the impact of HRAIS on the performance of HRM practices. A questionnaire survey was conducted to collect data for this study. The sampling area was mainly the HR executives of different leading banks in Bangladesh. Consequently this study collected data from 120 HR executives of 20 different banks. The results indicated that the human resource accounting information system was familiar to almost all of the HRD of the banks and the HRAIS had a significance impact on the performance of HRM. The major contributing area of Human Resource Accounting Information System (HRAIS) was on job design & analysis, human resource planning, recruitment & selection, and training & development and performance appraisal etc. The study concluded that proper implementation and execution of HARIS can give competitive advantages to the organization.

Keywords: Human Resource Department (HRD), HR executives, Human Resource Planning, Human Resources Accounting (HRA), Human Resources Accounting Information System (HRAIS).

1. Introduction

The word human has been given so many linked words based on its importance like assets resource capital etc. Human is a living being spends whole life in combination of both organizational and family life. To make human as human resource incurs cost. Cost should be always effective. Human resource accounting is simply the calculation of cost associated with human to become human resources in any organization. Flamholtz (1971) defined HRA as "the measurement and reporting of the cost and value of people in organizational resources". It is simply the activity of knowing the cost invested for employees towards their recruitment, training them, payment of salaries & other benefits paid and in return knowing their contribution to organization towards its profitability. Stephen Knauf (1983) 'HRA is the measurement and quantification of human organiza¬tional inputs such as recruiting, training, experience and commitment'. Cost effectiveness always depends on availability of proper amount of information. Proper and smooth functioning of human resource department solely depends on proper information system and based on these continuous demands human resource information system emerged. HRIS provides the capability to more effectively plan, control and manage HR costs; achieve improved efficiency and quality in HR decision making; and improve employee and managerial productivity and effectiveness. HRAIS is mainly an extensive use of both human resource accounting and information system. It is ongoing interaction between human resource valuation and human resource information.

1.1 Concept of Human Resource Accounting (HRA)

Bullen and Eyler (2010) stated that Human Resource Accounting involves accounting for expenditure related to human resources as assets as opposed to traditional accounting which treats these costs as expenditures that reduce profit. Woodruff (1973) defined Human Resource Accounting as the identification, accumulation and dissemination of information about Human Resources in dollar or Naira term. He further explained that Human Resource Accounting is the systematic accumulation of information about changes in investments made in human resources and reporting back that information to operating managers in order to assist them to make better decisions than they would have been able to make without such additional information. Raghav (2011) stated that Human Resource Accounting is a method of measuring the effectiveness of personnel management activities and the use of people in an organization. Parameswaran and Jothi (2005) referred to the American Accounting Association's definition of human resource accounting as the measuring of data of human resources and communicating the information to the interested parties. Going by the various definitions above, human resource accounting in simple term is accounting for the value of people in organization to enhance information for decision making by the users of financial information. Parameswaran and Jothi (2005) identified and categorized the objectives of human resource accounting into three considering the needs of the various users of financial information as Internal, Internal and External, and External. The internal objectives relate to the improvement of the internal management of human resources in an organization, while the Internal and External objectives of human resource accounting are designed to meet specific information requirements of both the internal and external users of financial statements. The external objectives on the other hand are specific objectives that are designed to meet financial information requirements that are peculiar to the external users of financial statements. According to the American Accounting Association's Committee (1973), Human Resource Accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties. Thus, HRA involves measurement of all the costs related with the employees such as expenses incurred for recruitment,

placement, training, development etc. Moreover, it includes the quantification of the economic value of the employees.

1.2 The concept of Human Resource Information System (HRIS)

HRIS can be briefly defined as integrated systems used to gather, store and analyze information regarding an organization's human resources (Hedrickson, 2003). HRIS is used to acquire, store, manipulate, analyze, retrieve and distribute information about an organization's human resources." (Tannenbaum 1990).Human Resources (HR) and information technology are the two elements that many firms are learning to use as strategic weapons to compete (Jenkins and Lloyd, 1985). To capitalize on the synergy between these two assets, human resource information systems (HRIS) is an emerging area that may lead human resource management into a new era. In a 1991 report on HRIS, Richards-Carpenter (1991) noted that "If the personnel function is to take the next big step in its development, it will have to integrate with information technology". HR executive of Federal Express, James Perkins believes that now and in the future, excellence in HR will be defined through the strategic use of information (O'Connell, 1994). HRIS are designed to support the planning, administration, decision-making, and control activities of human resources management (De Sanctis, 1986). They have enormous potential to make HR more competitive and thus enable human resource departments to become strategic partners in business organizations (Broderick and Boudreau, 1992; Kossek, 1994).

1.3 The Concept of Human Resource Accounting Information System

One of the newly emerging concepts in today's management practices is Human Resource Accounting Information System. The study defines the concept as the process of calculating all the cost associated with human resource electronically through the use of software. HRAIS assists organization providing necessary information for valuing human resources. HRAIS makes the bridge between human resource accounting and human resource information system.

1.4 Significance of the study

Today's world is an Organizational world. Human are surrounded by organizations and participate in them as members, employees, customers, and clients. Organizations on the other hand depend on people, and without people, they would disappear. In most of the cases it is people who give always competitive advantages. People can make big difference, keeping in mind organizations have taken many ways to calculate cost and value of their employees. In Bangladesh, banking is a rising sector of employment for abundant amount of qualified people. Banking sectors has already established an ample opportunity of employment for huge amount of people. Most of the banks are very much aware of giving better customer services through effective utilization of their employees. In this today's competitive banking sectors acquisition of human resource is not only everything retaining human resource is most important. The retention of people requires proper and effective human resources practices. HRAIS shows a true picture about human resource and aids management to make better plan and its execution. The study had taken an attempt to represent the usage of human resource accounting information system for proper valuation of human resource in banking sector.

2. Literature Review

Theeke and Mitchell (2008) discussed how reporting under a human resource liability paradigm fits into the traditional accounting framework of contingent liabilities; examine the financial effects of such reporting on market valuation and internal planning; and explore measurement of human resource liabilities. From reviews of financial effects of human resource liability reporting the research logically extends those results to support the proposed paradigm. The paper provides support for the feasibility and need to adopt a human resource liability paradigm for valuing, reporting and managing human resources. Flamholtz et al. (2003) utilized the HRA measure of expected realizable value, and found that employees' participation in a management development program increased the value of the individuals to the firm. In addition the authors noted that the HRA measures provide upper level management with an alternative accounting system to measure the cost and value of people to an organization. Thus HRA represents both a paradigm and way of viewing human resource decisions, and the set of measures for quantifying the effects of human resource management strategies upon the cost and value of people as organizational resources. Dawson (1994) indicated relationship between two prescriptive models of HRA – the replacement cost model (RCM) and the stochastic rewards valuation model (SRVM). He investigated not only the operationalization of the two models, but also the reasoning used by managers in determining or arriving at the data. He discussed the general benefits and limitations of simulation methodologies and showed how they relate to prescriptive and descriptive approaches to the study of management. 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 indicate 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. Tomassini (1977) provided to a sample comprising of accounting students, traditional financial information and information containing human resources accounting. HRA information led to remarkable differences in decision-making. Schwan (1976) considered the effects of human resource cost measures on banker decision-making. He found that the inclusion of HRA data in published financial statements resulted in, one, significantly different ratings of management's preparedness to meet future challenges and opportunities and, two, statistically different predictions of a firm's net income. Acland (1976) selected a sample comprising of 500 financial analysts and provided financial reports for some of them and reports containing behavioral indexes to some other analysis so that they can make decisions about investments in one or two companies. Insertion of behavioral indexes caused that some analysts would make decision differently from those who had only financial information. This difference was visible in the analysts who had received HRA information with behavioral indexes. Research was performed about relative impact of disclosure of HRA monetary information versus non-monetary information. Flamholtz (1976) asked official accountants to select between two persons for occupying a position. He gave three kinds of information to the accountants, traditional information about function, non-monetary information about HRA and monetary information about it. This information was given about three cases A, B and C respectively to the accountants. In contrary to Flamholtz's expectation, non-monetary information had impact on decisions. Elias (1972) provided two groups of financial reports (one, traditional report and another, reports containing HRA information) in his research to the sample including accounting students, financial analysts and accountants. Research results showed that HRA information had meaningful impact on decisions statistically.

3. Objectives of the Study

The objectives of the study are:

• To identify the degree of familiarities of human resource accounting information system in HRM practices in the banking sector of Bangladesh; and

• To show whether Human Resource Accounting Information System (HRAIS) has any impact on the performance of HRM.

3.1 Theoretical framework and hypothesis

This study defined performance of the HRM as dependent variable and HRAIS as independent variable. The core functions that HRM performs are: Job Design & Analysis, Human Resource Planning, Recruitment and Selection Decision, Performance Appraisal, Training and Development. The impact of HRAIS on the performance of HRM is mainly focuses on the core functions that HRD performs. So the impact of independent variable covers as the following table:

Table 1

Independent variables	Ideninty
The impact of (HRAIS) on Job Design and Analysis (JDA)	V1
The impact of HRAIS on Human Resource Planning (HRP)	V2
The impact of HRAIS on Recruitment and Selection Decisions (RSD)	V3
The impact of HRAIS on Performance Appraisal (PA)	V4
The impact of HRAIS on Training and Development (T&D)	V5
The impact of HRAIS on Job Evaluation (JE)	V6
Dependent variable	
Performance of Human Resource Management (HRM)	DV

This study also aimed at construct the regression model using multiple regression analysis. The model is as follows:

$$Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + \ldots + b_n x_n$$
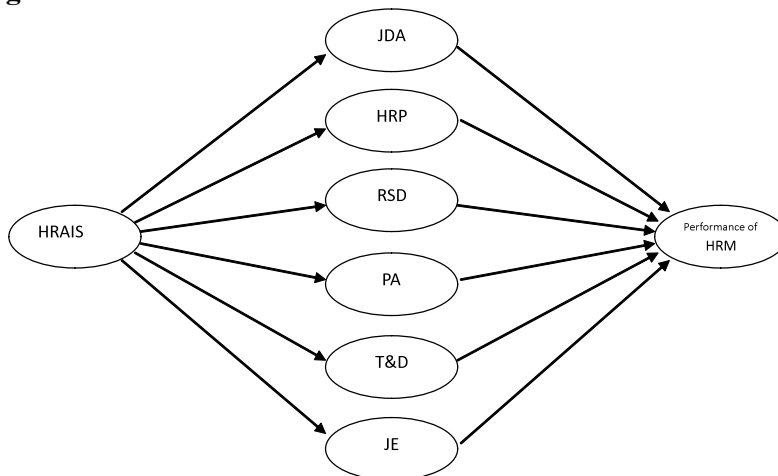
Where,

Y = Performance of HRM

x_1, x_2, x_3, and x_n = The impacts of HRAIS on the core factions of HRM

a = constant

b_1, b_2, b_3, and b_n = The coefficient

Therefore, the outline of the model of the study is:

Figure 1: The Research Model

Hypothesis: this study drew the hypothesis that the performance of HRD depends on the HRAIS.

4. Material and Methods

4.1 Research design

It is the guideline for conducting the study that helps to achieve intend research objectives. It helps to plan and implement the study in a way that will help the researcher to obtain intended results, thus increasing the chances of obtaining information that could be associated with the real situation (Burns & Grove 2001). A conclusive descriptive research approach was adapted to carry on the study. The study conducted a field survey to have available information and meet the research objectives.

4.2 Population of the study

Polit and Hungler (1999) refer to the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. The study considers all the managerial level employees work in different banks in Dhaka city as the population.

4.3 Sampling and Sample

The process of selecting a portion of the population to represent the entire population is known as sampling (LoBiondo-Wood & Haber 1998). The study selects simple random sample technique to choose respondents from the banks. A sample is a subset of a population selected to participate in the study, it is a fraction of the whole, selected to participate in the research project (Brink 1996). To reach a valid conclusion and make sample more representative, the study purposive selects only the managerial level employees as the respondents. The researchers selected 120managerial level employees of the human resource departments of 20 different banks to conduct the questionnaire survey.

4.4 Sample area and sample distribution

The study was confined within the Dhaka city, Bangladesh. This study targeted to conduct the survey in the banking sector of Bangladesh because this is one of the uprising sectors in Bangladesh. Moreover now a days the both the govt. and private banks in Bangladesh offer the updated online services through their structured and well-furnished MIS departments. The following table [Table 2] shows the nature of the organizations.

Table 2

	Respondents from	Frequency	Percent
Valid	Nationalized banks	50	41.67
	Private banks	50	41.67
	Multinational banks	20	16.66
	Total	120	100

Since, Human Resource Accounting (HRA) is a newly evolved term in Bangladesh, so a few companies are found to follow this approach. Most of the respondents are found to have the theoretical knowledge about Human Resource Accounting (HRA) and Human Resource Accounting Information System (HRAIS).

4.5 Sources of data

Both the primary and secondary data were used in the study. Secondary data and information were collected from the existing literature in the said field and the primary data and were collected through the questionnaire survey.

4.6 Questionnaire design

A structured questionnaire with both closed and open ended questions was developed for collecting primary data. Before developing the questionnaire researchers interviewed some higher level of human resource executive working in banks. This assists a lot to make an appropriate questionnaire. The questionnaire included both demographic and job related questions. For the closed ended questions the study used five point Likert scale, where 1 = strongly agree, 2 = agree, 3 = neutral (neither agree nor disagree), 4 = disagree, and 5 = strongly disagree.

4.7 Reliability of data

Reliability is the degree of consistency with which the instrument measures an attribute (Polit & Hungler1999). The initial reliability of the items was verified by computing the Cronbach's alpha. The Cronbach's alpha suggests that a minimum alpha of .60 is sufficed for early stage of research. The Cronbach's alpha estimated for all of the variables was .815 therefore deemed to have adequate reliability.

4.8 Data Analysis

After getting raw data from the field by questionnaire survey, with utmost care the researchers gave input into the SPSS software. Simple descriptive and regression analysis was used to analyze the data.

4.9 Time frame

Each and every study should allow considerable time to be ethically responsible in results. The present study mainly consumed time for research design, questionnaire development, field survey, data collection, data analysis and report writing. The study was carried on from July, 2015 to December, 2015.

5. Results and Discussion

With regard to the questions mentioned in the questionnaires and based on the results of the information analysis, the research findings can be summarized as follows:

5.1 Perceptions of the HR executives regarding Human Resource Accounting Information System:

Table 3: The descriptive statistics of respondents' perceptions

Particulars	N	Mean	Std. Deviation
The concept of Human Resource Accounting Information System is familiar in Bangladesh	120	2.0006	1.55616
Human Resource Accounting Information System is widely used in banks of Bangladesh	120	3.07	1.22016
Regulatory authority of the banks demand the initialization of Human Resource Accounting Information System in their banks	120	2.01	1.2105

Particulars	N	Mean	Std. Deviation
Human Resource Accounting Information System will help the human resource management of the banks much	120	1.62	0.88252
Valid N (listwise)	120		

(Scale 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree)

The above table [Table 4] shows the perceptions of the respondents regarding the familiarity and the application of HRAIS in different banks in Bangladesh. The mean value about the familiarity of the concept of Human Resource Accounting Information System in Bangladesh is 2. It means that the concept is familiar in Bangladesh. Another statement whether Human Resource Accounting Information System is widely used in the banks of Bangladesh or not shows the mean value 3.07. That means it is not widely used in Bangladesh. Another statement whether the regulatory authority of the banks demand the initialization of Human Resource Accounting Information System in their banks? The mean value of which is 2.01. It means that the regulatory authority of the banks demand the initialization of Human Resource Accounting Information System in their banks. The mean value of the respondents' perceptions about the helpfulness of Human Resource Accounting Information System to human resource management is 1.62. It says that Human Resource Accounting Information System will help the human resource management of the banks much.

5.2 Contributing fields of Human Resource Accounting Information System:

Table 4: The descriptive statistics of contributing fields of Human Resource Accounting Information System

Contributing fields	N	Mean	Std. Deviation
The impact of (HRAIS) on Job Design and Analysis (JDA)	120	1.8667	0.88814
The impact of HRAIS on Human Resource Planning (HRP)	120	2.2	0.73336
The impact of HRAIS on Recruitment and Selection Decisions (RSD)	120	1.9	0.83415
The impact of HRAIS on Performance Appraisal (PA)	120	2	0.68599
The impact of HRAIS on Training and Development (T&D)	120	2.1	0.83415
The impact of HRAIS on Job Evaluation (JE)	120	2.0667	0.77496
Performance of Human Resource Management (HRM)	120	1.5	0.56509
Valid N (list wise)	120		

(Scale 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree)

The above table (table 4) shows the major dimensions through which HRAIS supports to HR functions and decisions. The table shows the mean and standard deviation of the dimensions of HRAIS support. Considering the means the most important dimension of HRAIS support is the support on Job designing and analysis, the second important dimension of HRAIS support is the support on Recruitment and selection, rest of the variables are given in the above table.

5.3 Regression Analysis

Table 5: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.547[a]	0.299	0.262	0.48559

a. Predictors: (Constant), V6, V1, V3, V5, V4, V2
b. Dependent Variable: Performance of HRM (DV)

From the above table (table 5) it is found that the value of R is .547, it indicates that the relations between the dependent variable and the independent variables are strong enough to represent the model. It is also seen that the value of Adjusted R2 is .262, i.e. the dependent variable is 26% explained by the independent variable that are included in the model.

5.4 Test of hypothesis

Table 6: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.355	6	1.893	8.026	.000[a]
	Residual	26.645	113	0.236		
	Total	38	119			

a. Predictors: (Constant), V6, V1, V3, V5, V4, V2
b. Dependent Variable: Performance of HRD (DV)

The above table (table 6) shows that the value of F is 8.026 at 0.05 level of significance, which is higher than the critical value of F from the F distribution (3.40) and it indicates that the study can accept the hypothesis. That means that the performance of HRD depends on the HRAIS.

Table 7: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.263	0.157		8.021	0
	V1	-0.028	0.058	-0.044	-0.479	0.633
	V2	-0.204	0.104	-0.265	-1.958	0.053
	V3	-0.005	0.078	-0.007	-0.062	0.95
	V4	0.691	0.111	0.839	6.242	0
	V5	-0.07	0.077	-0.103	-0.912	0.364
	V6	-0.256	0.094	-0.35	-2.729	0.007

a. Dependent Variable: Performance of HRD

The above table (table 7) shows the value of the coefficients to construct the model. Since the beta value of standardized coefficients is 0 we will use the unstandardized coefficients. Hence the value of the constant is 1.263 and the co-efficient are -.028, -.204, -.005, .691, -.070, and -.256 respectively.

5.5 Assessment of Normality

Figure 2: Normal p-p plot of regression standardized residuals

Dependent Variable: Performance of HRD
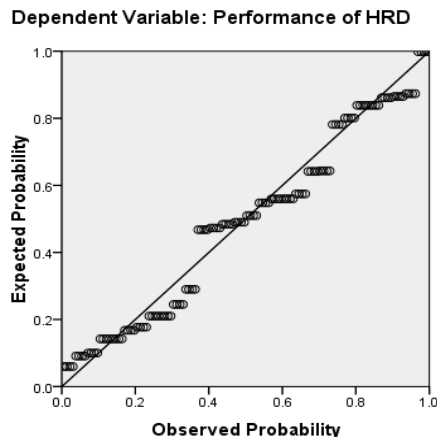
Normality was assessed by 'Normal Probability Plot of Regression Standardized Residuals' which is illustrated by figure 2 below. Here it can be observed that points were positioned in a reasonably straight diagonal line from bottom to top t indicating no major deviation from normality.

6. Conclusion and Recommendation

HRAIS is truly a new concept in Bangladesh as well as in the field of business. To cope with dynamic and ever changing business environment and response with the newness; the world organizations stay always alert. Organization has developed new strategies timely for these reasons, HAIRS is one of them. Among the resources HR is most precious and valuable resource because the functioning of other resources completely depends on human resources. Cost effectiveness is one of the precautions of successful resource deployment. HRAIS ensures proper functioning of human resource department activities with proper information and accountability and provides better profitability by reducing costs. The study result indicates that most of respondents are known about the concept, and HAIRS is somewhere partially and somewhere widely implemented in their respective organizations. Using HRAIS assists human resource department in better human resource planning, smooth recruitment and selection decisions, effective training need assessment, appropriate performance appraisal. Theoretically it is assumed that HRAIS generates some benefit for the organization and the study results practically validate the assumption. To make a bridge between the proper information and human resource department the implementation of HRAIS is crying needs for any kinds of organizations. The study finally wants to recommend that organization in need of superior performance should adopt HRAIS.

6.1 Future research implications

Probably no research so far has been done on the said field in Bangladesh so it will definitely open new opportunity for the upcoming researches. The study findings may help to construct new research model and view the issue in different angles. Since HRAIS is a new concept in Bangladesh, the rate of adaption of it by the organization is low. So the critical factors of adaption of HARIS, the challenges of HARIS adaption are burning issue to explore in this initial stage. This study will help those researches who want to explore critical factors or challenges and other related issues with HARIS adaption in Bangladesh.

6.2 Management implications

HRM became strategic partner of any organization. Organization makes all sort of plan based on their human resource availability and capabilities. To run current and future operation of any organization depends on effective utilization of human resource. HRAIS can assist organization for this purpose. HRAIS as a managerial tool can be used for effective management of human resources. In the field of managerial decision-making, the human resource data as part of management information system helps in making meaningful choices between various types of human investments and investments in other assets. The study result shows that HRAIS can bring best result if management properly implement and execute HRAIS in organization in the following areas: Human Resource Planning, Performance Appraisal, Training needs Identification, Usefulness of cost reduction programs in view of their possible impact on human relations. Studying the impact of budgetary control on motivation and morale of employees, Facilitating allocation, conservation and reward of human resources.

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