

## Human Resource Accounting Disclosure (HRAD) In Bangladesh: Multifactor Regression Analysis – A Decisive Tool of Quality Assessment

Imtiaz Alam, FCMA\*  
Suman Kanti Deb\*\*

**Abstract:** Human resource accounting (HRA) is an attempt to identify, quantify and report investment made in Human resources of an organization that are not presently accounted for under conventional accounting practice (Amaloth Deo Kodwani, et al). The paper investigates some corporate attitudes that influence human resource accounting disclosure in Bangladesh. A regression model has been used to analyze the data of 58 sample companies listed either with Dhaka Stock Exchange or Chittagong Stock Exchange in 2009. This paper reveals that none of the companies disclose all the human resource accounting information items. From the study it has been found that the level of human resource reporting of listed companies of Bangladesh is very poor.

**Keywords:** Human Resource Accounting (HRA), Human Resource Accounting Disclosure (HRAD), Human Resource Accounting Disclosure Index (HRADI).

### Introduction

Human Resources are the energies, skills, talents and knowledge of people which are or which potentially can be applied to the production of goods or rendering useful services (M. Narayanankutti). The term "human resource" has been defined in various ways with one commonality, and that is, the value that different activities exercised within an organization along with the environments in which it operates provide to that organization. Embodied in the activities include behavior, knowledge, experience, attitude, morale, corporate culture, to mention but a few, that when put together becomes of economic value to the organization.

According to Schultz (1961), human resource can be defined as the abilities and skills of a certain group of people or an individual person that have economic value.

The economic environment has shifted from industry based with a focus on physical assets such as factory, machines and equipment to a high technology, information, innovation based environment with a focus on the expertise, talents, creativity, skills, and experience of people—the company's human resource. How to account for the most important asset as claimed by most companies has become a big challenge for both accountants and human resource professionals since the term human resource was introduced in the field of accounting. Many organizations, big and small, acknowledge that "our biggest asset is our staff." However, no organization knows how to account for its employees on their financial statements. Among accountants, opinion is divided with regard to the evaluation, costing, and reporting the value of employees of an organization, and there have been various suggestions on these issues.

However, despite the human resource intensive economy, traditional accounting continues to focus on traditional assets to the exclusion

\* Mr. Imtiaz Alam, FCMA, CFO, Mostafa Group of Industries, M. Rahaman Chamber, 277, Khattajung, Chittagong, Phone: 2851742, Cell: 0187-0006500, E-mail: imtiaz\_fcma@yahoo.com

\*\* Mr. Suman Kanti Deb, Lecturer, Faculty of Business Studies, Dampara campus (WASA moor), Rebat Maham line, Dampara, Premier University (Chittagong City Corporation), Chittagong, Cell: 01819-841951, E-mail: suman.deb@yahoo.com.

The Cost and Management, May-June, 2010

## Human Resource Accounting

Table – 6: HRAI by industry-type

Industry type	Number	Mean disclosure	Standard deviation
Bank & Financial institution	15	19.85	10.45
Insurance	8	3.67	5.40
Pharmaceutical & chemicals	9	13.07	5.72
Fuel and power	4	13.74	3.50
Textile	11	9.09	4.83
Cement	4	11.75	10.74
Engineering	5	9.42	6.71
Service & real estate	2	5.88	0.00
Total	58	12.69	14.90

Table-7: Test for equality of variances and equality of means

Average HRADI of financial and non-financial sectors	Lewent's Test for Equality of Variances	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	1.165	0.286	2.848	53.000	0.007	
Equal variances not assumed			2.947	49.960	0.005	

Table-8: Result of Regression Analysis on HRADI

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta		
(Constant)	-10.983	5.800		-1.894	0.064
Category of the company	-4.731	2.110	-0.227	-2.241	0.030
Age	0.086	0.126	0.068	0.687	0.497
In_MC	4.722	0.631	0.690	7.467	0.000
Profitability	9.335	4.351	0.208	2.146	0.038

Dependent Variable: HRADI.

### References

- Accounting International Study Group (1977), Audit Committees, Current Practices in Canada, the United Kingdom and the United States.
- A. Beekun, A. Kahn (1978), Corporate Financial disclosure in Canada, Research Monograph No. 1, Vancouver: Canadian Certified General Accountants Association.
- Ahmed, K. and Nicholls, D., (1994), The impact of non-financial company characteristics on mandatory disclosure compliance in developing countries: the case of Bangladesh, The International Journal of Accounting, 29, pp. 62-77.
- American Accounting Association's Committee on Human Resource Accounting (1973), The Accounting Review Supplement to Volume XLVIII.
- A. Daid (2006), Association between firm Specific Characteristics and Disclosure: the case of Saudi Arabia, Managerial Auditing, 21 (3) pp. 476-496.
- B. Hansson (1997), Personnel investments and abnormal return, Human Resource Costing and Accounting, 2(2), pp. 9-29.
- Brummet, R. L., Flamholtz, E.G. and Pyle, W.C. (1968), Human Resource Measurement: a challenge for accountants, The Accounting Review, 43, pp. 217-224.
- S. Sonnie, K. Carson, C. Phillips, (2007), Accounting for intellectual capital: The relationship between profitability and Disclosure-Applied Manager and Entrepreneurship.
- B. Sonnie, K. Carson, C. Phillips (2007), Accounting for intellectual capital: The relationship between profitability and Disclosure" Journal of Applied Manager and Entrepreneurship.
- C. L. Marston, P.J. Shrivies (1991), The use of disclosure indices in accounting research: a review article "British Accounting Review, Vol. 25, pp. 195-210.
- D. M. Hosain, A. R. Khan, S. Yasmin, (2004), The Nature of Voluntary Disclosures on Human Resource in the Annual Reports of Bangladeshi Companies, Dhaka University Journal of Business Studies, 25(1) pp. 221-231.
- E. Flamholtz (1983), Human Resource Accounting, Jossey-Bass Publishers, Los Angeles.
- G. Lantieri (2008), Accounting Disclosure and Firm's Financial attributes: Evidence from

The Cost and Management, May-June, 2010

### Literature Review

To measure human value as a part of the goodwill, HRA was introduced in the accounting literature in the 1960s (Flamholtz, 1985). In 1968 Brummet, Flamholtz & Pyle used the term "human resource accounting" for the first time. In 1973 the American Accounting Association's Committee on Human Resource Accounting defined HRA as "the process of identifying and measuring data about human resources and communicating this information to interested parties. It provides information about human resource costs and values, serves to facilitate to decision making, and motivates decision makers to adopt a human resource perspective (Sackmann et al., 1989). Research to examine the way in which human resource variables affect the efficiency of firms could be performed in a number of ways including analyzing the association between different aspects of human resources and firm performance (Bassi & McMurrer, 1998; Boudreau & Ramstad, 1997; Grojer, 1998). Looking at different proposals (Conner, 1991), the resource theory considers human resources in a more explicit way. This theory considers that the competitive position of a firm depends on its specific and not duplicated assets. The most specific (and not duplicated) asset that an enterprise has is its personnel. It takes advantage of their interdependent knowledge. That would explain why some firms are more productive than others. With the same technology, a solid human resource team makes all the difference (Arche, 1995). There are two reasons for including human resources in accounting. First, people are a valuable resource to a firm so long as they perform services that can be quantified. Second, the value of a person as a resource depends on how he is employed. So management style will also influence the human resource value (Ripoll and Labatut, 1994).

Research into true human research accounting began in 1960s by Rensis Likert (Bowers, 1973). Likert defends long-term planning by strong pressure on human resources qualitative variables, resulting in greater benefits in the long run. Support for the idea of accounting for human resource values can be found much earlier (Sackmann et al., 1989). In 1965, Cronbach & Glaser (1965) and Naylor & Shine (1965) developed models for estimating the financial utility of personal selection. To embrace both HRA and UA (Utility Analysis), Grojer & Johanson (1996) use the concept Human Resource Costing and Accounting (HRCA). Grojer & Johanson (1996) express the management orientation of HRA even more clearly in the assertion that HRA concerns the management of human resources. Roslender (1997) proposes a societal approach to the subject. He uses the term human worth accounting. Assets from an accounting perspective are normally well, but too narrowly, defined when compared with emerging knowledge-based theories (Grant, 1996; Haanes & Lowendahl, 1997). Because of poor measurement and inadequate reporting, human resources run in the risk of being undervalued internally by managers and externally by capital markets (Hanson, 1997). There are many studies suggest a business community with a much more reluctant standpoint (Johanson et al., 1998). One recent survey on the attitudes of members of the European Accounting Association toward HRCA showed that it is becoming more important for accounting research and business practice, at least in East Europe and the Scandinavian countries. An interest in HRCA in Finland started several years ago from a return on investment perspective. Guy Ahornen, Johanson (1999) propose that decision making and learning by investors and managers are influenced when

managers hold positive attitudes towards HRCA. The American SEC has declared that there is no evidence of an information interest from a capital market point of view, not even for non financial HRCA information. In a recent literature survey (Johanson et al., 1998) on experience using HRCA and the balance scorecard (BSC) some 2000 articles and books written in seven languages were looked at. When it comes to the BSC, of which HRCA in some organizations is an explicit part, there is no lack of company enthusiasm and good intentions on how to use the BSC in the future - Johanson et al., 1998. Equity investors' necessity for information on human resources has been investigated extensively whereas studies of lenders are missing (Epstein & Freedman, 1994; Eccles & Mavrinac, 1995; Mavrinac & Siesfeld, 1997). One of the techniques showing a greater capacity to stimulate efficiency is based on the idea that an employee who is induced to get to know his job better is more productive and quicker on the job (Asociacion Espanola de Contabilidad y Administracion (AECA) 1994). No party that is referred to human resource is considered in the different balance sheet models, and only in the profit and loss account are the costs most directly related to them, such as salaries and staff welfare expenses (including pensions) (fourth directive of Comunidad Economica Europea 1978). As the organization has been considered as strategic capital, its accounting and reporting aspects are becoming crucial for its organizational success. But no significant analysis has been done yet on this topic. This paper is an attempt to contribute that end.

### Methodology of the Study

Three concept of disclosure proposed are adequate, fair and full disclosure (Hendriksen and Breda, page. 505). Here the adequate disclosure means a minimum amount of disclosure so that financial reporting is not misleading and useless. Gul et al. (1984) study found that large companies made more disclosures about employees but disclosures about community involvement were spread across firms of all size. Generally the big firm are expected to report comprehensively on HRAD and vice versa. So it is interesting to find out whether the big corporations of Bangladesh are reporting more on HRAD.

10

The Cost and Management, May-June, 2010

enlisted either Dhaka Stock Exchange(DSE) and Chittagong Stock Exchange (CSE). The companies are classified under two broad headings : Financial and Non-Financial sector. Financial sector includes banks and insurance companies. Non – Financial sector includes cement, fuel and power, textile, pharmaceuticals & chemical and others. Published annual reports of the aforesaid companies have been used as a secondary source. All these annual reports were for the year 2008 -2009 as this was the most recent year for which annual reports were available at the time of study. Therefore, information produced in company annual reports are taken as reliable and comparable. Listing age and market capitalization data are collected from the web site (www.dse.org.bd) and monthly review of DSE and CSE. A dichotomous procedure was followed to score each of the company index. Each company was awarded a score of "1" if the company appears to have disclosed the concerned disclosure and "0" otherwise. Once scoring of the companies completed, each company ended up with a score reflecting the number of disclosures against which it was found to have disclosed. Then the score of the respective company was divided by the total number of score. These score were then used as dependent variable and we tried to explain the size of the company that might explain variations in HRAD of the company under study.

This hypothesis of the study can be specified as under:

H<sub>0</sub> : There will be a positive association between company size and level of HR disclosure.

### Model Specification

To provide primary evidence of the impact of corporate attitude on human resource disclosures of different enlisted companies in Bangladesh, this paper uses simple ordinary least square regression technique. The following regression has been estimated.

$$Y = \alpha_1 + \beta_1 \text{Size} + \beta_2 \text{PT} + \beta_3 \text{FIN} + \beta_4 \text{Age} + \beta_5 \text{MNC} + \beta_6 \text{SP} + e$$

Where,

Y = Human Resource Accounting Disclosure Index (HRADI)  
= Cutoff constant.

β = Co efficient of independent variables.

Size = Natural log of market capitalization is used as a proxy of size of the company.

PT = Dummy variable, Profitability is measured by the margin.

FIN = Dummy variable, Financial institution.

Age = Years of operation in the market as a listed public limited company.

MNC = Dummy variable, 1 if the company is a Multination Company.

SP = Dummy variable, 1 if the company has concentrated sponsor.

e = Standard sample error.

Size: Natural logarithm of size has been considered in this study. Actually it represents the capitalization position in the market. For this study we expect to have a positive relationship between human resource attitude and log of size.

The Cost and Management, May-June, 2010

PT: Profitability is measured by the margin. Corporate profitability may affect the Human Resource Accounting Disclosure. It might be easier for a profitable company to take necessary measures to concentrate on the issues of human resource and to disclose the same. Hence it is expected to have a positive relationship between margin and HRAD.

FIN: It is expected that the financial institutions might be more concerned about the issue of HRAD and we therefore expect to have a positive relationship between financial institutions and HRAD.

Age: Age of company is the length of listing in capital market as a public limited company. Companies' listing length is not a matter for the company to disclose Human Resource Accounting information. MNC: It is expected that sample companies, which are subsidiaries of multinational, will have better human resource mechanisms. Therefore, we expect to have a positive relationship between MNC and HRAD.

SP: Sponsor reflects the concentrated ownership (more than 50%) by the sponsors of the company. If ownership is concentrated by the sponsor in a company it is expected that the disclosure pattern might be influenced. Hence we expect to have a negative relationship between sponsor and HRAD.

### Result And Analysis

The lowest level of disclosure observed in this study appears to be 0.26 (Table - 3) which suggests that the company disclosed only 26% of Human Resource Disclosures (HRD) applicable to this study. The range of the human resource disclosure is from 52% to 64.5% with standard deviations 10.85. The result indicates that none of the companies disclose all the human resource accounting information items determined in this study. No company has a HRAI of 100%. Eight companies possess HRAI 6.45 that reveals their very low level of HRAD.

The model class of Human Resource Disclosure (HRD) items 20- 25 percent indicates that maximum 14 companies (Table – 2). HRD level is 20 to 25 percent while 11 companies disclose 15 to 20 percent of total disclosure items. About 80 percent of sample companies are less than 35% disclosure. Remaining 20 percent companies have a HRD between 25 and 40. It implies that the level of human resource reporting of listed companies of Bangladesh is very power. Table 4 shows that 54% of the total disclosed HRA is reported in through notes of annual report and about 16% is reported through Directors' report. Around 14% HRAD is reported in formal way through profit and loss account. Table -5 shows that the non-financial companies are negatively correlated with HRADI while natural log of market capitalization (size) is positively correlated with HRADI.

In the regression analysis, HRAD score is found to be significantly influenced at 5% level by several attributes of the company such as profitability, multinational corporation, age and sponsors variable. Among these only sponsor variable is negatively associated with HRAD. Other attributes of the company such as size has also been found to statistically insignificant at the same level. The multiple correlation co-efficient (R) is 0.771 (R<sup>2</sup> =0.595) indicates that 60% of the variation in HRADI can be predicted (Table-8). The regression result shows that the size of the company has a significant positive relationship. Same result is also absorbed in case of profitability of the sample companies. The beta weight = 0.068; sig > 0.10 indicates no association between the age of company and HRADI.

11

The overall mean level is 12.69 (table -6). It implies that the sample companies on an average disclose 12.69 percent of the HRA reporting items in their annual reports. The bank and financial institution is the highest scoring industry (19.85%) that indicates the highest level of human resource reporting of the industry. The second highest scorer is fuel and power (13.74%), followed by pharmaceutical and chemical (13.07%) and cement (11.75) in the sample industries. The least scorer is Insurance which has mean value only 3.67%.

The significant value for the independent sample t test 0.007 which is less than 0.05 (Table-7). It supports that there is significant difference between financial and non-financial sector average HRADI. This table also shows that average HRADI of financial and non-financial companies are significantly different as the value of Levene's test 0.286 is more than value of 0.05.

### Conclusion

This paper examines quality of voluntary HRAD taking a sample of 58 firms from different industry groups in Bangladesh as categorized by DSE and CSE. Conducting index items survey, we found that in Bangladesh, market capitalization position, profitability, category of corporation and multinational affiliation and concentrated ownership have significant influence on human resource disclosure is that it can ensure major benefit to the society through ensuring greater transparency and higher productivity. This study initiates to reveal the relationship between corporate attitudes and HRAD of listed companies in Bangladesh. Its results shows that company size significantly associated with HRAD. The possible reason for the result could be that large companies in DSE and CSE are motivated to disclose more HRA information in their annual report to uphold their market value. In addition, the result also find the financial companies are disclosing HRA information than non-financial companies and company's profitability positively influences companies to report the information in their annual report. It indicates highly regulated financial companies are disclosing more HRADI than non-financial companies. Hence, regulating structure in Bangladesh is enhancing the disclosure practice in the area of HRA. The study also does not find any relationship between the age of the company and HRAD. Nevertheless, the study is free from limitations that future work may address. A one-year sample study (2009) is considerably insufficient to make inference regarding quality of voluntary HRAD. The mean disclosure value 25% shows that listed companies in Bangladesh disclose only one fourth of the selected HRA disclosure items. So, further research can be done focusing on the reasons of reluctant attitude of listed companies in Bangladesh to disclose the HRA information. Moreover, the scope of the research may be extended by increasing the sample size and cross-industry examination.

Table – 11: Human Resource Accounting Reporting (HRAR) variables:

No.	Variables
01	Separate HRA statement.
02	Total value of Human resource
03	Number of employees
04	Human resource policy
05	Training and development
06	Management succession plan
07	Employment report
08	Employees' value addition
09	Human resource development fund

12

The Cost and Management, May-June, 2010

10	Employees/workers fund
11	Employees categories
12	Managerial remuneration
13	Retirement benefits
14	Performance Recognition
15	Superannuation fund

Table – 2: Human Resource Reporting Levels

Class	No. of Company (N)	Company %	Cumulative %
0 – 5	3	5.16	5.16
5 – 10	5	8.61	13.77
10 – 15	6	10.34	24.11
15 – 20	11	18.96	43.07
20 – 25	14	24.14	67.21
25 – 30	0	0.00	67.21
30 – 35	9	15.52	82.73
35 – 40	7	12.08	94.81
40 – 45	2	3.46	98.27
45 – 50	1	1.73	100.00
Total	58	100	

Table – 3: Descriptive statistics of the HR disclosure indexes.

	Mean	26.00
Maximum	52.00	
Minimum	6.45	
Std	10.85	

Table – 4: Medium of Human Resource Accounting Reporting

Medium of Reporting	No. of Information Reported	Percentage
Profit & loss account	21	14.00
Notes	80	53.33
Directors' Report	23	15.33
Managing directors' report	6	4.00
Chairman's report	15	10.00
Profile of business	5	3.34
Total	150	100

Table – 5: Descriptive statistics and Pearson correlations

	Mean	S.D	1.	2	3	4	5
Type of Co. (Non-financial)	0.58	0.492	1				
Age	14.01	8.123	0.383**	1			
In market capital	7.66	1.504	-0.142	-0.165	1		
Profitability	0.16	0.228	-0.316*	-0.226	-0.078	1	
HRADI	25.00	10.276	-0.365**	-0.180	0.699**	0.209	1

\*\* Correlation is significant at the 0.01 level (2 tailed)

\* Correlation is significant at the 0.05 level (2 tailed).