



HUMAN RESOURCE ACCOUNTING: THE EFFECT ON PROFITABILITY AND FUTURE IMPLICATIONS

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ABSTRACT

The objective of the study was to examine the impact of human resource accounting on the profitability of ACC Limited, from 2008 to 2017. Using the ordinary least square analytical technique, secondary data from ACC Limited was obtained. Findings revealed that there is a positive relationship between the indicators of human resource cost (training cost, development cost and number of staff) and the profit of the organization. It was also discovered that there was a significant relationship between training cost, development cost and the profit of the company. However, the number of staff does not have a significant effect on profit of the company. Nonetheless, organizational performance is dependent upon the performance of the individuals that make up the organization. That is, organization does not exist in a vacuum; there are people (employees) who may work together towards achieving its goal. It was therefore recommended inter alia that; organization should enhance the retention of education and training on staff so as to avert wastage of knowledgeable investment. Also, accounting standard board should incorporate their accounting standards for the valuation and disclosure of human resource accounting.

KEYWORDS: Human Resource Accounting, Development cost, Profitability, Staff training cost.

INTRODUCTION

Human Resource is a term which refers to the set of individuals who make up the workforce of an organization or a business entity. According to Syed (2009), it comprises 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. The success of any organization depends on the ability of the human resources to effectively and efficiently optimize other resources such as land, equipment and money hence human resources are the greatest assets at the disposal of businesses.

It is a truism that information as to human asset has not been noticeable and presented on the financial statement of organizations and it makes it difficult to measure or evaluate the real profit of a firm. The growing trend towards the measurement and reporting of human asset in corporate annual reports is particularly not noticeable in the financial report of corporate organizations. Corporate organizations, by charging expenses of recruitment, training, familiarization and development of human resources to the current period's profit or loss account, understate profits or overstate losses, by not accounting for expenses related to human resources, even when they substantially conceal asset and net worth.

Though the idea of accounting for human resources started many years back, the concept still lacks general acceptability. Many authors and scholars have conducted researches on how humans within an organization can be valued and reported in the financial statements of such organization. Human resource accounting and reporting by corporate organizations is still in the infancy stage in India. One of the companies that has invested heavily in human resources and has applied human resources accounting in one way or the other is ACC Limited. The investments by this company in human capital development are normally not reflected in the balance sheets as assets but expensed in the profit or loss account. The major challenges encountered in the recognition of human resources as an asset rest largely on its characteristics, quantification in monetary terms and the method of reporting. Thus the research seeks to clearly elucidate the impact of human resource accounting on the profitability of a firm. To guide the researchers in achieving this objective, the following hypotheses were formulated:

Ho1: There is no significant relationship between staff training costs and the profit of ACC Limited

Ho2: There is no significant relationship between staff development costs and the profit of ACC Limited

Ho3: There is no significant relationship between increment in staff and the profit of ACC Limited

LITERATURE REVIEW

A number of empirical studies have been conducted on the issue of human resource accounting in corporate organizations. A number of these studies have highlighted the need to capitalize human capital asset in the balance sheet of companies as against being written off as expenses in the profit and loss account. Hermansson (1964), in his pioneer work concerning the valuation of human assets attempts to place money value on human capital in the balance sheet. Barney (1991), notes that human resources accounting has helped in solving most personnel related problems in corporate organizations. Barney (1991), further asserts that sustainable competitive advantage is attained when the firm has human resource pool that cannot be imitated or substituted by its rivals. Syed (2009), examined the relationship between corporate characteristics and human resource accounting disclosure and concluded that companies with higher profitability intended to disclose more human resource accounting information.

Likert (1967), stressed that short-term company profits are too often obtained through automatic “system I” methods, which result in the wastage of human resources through neglect of training and development, turnover, reduced co-operation, etc. His argument was that conventional accounting procedures ignore human assets, even though their depletion almost inevitably leads to reductions in profit over the long run. He challenged the accountants to develop measures for valuing the human resources so that changes could be recorded on the

scorecard that counts, the profit or loss statement. In response to Likert (1967), challenges, many accountants conducted researches on how best to measure human resources in monetary terms. Prominent among them are Flamholtz (1999) and Lev and Schwartz (1974). Their contributions led to the suggestion of various methods of valuing human resources such as replacement cost model, stochastic rewards valuation model, historical cost model, competitive bidding method, and capitalization of future benefit. Strauss (1976), cautioned that numerous conceptual and practical problems must be solved before human resource accounting is widely accepted. These problems, according to him, relate particularly to the method of calculating human resource values and to the use to which the resulting data will be put such as its impact on managerial or investor behavior.

The concept of human resource accounting

Accounting is viewed as a child of production. Production can be either the creation of tangible goods or the provision of services to satisfy human wants. The major factors of production are the land, labour, capital and entrepreneur. The two factors, labour and entrepreneur, are the human assets or resources organizations have.

HRA considers human resources as equivalent to other assets in the organization. They require investment over time to make them productive. Such investment relates to the hiring, training, and development costs, which are capitalized and amortized over an assumed probably productive life for the human resource, taking into account attrition and eventual deterioration. The concept of HRA has been defined in so many ways but the basic feature of the system remains the same in every definition.

The American Accounting Association (1973), defined HRA as the process of identifying, measuring and communicating information about human resources in order to facilitate effective management within an organization. This definition considers HRA as the process involving recognition and the quantification of human resources for the purpose of assisting the effective management of an organization. The definition is somehow crude as it is not specific as to what constitute the human resources expenditure and how it is to be recognized.

HRA is also seen as an important aspect of management information system. In this view, Gupta (1991), defines the concept as basically an information system that tells management what changes are occurring overtime to the human resources of the business. It involves accounting for investment in people and their replacement costs, and also the economic value of people in an organization. This definition regards HRA as an information system capable of assisting the management in effective decision-making relative to the hiring and retention of employees. Therefore, HRA provides a comprehensive look at one method of using human resource cost and value information in the decision-making process.

Human asset treatment and corporate profitability

The main problem confronting human asset treatment in organizations include the difficulty to measure or value human capital over the last two decades, which has ran into the difficult problem of pricing such assets (Strassman, 1998). But the benefit associated with the exercise has forced many companies to embark on the exercise. Research carried out by Leadbeater and Demos (1999) in the UK revealed that methods used to measure human assets depend on which user group the report is for (Leadbeater & Demos, 1999). They stressed that internal users such as managers prefer the treatments that allow for more information and which allow human asset to be managed more effectively. For such users, a new range of performance measurement and internal corporate reporting which attempts to link financial performance such as cash flow to intangible drivers are sufficient. Examples include: Economic Value Added (EVA) and European Foundation for Quality Model (EFQM). There is another approach as recommended and used by ten Danish and Swedish companies in their HAAT which is capable to show the underlying fundamental that determines a company's future growth and the link between human with the strategies of the companies.

The traditional human asset accounting theories also identified three major areas of cost items of human asset investments (Flamholtz, 1973). It therefore means companies could identify those items and separate them from their profit and loss accounts; such treatments would definitely impact on the corporate portability of the firm. The extents to which an

organization can practice human asset accounting treatments have strong relationship with its profitability.

RESEARCH METHODOLOGY

The exploratory research design was adopted in this study. A time series analysis of 16 years was used as population of the study. A non-probability sampling was adopted for this study. It is that type of sampling procedure that represents a group of sampling technique that helps researchers to select units from a population which they are interested in. Such sampling procedure is based on subjective judgment of the researcher rather than random selection. In line with the aforementioned, a convenience sampling technique was specially adopted for this study. A period, 2008-2017 (a period of ten years) was used for proper examination of the impact of human resource accounting on the profitability of ACC Limited. This period was chosen based on the fact that there was availability of data that was relevant to this study. Data was collected from secondary sources and the Ordinary Least Square (OLS) multiple regression analytical technique was used for data analysis. The model built for the purpose of this analysis is given below:

$$RP = f(\text{STC}, \text{SDC}, \text{NSEP},) \quad (i)$$

Where;

RP = Retained Profit

STC = Staff Training Cost

SDC = Staff Development Cost

NSEP = Number of Staff Employed for the Period f =

Functional Notation

RP = Dependent Variable

STC, SDC, NSEP, = Independent Variables

The Ordinary Least Square for the above model is stated as follows:

$$RP = a_0 + a_1STC + a_2SDC + a_3NSEP + e \quad (ii)$$

Where;

a_0 = Unknown Constant to be estimated

$a_1 - a_3$ = Unknown coefficient to be estimated e =

Stochastic error term

$a_1, a_2, a_3, \geq 0$.

ANALYSIS OF RESULT AND FINDINGS

Table 1: Selected variables of human resources cost with the profit of ACC Limited

Years	RP (Rs.crore)	STC (Rs.crore)	SDC (Rs.crore)	NSEP
2008	1213	0.76	0.83	6756
2009	1607	0.74	0.75	6845
2010	1120	0.81	0.66	7200
2011	1325	0.97	0.52	7403
2012	1061	1.19	0.67	7521
2013	1096	1.34	0.71	7794
2014	1168	1.65	0.69	8300
2015	827	1.79	0.55	8631
2016	685	1.95	0.65	9000
2017	705	2.05	0.62	9071

Source: Annual Reports

Table 2: Regression result on retained profit, staff training cost, staff development cost and number of staff employed for the period

Variables	Estimated coefficient	Std error	t- statistic	Prob.
Constraint	3.215011	2.920167	1.100676	0.3132
LSTC	0.496415	0.454590	3.091788	0.3168
LSDC	0.894279	0.560279	2.595800	0.1616
LNSEP	2.557310	0.792320	2.127499	0.0180

R –square = 0.899559

Adjusted R - Square = 0.849339

Standard error of regression = 0.686237

F – Statistic = 17.91227

Durbin-Watson stat= 1.991942

Source: SPSS (E-Version, 2007)

The data presented in table 1 was run via E-view 2007 and the results shown on table 2. The least square multiple regression model was used with three independent variables (STC, SDC and NSEP) and a dependent variable retained profit. The following statistics are taken cognizance of; the coefficient of multiple determination (R^2), F – ratio, the standard error of the regression (SER) and Durbin-Watson (DW) statistics.

R^2 is used to measure the overall goodness of fit of the regression plane; the higher the R^2 , the better the goodness of fit. To pass the “goodness of fit” test, the coefficient of determination must have a value of at least 50%. The magnitude of the f-statistics is a test of the significance of the relationship between the dependent variable and the independent variables of a model taken together, while Durbin-Watson statistics is used to test for the first-order autocorrelation of the random variable because multiple regression was used, adjusted R^2 or coefficient of multiple regression is also introduced.

From table 2, the constant value of 3.214179 is autonomous and indicates changes that could take place in the retained profit of ACC Limited, if the independent variables (STC, SDC and NOS) are held constant. The $a_1(0.49)$, is the coefficient of log of staff training cost (LSTC) which depicts that a percentage increase in the staff training cost could lead to forty nine percent increase in the profit of the organization (ACC Limited). More so, the $a_2(0.89)$ means that a percentage increase in log of staff development cost (SDC) could lead to eighty nine percent increases in the profit of the company. The $a_3(2.56)$ depicts the coefficient of log of number of staff (LNOS). It indicates that a percentage increase could lead to two hundred and fifty six percent increase in the profit of the organization.

The coefficient of determination (R^2) is ninety percent. It indicates that the independent variables (training cost, development cost and number of staff) capture approximately

ninety percent of the total variation (i.e. one hundred percent) in the dependent variables (profits). That is, the independent variables explained ninety percent out of the one hundred percent variation that can occur in the dependent variable. The remaining percent (i.e. ten percent) represent the unexplained percentage and could be accounted for by other independent variables not built in the regression model. In addition to the co-efficient of determination is the adjusted R^2 . This means the coefficient of determination (R^2) if adjusted from ninety to eighty four percent could create more room or chances for other independent variables in the regression model, hence increase the line of fit of the model. Testing for the overall significance of the model, the ANOVA on the F-statistic is used. The high significance of F-statistic value of 17.91472 confirms the fact that the high predictability of the model did not just occur by chance. It actually confirms that the model fits the data well. To test for the individual statistical significance of the regression parameters, the F-statistic of the respective variables were used. Considering their probability values which were automatically generated during the computation process by the computer software. The constant term is significance at five percent level. The a priori expectations about the signs of the parameter estimates are confirmation to economic theory. Here, all the variables entered the model with positive signs. To test for the autocorrelation in the residual, the calculated Durbin-Watson statistic is used to compare with the table DW value. The decision rule for no autocorrelation in the residuals of the model is that the calculated DW value must be greater than DL. Given that, the calculated DW statistic = 1.991942, dl = 0.376 and du = 1.414 Since K = 4 variables and n = 10 years and at five percent level of significance, it can be concluded therefore that the model is free from autocorrelation of the residual.

In testing the hypotheses earlier formulated, it is imperative to restate the hypotheses in both null and alternative form:

Ho1: There is no significant relationship between staff training cost and the profits of ACC Limited

Ha1: There is a significant relationship between staff training cost and the profits of ACC Limited

To test for significant relationship of each independent variable, the T-statistic was used. The decision rule was that if T- calculated is less than the T-table value then the null hypothesis should be accepted otherwise rejected and accept the alternative. At five percent level of significant, the table value is 2.365. Thus, since the T-calculated (3.09) is greater than the table value (2.36), the null hypothesis is rejected and the alternative accepted. We therefore conclude that there is a significant relationship between staff training cost and the profits of ACC Limited for the period of study.

Ho2: There is no significant relationship between staff development cost and the profits of
ACC Limited.

Ha2: There is a significant relationship between staff development cost and the profits of
ACC Limited.

For hypothesis two, the T-calculated is 2.59 hence it is greater than the T- table value (2.36). Based on this, the null hypothesis is rejected and the alternative accepted. We also conclude that there is a significant relationship between staff development cost and the profits of ACC Limited for the period of study.

Ho3: There is no significant relationship between increment in staff and the profits of
ACC Limited

Ha3: There is a significant relationship between increment in staff and the profits of
ACC Limited

For hypothesis three, the T-calculated is 2.12 hence it is less than the T- table value (2.36). Based on this, the null hypothesis is accepted and the alternative rejected. We can conclude that there is no significant relationship between staff development cost and the profits of ACC Limited for the period of study.

In addition to T-statistic, an overall test was carried out to observe the significant effects of all independent variable on the dependent variable. F-table was ascertained using the degree of freedom; $K: n - (K+1)$. Where k represent the number of independent parameters (i.e. three) and n represent number of period use for the study (i.e. Ten)

Degree of freedom = $3:10 - (3+1)$

= 3:6

From the F- distribution table, with five percent level of significance, 3:6 equal 8.04. This result was compared to the calculated F ratio so as to either accept the null hypothesis or reject it. Since the F – ratio calculated (17.91) is greater than the table value (8.04), we therefore reject the null hypothesis and accept the alternative and conclude that there is a significant effect of human resource costs towards attainment of ACC Limited corporate profit.

CONCLUSION AND RECOMMENDATIONS

Based on the empirical analysis, the regression results showed that the estimated coefficients of the regression parameter all have positive signs. The implication of these signs was that ACC Limited training cost, development cost and number of staff are all positively related to the profit of the company for the period of study. This means an increase in training cost, development cost and number of staff could lead to increase in profit of the Company. However, the third parameter (number of staff), does not show a significant effect on the profit. This indicates that profit level does not depend on the rate of its employees rather other assets.

An overall test was carried out to observe the significant effect of all independent variables (training cost, development cost and number of staff) on the dependent variable (profit). Result concluded that there is a significant effect of human resource costs towards attainment of profit. In line with this, it is justified that three independent variables have a

proportionate impact in predicting the profitability of the firm. The result of the R^2 also has a justification for this. It is therefore concluded that organizational performance is dependent upon the performance of the individuals that make up the organization. That is, organization does not exist in a vacuum; there are people (employees) who make work together towards achieving its goal. Organization exists for a particular goal. The goal cannot be realized except people are trained and developed. Based on the summary of findings, the following are recommended;

1. Organization should enhance the retention of education and training on staff so as to avert wastage of knowledgeable investment.
2. Accounting standard board should incorporate their accounting standard for the valuation and disclosure of human resource accounting.
3. The company law should require companies to attach information about the value of human resource and the result of their performance during their accounting year in notes and schedule.
4. Finally, it is apposite to suggest that prospective researchers in this area should broaden their study to cover a wider range of human resource Accounting.

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