

HUMAN RESOURCE ACCOUNTING (HRA) DISCLOSURE OF BANGLADESHI COMPANIES AND ITS ASSOCIATION WITH CORPORATE CHARACTERISTICS

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ABSTRACT

This study reports the relationship between corporate characteristics and Human Resource Disclosure (HRAD) level in fifty five randomly selected companies of Bangladesh. The relationships were determined using a HRAD Index (HRADI) under a number of hypotheses. The results of the study show that companies averagely disclose 25% of the total HRAD items. In this study, HRAD has been found significantly related with the size of the company, category of the company (financial or non-financial) and profitability. However, HDAD had no influence on the age of companies.

Key Words: Human Resource Accounting (HRA), Human Resource Accounting Disclosure (HRAD), Human Resource Accounting Disclosure Index (HRADI), Corporate Characteristics, Bangladeshi Companies.

I. INTRODUCTION

Human Resources (HR) 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. HRA is the process of identifying and measuring data about human resources and communicating this information to interested parties. Human resource accounting is not a new issue in economics. Economists consider human capital as a production factor, and they explore different ways of measuring its investment in education, health, and other areas. Accountants have recognized the value of human assets for at least 70 years. Research into true human resource accounting began in the 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. The basic objective underlying human resource accounting is to facilitate the effective and efficient management of human resources (Porwal, 1993).

According to Sveiby's (1997), human capital, intellectual capital and structural capital concept are similar to other assets. He also argued that organizations acquire HR to generate future revenues, and therefore Human R should be

considered when valuing a company by capitalizing instead of expensing them in the current period. The crux of his argument is that human, intellectual and structural capital should be treated as other assets. Since assets are reported on the balance sheet, these also should be reported along with the physical assets. But it is very tough to quantify the expertise, knowledge and competence of human resource as these matters are not physical assets of a company. Moreover, the monetary unit assumption of accounting does not allow to report value of company employees in company's financial report because value of HR is difficult to measure in monetary unit. As a result, though companies all over the world are showing their expenses related to human resources in the financial statements, they are not being able to show the expertise of their 'Human Capital' and how these resources are utilized, in the financial statements. For this reason, stakeholders are being deprived of getting important information about the human resources of their organization (Hossain, Khan & Yasmin, 2004).

Moreover, the development of human resource accounting is necessary to provide a firm with accurate financial reports to guide its decisions (Brummet et al., 1968). Tom Stewart supports the importance of external reporting of intellectual

capital. As a result, the external financial reporting aspects of HRA can play significant role to facilitate the proper utilization of human resources in an organization. In the developed countries, it is very common phenomenon that companies have formal HRA reporting aspect in their annual report. But, in the developing countries like Bangladesh, HRA reporting aspect is very new concept and it is still in naïve stage. Though this is not mandatory for the Companies in Bangladesh to disclose HRA information, they are making some HRA disclosure voluntarily (Hossain, Khan & Yasmin, 2004). Hence, this study is an attempt to find the pattern of HRA disclosure in the listed companies in Bangladesh and the relationship between corporate characteristics and HRA disclosure.

II. LITERATUR 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 (Archel, 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 resource 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 (Sacmann 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 Ahonen. 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 human resource has been considered as strategic capital, its accounting and reporting aspects are becoming crucial for the organizational success. But no significant analysis has been done yet on this topic. Hence, the specific objectives of the study are:

- to explore the impact of nature of companies (financial or non-financial) on HRAD of the listed companies in Bangladesh.
- to find the effect of company size on HRAD.
- to examine the relationship of profitability and HRAD of the listed companies in Bangladesh.
- to investigate the association of listing age of the companies with their HRAD pattern.

III. HYPOTHESES OF THE STUDY

There are some mixed research findings regarding the relationship between levels of disclosure and industry type. Belkaoui and Kahl in Canada (1978), Cooke (1989a,b) in Sweden and Stanga (1976) in the USA found a significant relationship but McNally et al. (1982) in New Zealand, Wallace (1987) in Nigeria and Wallace et al. (1994) in Spain did not find any relationship between levels of disclosure and industry type. Bhuiyan and Biswas (2007) have found that companies of financial sector make more intensive corporate governance disclosure than the nonfinancial sectors. As the study also classified all the sample

companies into only financial and non financial industries, the hypothesis is:

Hypothesis 1: There is significant difference between financial and non-financial sector average HRADI.

Studies relating to financial disclosure reveal that there is a positive relation between company size and number of disclosures (e.g. Adams et al., 1998; Marston and Shrivies, 1991). Corporate governance disclosures of Bangladeshi companies are significantly influenced by the size of the company (Bhuiyan & Biswas, 2007). These studies do not focus on the HRA issues, rather these are on other patterns of disclosure. Therefore, this study will test the hypothesis to see the association between size of the company and HEAD.

Hypothesis 2: There will be a positive association between company size and level of HR disclosure (HRADI)

Generally a company with better profitability intended to disclose more information about their operation to keep its image up. But Konisi & Mohabbat (2007) did not find any positive relationship between risk disclosure and relative profit of companies. In contrary, Latridies (2008) found that higher size firms provide more informative accounting disclosures. So, this paper test the hypothesis to find the relationship between relative profitability and level of HRA disclosure.

Hypothesis 3: There will be a positive relationship between the relative profitability of a company and the extent of HRAD.

Companies enlisted in the capital market earlier have more experiences to disclosure information considering the reaction of market for appropriate disclosure. Firms are inclined to provide voluntary disclosures when they plan to issue public debt or equity or to acquire another company in order to give investors explicit information and influence their perceptions (Healy & Palepu, 1993). As a result the level of disclosure of listed companies significantly influenced by their capital market listing status. Moreover, Alsaeed (2006) identified that firm age is significantly positively associated with the level of disclosure. Hence, the study test the hypothesis to find the association between the age of a company and the extent of HRAD.

Hypothesis 4: There is significant association between age of a company and the extent of HRAD.

IV. METHODOLOGY

The study is empirical in nature based on the secondary as well as primary data sources. For this study, randomly selected 55 listed public limited companies in Dhaka Stock Exchange (DSE) have been considered. The companies are classified under 2 broad headings: Financial and Non-Financial sector. Financial sector includes banks and insurance companies. Non-Financial sector includes cement, fuel & power, textile, pharmaceuticals & chemical and others. The reporting practices of the selected companies are analyzed as of December 31, 2007.

All the data used in this study are manually collected from the annual reports of the respective companies for the period. For listed companies, annual reports are mandatorily audited by external independent auditors and have generally been approved by the Securities and Exchange Commission (SEC). Therefore, information produced in company annual reports are taken as reliable and comparable (Farooque et. al, 2007). Listing age and market capitalization data are collected from the web site (www.dse.org.bd) and monthly review of DSE.

In the study a Human Resource Accounting Disclosure Index (HRADI) comprising of 16 Human Resource Accounting Reporting (HRAD) variables (table: 1) was constructed by reviewing of relevant literature and what Disclosure items the sample companies are reporting. In examining each of these HRAD items, a dichotomous procedure was followed where each company was awarded a score of '1' if the company appears to have disclosed the concerned reporting variable and '0' otherwise. The score of each company was totaled find the net score of the company.

An HRADI was then computed by using the following formula:

$$\text{HRADI} = \frac{\text{Total Score of Individual Company X 100}}{\text{Maximum Possible Score Obtainable}}$$

Table-1: Measurement of HRAR variables

No.	Disclosure Items
1	Separate HRA statement
2	Total Value of Human resource
3	Number of employees
4	Human resource policy
5	Training and development
6	Management succession plan
7	Employment report
8	Employees' value addition
9	Human resource development fund
10	Employees/workers fund
11	Employee categories
12	Managerial remuneration
13	Retirement benefits
14	Performance Recognition
15	Superannuation fund
16	Other employees benefits

The study uses the SPSS 11.5 version to analyze the data. The Kolmogorov-Sminor test is used to test the normality of the collected data. For testing the hypothesis 1, independent sample t-test is used. To provide evidence of the impact of corporate attributes on HRA disclosure of different companies in Bangladesh, this study uses the following multiple regression technique:

$$Y_i = \alpha + \beta_1 \text{SIZE} + \beta_2 \text{FIN}_i + \beta_3 \text{PT}_i + \beta_4 \text{Age}_i + \epsilon_i$$

Here,

Y = Human Resource Accounting Disclosure Index (HRADI)

α = inception of the regression line

β_i = Coefficient (Slope of the regression line)

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

FIN_i (dummy variable) = Financial Institution, value 1 if the company is a financial institution and 0 otherwise.

PT_i = Profitability is measured by the margin.

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

ϵ_i = standard sample error

V. FINDINGS

A. Level of Human Resource Disclosure

Table 2 presents the distribution of Human Resource reporting levels in terms of number of

items disclosed as percentage of the total disclosure items. The modal class of HR disclosure items 20-25 percent indicates that maximum 14 companies' HR disclosure level is 20 to 25 percent while 11 companies disclose 15 to 20 percent of total disclosure items. The table also shows that the HRAD of around 80 percent of the sample companies are less than 35 percent disclosure items. The remaining 20 percent companies have a HRDI between .25 and .40. It implies that the level of human resource reporting of listed companies of Bangladesh is very low.

Table 2: HR Reporting Levels

Class	No. of Company (N)	Company %	Cumulative %
5-10	4	7.27	7.27
10-15	6	10.91	18.18
15-20	11	20.00	38.18
20-25	14	25.45	63.63
25-30	0	0.00	63.63
30-35	9	16.36	79.99
35-40	8	14.55	94.54
40-45	2	3.64	98.18
45-50	1	1.82	100.00
Total	55	100.00	-

B. Discussion of Descriptive Statistics of the Aggregate Disclosure Indexes

It is noticeable from the table 3 that mean score of the HR disclosure items is very ordinary (25.00%). The range of the HR disclosure is from 50.00% to 6.25% with standard deviation 10.28. The result indicates that none of the companies disclose all the human resource accounting information items determined in this study. That is, no company has a HRAI of 100%. Moreover, four companies possess HRAI 6.25 that reveals their very low level of human resource accounting disclosure.

Table 3: Descriptive statistics of the HR disclosure indexes

	N	Minimum	Maximum	Mean	Std. Deviation
x7-HRADI	55	6.25	50.00	25.00	10.27
Valid N (list wise)	55				

C. Medium of Human Resource Accounting Reporting

Table 4 shows that 60% of the total disclosed Human Resource Accounting Information is reported in through notes of annual report and 19.56% is reported through Directors' report. Around 9% HRA information is reported in formal way through Profit and Loss Accounts whereas 6% is disclosed in more informal way through Chairman's Report.

Table 4: Medium of HRA Reporting

Medium of Reporting	No. of Information Reported	%
Profit and Loss Accounting	21	9.33
Notes	135	60.00
Directors' Report	44	19.56
Managing Directors' Report	5	2.22
Chairman's Report	14	6.22
Profile of Business	2	0.88
Credit Rating Report	2	0.88
Total	225	100

D. Hypotheses Testing

The Kolmogorov-Sminor test (Table 5 in appendix A) reports the significant value .258 which allows accepting that sample data are normally distributed. Table 6 (see in appendix A) presents descriptive statistics and correlation of key variable. The results show that type of company (non-financial company) is negatively correlated with HRADI while natural log of market capitalization (size) is positively correlated with HRADI.

Table 7 (see in appendix A) reports the significant value for the independent sample t-test .006 which is less than .05. It supports our hypothesis 1 that there is significant difference between financial and non-financial sector average HRADI. It is also found that null hypothesis of equal variance cannot be rejected as significant value of Levene's Test .285 is more than α value of .05. Under the assumption of equal variance, the null hypothesis of equality of means cannot be accepted. It means that average HRADI of financial and non-financial companies are significantly different.

To find out the association of HRAD with corporate characteristics, a multiple regression

model is run. The multiple correlation coefficient (R) is 0.771 ($R^2=0.595$) and the adjusted R^2 is 0.563, indicates that 60% of the variation in Human Resource Disclosure Index can be predicted from the selected independent variable (see table 8 in appendix A). The regression results show that the size of the company (represented by the natural log of market capitalization) has a significant positive relationship with HRADI ($\beta=.691$, sig.<.01). It is suggesting that the companies with bigger size disclose larger extent of Human Resource Accounting Information. So, the *hypothesis 2* is strongly supported that there is a significant and positive relationship between company size and level of Human Resource Accounting Disclosure.

The model also shows that there is a relationship between profitability and HRADI ($\beta=.207$, sig.<.05). It indicates that the companies with higher profitability intended to disclose more HRA information. Though it supports the hypothesis 3 but the relationship is not so strong with significant value .037. The beta weight ($\beta=.068$, sig.>.10) indicates no association between the age of company and HRADI. Consequently, hypothesis 4 is not supported. In total, the model shows different levels of association between HRADI and other independent variables except age of the company.

VI. CONCLUSION

Human Resource Accounting Information of an organization is very important factor to decision makers in the era of knowledge based economy. As a result, each organization takes serious attempt to disclose its HRA information to insiders and outsider decision makers. In fact, it is becoming an integral part of management report. This study initiates to reveal the relationship between corporate attributes and HRAD of listed companies in Bangladesh. Its results shows that company size significantly associated with HRAI, which leads the conclusion that larger companies with higher market value discloses more HRA information than smaller companies. The possible reason for the result could be that large companies in DSE are motivated to disclose more HRA information in their annual report to uphold their market value. In addition, the results 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 HRA information than non-financial companies. Hence, regulation structure in Bangladesh is enhancing the disclosure practice particularly in the area of HRA. In contrary, the study does not find any relationship between the age of the company and HRAD. It indicates that companies' listing length is not a matter for the company to disclose HRA information.

Though the paper finds some association of corporate attributes with HRAD, the level of disclosure of the listed companies are not so high. 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.

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Appendix A

Table 5: One-Sample Kolmogorov-Smirnov Test

		HRADI
N		55
Normal Parameters(a,b)	Mean	25.0000
	Std. Deviation	10.27684
Most Extreme Differences	Absolute	.136
	Positive	.136
	Negative	-.118
Kolmogorov-Smirnov Z		1.011
Asymp. Sig. (2-tailed)		.258

a Test distribution is Normal.

b Calculated from data.

Table 6: Descriptive statistics and Pearson correlations

	Mean	S.D	1	2	3	4	5
1. Type of Co. (Non-financial)	0.60	0.494	1				
2. Age	14.02	8.123	0.385**	1			
3. ln Market Cap.	7.65	1.505	-0.142	-0.164	1		
4. Profitability	0.16	0.228	-0.315*	-0.227	-0.079	1	
5. HRADI	25.00	10.277	-0.364**	-0.180	0.696**	0.209	1

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

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

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

Average HRADI of financial and non-financial sectors	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	1.164	0.285	2.849	53.000	0.006
Equal variances not assumed			2.948	49.961	0.005

Table 8: Results of Regression Analysis on HRADI

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-10.983	5.801		-1.893	.064
Category of the Company	-4.731	2.110	-.228	-2.242	.029
Age	.086	.125	.068	.686	.496
ln. MC	4.722	.632	.691	7.468	.000
Profitability	9.335	4.352	.207	2.145	.037

a Dependent Variable: HRADI