

AN EMPIRICAL ANALYSIS OF KEY COMPONENTS OF MEASUREMENT OF HUMAN ASSET

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PURPOSE

TO explore the reasons for the importance of measuring human asset and to find any significant difference between employees of different age and experience.

Methodology: 150 responses were obtained through a standard structured questionnaire that was analysed through mean, standard deviation, Factor analysis, ANOVA, Tukey HSD.

Findings: 61.9% of respondents stated that measuring human asset was important or very important in their organization. The employees of age group of 45 years and more and employees having experience of 5 years give more importance to measure human asset.

Implication: The information system should consider both the cost and value of human beings and should be able to make inter and intra-firm comparisons. Accounting standard for the measurement and reporting of the Cost and Value of Human Asset should be issued.

Key Words: Human Asset Measurement, Human Asset Valuation, Human Resource Valuation Model, Service Sector, Human Asset Value.

Introduction

How often have you read or heard a Chief Executive saying that ‘people are our best assets!’ Where this undoubtedly recognizes that, the future of all organizations rests on the competencies of its people, however human resource accounting is something more than simply putting people on the balance sheet. So, why human resource accounting and why now? First of all we are in the midst of considerable economic and social change where, according to many management writers, most organizations, if they are to be successful, must compete through people. Competing through people - resource based strategies – is the new competitive advantage that organizations should aspire towards if they wish to achieve any competitive edge. The true source of competitive advantage for organizations, therefore, is embedded in the knowledge, skills, abilities, and other characteristics (KSA&OCs) of their employees. Retaining, rewarding, and motivating these employees requires a new approach to human resource management. The identification and utilization of intangible assets, and utilization of intangible assets, and the communication of their value is viewed as a key competitive driver (Eustace, 2000). Investments in intangibles have been shown to generate future economic benefits (Amir and Livne, 2001, Lev, 2001).

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In knowledge economy/society, human asset constitutes the focal point on which most of the economic activities rotate. A knowledge economy is one, in which, the generation and exploitation of knowledge play the predominant part in the creation of wealth (United Kingdom Department of Trade and Industry, 1998). In these types of economies, service-oriented companies dominates majority of economic activities. The major asset to these companies is thus the knowledge, experience, and skillful workers who work with symbols rather than machines. The fast growth of service organizations in various developed and developing countries shifts the focus of management towards empowerment of their employees.

Despite the fact that service firms are fast growing in the 21st century universally where intellectual capital is the most important asset, the system of measurement of human asset accounting has few evidences of its application. Many intangibles are not recognized in financial reporting leading to a potential decline in the relevance of the financial statements. Human Resource Accounting (HRA) provides the means through which the rhetoric can be turned into the reality and the intellectual and social worth, value, and capital of an organization can be identified, developed, and recognized.

Review of Literature

Since the 1980s, there has been an increasing emphasis on the importance of human asset measurement. From a business perspective, measuring provides a common numerical language to communicate the size, quantity, or quality of an activity. In the world of business, there are few factors, those are more important to organizational performance than measurement (Drucker, 1973).

According to World Bank's assessment of 192 countries on average, physical capital accounts for 16% of total wealth, natural capital accounts for 20%, and human capital accounts for 64%. This is much against the general belief that physical capital is the most important productive wealth. The dominance of human capital is particularly marked in high income countries such as Germany, Japan, and Switzerland where it accounts for as much as 80% of human capital out of total capital (Human Development Report, 1996, cited in Singh, 2002a). Singh (2002a) has made detailed comparison of human capital vs. financial capital and the importance of human capital.

As intangible assets play an even more important role in companies' value-creating process than ever before, it has become more important to communicate these "hidden" assets to external stakeholders. Singh and Gupta (2013) found a significant impact of the human asset valuation information on investors' decision regarding their selection of the company.

Measurement of human asset is often management's weakest area and weakness in HR management (HRM) specifically has been recognized by authors like Fitz-enz (1984, 1990) and Cascio (1991, 1992). HR practitioners believe that their role is developing more strategically than the operational and administrative functions of traditional personnel management. While HR practitioners recognize that they have to use business language to operate strategically in business, there are questions about how well equipped they are to do this (Cleland *et al.*, 2000).

Researchers (Toulson and Dewe, 2004; Verma and Dewe, 2008) have used surveys to explore a range of issues around HR measurement. While, respondents viewed HR measurement as important, results acknowledged that effective HR measurement in the short term may be slow because of a number of perceived and practical difficulties. Such surveys provide a snapshot of views and perceptions but they cannot provide insights into, what is actually happening in those organizations undertaking practical measurement steps.

Singh and Gupta (2008) by using the human resource valuation model (Singh, 2002b) found that there was huge difference between the cost incurred on an employee by an organization and the value of their employees. Therefore, human asset valuation helps organization and its employees to know not only about their contribution (Singh, 1996) but also about to be aware of the improvements needed to make the firm more competitive and more productive and to increase their efficiency and skills.

Singh and Gupta (2010) showed the importance of valuation of human asset by proving that the cost incurred on employees cannot be used as a surrogate measure of their value. Also, the various Organizational and Environmental factors relating to human asset had an impact on Organization's human asset value. Values calculated by using the human resource valuation model (Singh, 2002) provided the information for strategic decision making, particularly, relating to the human resource decision problems. Hence, HCIS (Human Capital Information System) can be used by the decision makers as Decision Support System (Singh, 1999).

Human Asset Measurement has a number of roles; it provides organizations with information not just about the cost of human resources but more importantly about their value and worth. In this way, it gives a new perspective to many when taking decisions about human resources. It is through this framework of worth and value versus cost that strategic decision can be made that enhance the competitive advantage for most of the organizations. Human Asset Accounting is all about developing a way of measuring and valuing that captures the very essence of a business – its people – and reports this worth in such a way that not only shows the added worth that they make to the organization but allows for the continued development of this worth as well (Singh and Rastogi, 2001). Human asset is one of the key non-financial areas of business activity, where greater disclosures in the annual report and accounts are likely to be demanded in the future.

Research Methodology

Do organizations share their views about Human Resource Accounting? In order to explore the reasons for the importance of measuring the value of human asset to the organization, a survey has been carried out – collecting information from a range of organizations in service sector organisations. Data has been obtained, using a standard structured questionnaire. Questionnaire developed by Verma and Dewe (2006), has been adopted to explore the reasons why measuring human resources is important to service sector organizations in India. Scale metrics indicate five point likert scale ranging from “not important to very important”. From those who returned the survey, a number of reasons why it was important for organization to measure Human Resources stood out. These included, for example, ‘human resources should be accountable, just like any other function,’ ‘the knowledge and skills of our people are our most important source of sustained competitive advantage,’ ‘measurement of human resources gives management needed information about the people resources in the organization and whether the resources are there to support business strategies,’ ‘measurement helps with strategic planning,’ and ‘understanding the value of our people focuses on our future human resource needs, which is crucial for both setting long-term strategies and achieving them.’ Data analysis also extended to explore differences in perception between employees under different age groups and having different work experience.

The data for the present study have been collected from 150 employees working in service sector organizations. Organizations were selected from the major areas of service sector (i.e., Information technology, Banking and Insurance, Telecommunication, and Finance) through stratified random sampling technique.

In order to obtain a good estimate of the reliability of the questionnaire, Cronbach's alpha has been computed.

Table 1: Cronbach's Alpha Coefficient for Measuring Reliability of the Instrument

Cronbach's alpha coefficients	0.897
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The coefficient of Cronbach's alpha revealed high reliability coefficient as shown in Table 1.

The statistical methods applied in the study have been used for both descriptive and inferential purposes. The data have been analysed using Predictive Analytic Software (PASW).

Objectives of the Study

The main objective of the study is to find out the reasons for the importance of measuring the value of human asset to the service sector organization.

The objectives of the present study are as follows:

1. To find out the reasons of why it is important to measure human asset in the organization.
2. To find out the key components of measuring the value of human asset to the organization.
3. To find whether there are any significant differences between employees of different age groups in relation to the reasons they thought important for measuring human asset.
4. To find whether there are any significant differences between employees having different work experience in relation to the reasons they thought important for measuring human asset.
5. To make recommendations for the policy makers on the basis of findings of the study.

Hypotheses of the Study

To achieve the above objectives, following **Null (H0) and Alternative (HA) Hypotheses** have been formulated:

H01: There is no key component of measuring the value of human asset to the organization.

HA1: There are key components of measuring the value of human asset to the organization.

H02: There is no significant difference between employees of different age groups in relation to the reasons they thought important for measuring human asset.

HA2: There is a significant difference between employees of different age groups in relation to the reasons they thought important for measuring human asset.

H03: There is a no significant difference between employees having different experience in relation to the reasons they thought important for measuring human asset.

HA3: There is a significant difference between employees having different experience in relation to the reasons they thought important for measuring human asset.

Analysis and Discussion

Data has been obtained using a standard structured questionnaire. The questionnaire developed by Verma and Dewe (2006), has been adopted to explore the reasons why measuring human resources is important to service sector organizations in India.

Scale metrics indicate five point scale ranging from “not important to extremely important or very important”. Data analysis also extended to explore differences in perception between employees under different age and experience group categories. Respondents were asked to identify how important the measurement of human asset was to their organization. Results are shown in table 2. As shown in the Table 2, there are eight reasons for measuring human resources, which were supported by over 65% of all respondents.

Table 2 indicates that 70% respondents stated that human asset was identified as being important source of sustained competitive advantage to organizations. 68.7% of the respondents agreed that measurement of the knowledge and skills of employees is an important indicator of future profitability, human assets should be more accountable, and it is crucial for both setting long term strategies and achieving them. It shows that accountability is of important concern with most of the respondents and the valuation of human asset would help strategic planning and the achievement of these plans.

Table 2: Percentage of Employees who Agreed or Strongly Agreed for Important Reasons for Measuring Human Asset

S. No.	Reasons for Measuring Human Resources as an Intangible Asset	% of Agreed or Strongly Agreed
1.	Human resources should be accountable, just like any other resource.	68.7
2.	The knowledge and skills of our people is our most important source of sustained competitive advantage.	70
3.	Measurement of human resources gives management needed information about the people resources in the organisation and provided that the resources are there to support business strategies.	64.4
4.	Measurement helps in strategic planning.	66.7
5.	Understanding the value of our people focuses on our future human resource needs, which is crucial for both setting long term strategies and achieving them.	68.7
6.	By identifying the value added contribution of human resources, the impact of human resources on financial results can be developed.	66.2
7.	Through measuring the effectiveness of a particular programme and the impact it will have on the level of knowledge within the organisation, management can make better decisions.	55.7
8.	Measurement encourages the alignment of human resource plans with business plans.	65.1
9.	Measurement increases the preparedness of management to take action.	58.7
10.	Measurement encourages human resource to adopt a strategic perspective.	57.4
11.	Measurement allows people to be seen as an investment to be developed rather than as an expense to be trimmed.	66.7
12.	The language of business is money. To earn credibility and receive needed resources, human resources need to speak in financial terms.	50.7
13.	Measuring human resources facilitates decision making by making the costs of different actions visible.	55.3
14.	To be able to manage knowledge we need to be able to measure it as an intangible asset.	64.4
15.	Measurement of the knowledge and skills of employees is an important indicator of future profitability.	68.7
16.	Measurement helps solve human resource problems.	53.3
17.	Measurement of human resources gives investors needed information about the value of the business and its potential for future profitability.	56
18.	Human resources should be mandated and have as one of their priorities the development of HRM accounting procedures and practices.	58
19.	Though being able to demonstrate the value and importance of the organisation's human resources, human resources become a strategic partner.	61.3
Mean		61.9

The remaining 11 reasons for measuring human assets were given moderate importance for which approximately 50% to around 65% of respondents stated that they agreed with these.

61.9% of respondents stated that the measuring human resource as an intangible asset is important or very important in their organization. The rest, 38.1% of respondents stated that the measurement of human resources is not important, somewhat important, or moderately important.

To test the null hypothesis H01 that there is no key component of measuring the value of human asset to the organization, factor analysis has been done. Before applying factor analysis technique, Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy and Bartlett’s Test has been conducted to judge the suitability of the data for factor analysis. Table 3 shows the results of Kaiser-Meyer-Olkin Measure and Bartlett’s Test.

Table 3: Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy and Bartlett’s Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.870
Bartlett’s Test of Sphericity	Approx. Chi-Square	1.117
	Df	171
	Sig.	0.000

The Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy is a statistic which indicates the proportion of variance in the variables which is common variance, i.e., which might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with the data. If the value is less than 0.50, the results of the factor analysis probably won’t be very useful. Since value is more than 0.50 i.e., 0.870, factor analysis would be useful with the data.

Also, Bartlett’s test of sphericity indicates whether correlation matrix is an identity matrix, which would indicate that the variables used in model are unrelated. The significance level gives the result of the test. Very small values (less than 0.05) indicate that there are probably significant relationships among the variables. A value higher than about 0.10 or so may indicate that the data are not suitable for factor analysis. Since significance level 0.000 is very small (i.e., less than 0.05), this indicates that data are suitable for factor analysis.

Table 4: Scores of Factor Analysis to the Reasons for Measuring Human Asset

S. No.	Reasons for Measuring Human Asset	Components Intangible Asset			
		1	2	3	4
1.	Human resources should be accountable, just like any other resource.	0.773			
2.	The knowledge and skills of our people is our most important source of sustained competitive advantage.	0.835			
3.	Measurement of human resources gives management needed information about the people resources in the organization and if the resources are there to support business strategies.	0.677			
4.	Measurement helps in strategic planning.	0.618			
5.	Understanding the value of our people focuses on our future human resource needs, which is crucial for both setting long term strategies and achieving them.	0.759			

6.	By identifying the value added contribution of human resources, the impact of human resources on financial results can be developed.	0.530			
7.	Through measuring the effectiveness of a particular programme and the impact it will have on the level of knowledge within the organization, management can make better decisions.				0.464
8.	Measurement encourages the alignment of human resource plans with business plans.				0.740
9.	Measurement increases the preparedness of management to take action.				0.729
10.	Measurement encourages human resource to adopt a strategic perspective.				0.770
11.	Measurement allows people to be seen as an investment to be developed rather than as an expense to be trimmed.		0.526		
12.	The language of business is money. To earn credibility and receive needed resources, human resources need to speak in financial terms.			0.814	
13.	Measuring human resources facilitates decision making by making the costs of different actions visible.			0.714	
14.	To be able to manage knowledge we need to be able to measure it as an intangible asset.		0.456		
15.	Measurement of the knowledge and skills of employees is an important indicator of future profitability.		0.640		
16.	Measurement helps solve human resource problems.			0.629	
17.	Measurement of human resources gives investors needed information about the value of the business and its potential for future profitability.			0.594	
18.	Human resources should be mandated and have as one of their priorities the development of HRM accounting procedures and practices.		0.789		
19.	Through being able to demonstrate the value and importance of the organization's human resources, human resources become a strategic partner.		0.775		
	Eigen Values	3.660	2.862	2.504	2.377
	% of variance explained	19.265	15.061	13.180	12.511
	Cumulative %	19.265	34.326	47.506	60.016

The values in Table 4 are correlation coefficients (r) between the particular and the component (i.e., explain how closely the variables are related to each one of the component discovered). These correlation coefficients are called factor loadings. It has become customary in factor analysis literature for a loading of 0.6, 0.5, 0.45, and 0.4 on the basis of sample size to be the minimum absolute value to be interpreted. In the present study, loading of 0.4 is taken to be the minimum value. Further, Eigen value, as shown in Table 4, are the sum of the variances of the component values. These values indicate the relative importance of each component in accounting for the particular set of variables being analyzed. On the

basis of factor loadings, these variables are classified into 4 components. These components on the basis of common characteristics of variables can be named as follows:

Classification of Components

- Component 1: Human Value Added
- Component 2: HR as a Measurable Intangible Strategic Partner
- Component 3: Accountability and Quality of Decision Making
- Component 4: Strategic Alignment & Control

When divided by the number of variables, an Eigen value yields an estimate of the total variance explained by the factor. In the table 4, component A accounts for 19.26% of the total variance. If a factor has a low Eigen value, then it adds little to the explanation of variances in the variables and may be disregarded. 60% of the total variance is common variance. 40% of the total variance in variable is made up of portions unique to individual variables and the technique used to measure them. If the variables are all very different from each other, this index will be low. If they fall into one or more highly redundant groups, and if the extracted factors account for all the groups, the index will then approach unity.

Thus, we reject the null hypothesis and accept the alternative hypothesis, stating that, there are key components of measuring the value of human asset to the organization.

To test the null hypothesis H02 that there is no significant difference between employees of different age groups in relation to the reasons they thought important for measuring human asset, descriptive statistics, and ANOVA has been performed as given in Table 5 and 6.

Table 5 presents the descriptive statistics, mean, and standard deviation for different age groups.

Table 5: Comparisons of Mean Scores of Different Age Groups for Reasons to Measure Human Asset

Age	Mean	Standard Deviation
Less than 25 years	3.368	0.438
25-35 years	3.725	0.527
36-45 years	3.776	0.507
45 years and more	4.079	0.475

As shown in the Table 5, employees of age 45 years and more give more importance to measure human asset (M= 4.079, SD= 0.475) followed by employees of age 35-45 years (M= 3.776 , SD= 0.507).

The next step is to conduct test of significant differences to evaluate the null hypotheses. The one way analysis of variance, commonly known as ANOVA, analyses the data statistically to find out whether the differences between the means of the groups are likely to be due to the sampling error or reflect a real difference in the population. It is generally used for inferential bivariate analysis. If the F statistics, computed in the analysis of variance proves significant (usually at 0.05 level of significance), the null hypothesis of no difference between the groups' mean is rejected. The differences in that case are not due to the sampling variation; rather they are real differences among groups.

Table 6 presents the F-statistics (ANOVA).

Table 6: Summary of Significant F-test for Different Age Groups

	Sum of Squares	Mean Squares	F	Sig.
Between Groups	4.803	1.601	6.259*	0.001
Within Groups	37.344	0.256		
Total	42.147			

It shows that there is a significant difference among the employees under different age groups (F= 6.259, p< 0.01). It shows that the differences among the groups' are real and not because of the sampling errors.

The one way ANOVA is a hypothesis testing procedure used to determine if significant mean differences exist for three or more groups. There is however, one limitation of the ANOVA. The significant F-statistics provides evidence that there are real differences among the groups but it does not tell exactly which groups have significantly different means. Therefore, to supplement ANOVA a further analysis has been conducted by applying post-hoc multiple comparison procedure. Tukey's HSD (Honestly Significant Difference) test has been used for post-hoc comparison that helped in identifying the pairs of groups that have sufficiently large differences, which are unlikely due to the sampling error.

The Table 7 shows the results of Tukey's HSD test. The groups for which the means are found significantly different by the Tukey's HSD test are shown by asterisk (*) in the table.

Table 7: Summary of Tukey's HSD (Honestly Significant Difference) Test

Age (I)	Age (J)	Mean Difference (I-J)	Standard Error	Sig.
Less than 25 years	25-35 years	-0.356*	0.114	0.011
	35-45 years	-0.407*	0.136	0.016
	45 years and more	-0.711*	0.177	0.001
25-35 years	Less than 25 years	0.356*	0.114	0.011
	35-45 years	-0.051	0.108	0.965
	45 years and more	-0.354	0.156	0.111
35-45 years	Less than 25 years	0.407*	0.136	0.016
	25-35 years	0.0510	0.108	0.965
	45 years and more	-0.303	0.173	0.299
45 years and more	Less than 25 years	0.711*	0.177	0.001
	25-35 years	0.354	0.156	0.111
	35-45 years	0.303	0.173	0.299

* The mean difference is significant at the 0.05 level.

There are significant differences in the mean of the employees in 'Less than 25 years and other age groups. It reveals that the employees between 25-35 years, 35-45 years, and 45 years and more of age give more importance to measure human asset than employees below the age of 25 years (Mean Difference = -0.356, -0.407, -0.711 respectively).

This rejects the null hypothesis H02 and accepts alternative hypothesis that there is a significant difference between employees of different age groups in relation to the reasons they thought important for measuring human asset.

To test the null hypothesis H03 that there is a significant difference between employees having different experience in relation to the reasons they thought important for measuring human asset, descriptive statistics, and ANOVA has been performed as given in Table 8 and 9.

Table 8 presents the descriptive statistics, mean and standard deviation employees having different work experience.

Table 8: Comparisons of Mean Scores of Employees having Different Work Experience for Reasons to Measure Human Asset

Experience	Mean	Standard Deviation
Less than 2 years	3.412	0.453
2-5 years	3.588	0.561
5-10 years	3.815	0.479
more than 10 years	3.877	0.508

Table 8 shows that employees having higher experience i.e., 10 years and more give more importance (M= 3.877, SD= 0.508) to measure human asset in the organization.

Table 9 presents the F-statistics.

Table 9: Summary of Significant F-test for Different Work Experience

	Sum of Squares	Mean Squares	F	Sig.
Between Groups	4.381	1.460	5.646*	.001
Within Groups	37.765	0.259		
Total	42.147			

* Significant at 0.01 level

Table 9 shows whether there is any significant difference between the employees having different years of experience. As shown in the table 9, there are significant differences (F= 5.646, P< 0.01) among employees having different years of experience.

Table 10 shows the results of Tukey's HSD Test.

Result of Tukey's HSD test (Table 10) shows that there are significant differences in the mean of employees having experience less than '2 years' and '5-10 years' (Mean Difference=-0.402), 'Less than 2 years' and 'More than 10 years' (Mean Difference=-0.465), and '2-5 years' and 'more than 10 years' (Mean Difference=-0.289).

This rejects the null hypothesis H03 and accepts alternative hypothesis that there is a significant difference between employees having different experience in relation to the reasons they thought important for measuring human asset.

Discussion and Recommendations

The research was carried out to explore current perception in the area of valuing human asset, focusing on the importance of valuation of human asset in service sector organisations.

Table 10: Summary of Tukey’s HSD (Honestly Significant Difference) Test

Experience (I)	Experience (J)	Mean Difference (I-J)	Standard Error	Sig.
Less than 2 years	2-5 years	-0.176	0.129	0.524
	5-10 years	-0.402*	0.131	0.014
	10 years and more	-0.465*	0.130	0.003
2-5 years	Less than 2 years	0.176	0.129	0.524
	5-10 years	-0.226	0.111	0.179
	10 years and more	-0.289*	0.110	0.046
5-10 years	Less than 2 years	0.402*	0.131	0.014
	2-5 years	0.226	0.111	0.179
	10 years and more	-0.063	0.112	0.944
10 years and more	Less than 2 years	0.465*	0.130	0.003
	2-5 years	0.289*	0.110	0.046
	5-10 years	0.063	0.112	0.944

* The mean difference is significant at the 0.05 level.

It appears from the result of the study that human asset was identified as being important sources of sustained competitive advantage to service sector organizations. There were a wide range of measures considered either of moderate or high importance. Thus, it is expected that the valuation of human assets would help strategic planning and the achievement of these plans (Singh, 1999). Also, accountability as of prime concern with most of the respondents state that human asset should be accountable in order to be more influential in organizations while taking qualitative decisions. Similar results have been found by Verma and Dewe (2006) in their research study conducted in UK organizations. Majority of respondents identified that the measurement / valuation of human resources was important to their organisations.

Also, key components of measuring the human asset were found as Human Value Added, HR as a Measurable Intangible Strategic Partner, Accountability and Quality of Decision Making, and Strategic Alignment and Control.

Also, Toulson and Dewe (2004) emerged five themes from their research in institutes in New Zealand, on exploring why HR accounting is regarded as important. These are, to be able to manage, We must be able to measure’, ‘human resources must be accountable like any other business function’, ‘Helps to develop a culture emphasising investment rather than expenditure’, ‘Encourages a strategic perspective’ and ‘Such information is needed for decision making’. They also used component analysis and found the reasons why measuring human resources is perceived as being important. The first illustrated the view that, ‘measurement reflects the strategic and competitive importance of human resources’, while the second suggested that, ‘to earn credibility, HRM must be expressed in financial terms’.

Also, it was found that there is a difference in perception between employees of different age. Older employees give more importance to measure human asset as compared to younger employees. This implies that, by the passage of time as the employees grow older, they understand the value of human asset.

Similarly, differences have been found between employees having different experience. Employees having higher experience give more importance as compared to employees having lesser experience. This

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shows that how important it is to incorporate these values in taking strategic decisions and formulating plans.

On the basis of the results of the study, it is recommended that the human asset valuation information should be used while doing organizational planning and decision making (Singh, 1999). Also, in order to value and reward employees, their contribution to the key strategic plans of the organization and to financial results should be taken into consideration.

The study also revealed the results for ANOVA and Tukey's HSD tests, conducted at 0.05 level of significance, to find out the significant differences among the employees on the basis of their age and experience.

Since older employees give more importance to measure human asset, they should involve more in the process of measuring human asset to increase the effectiveness of the process by convincing and involving younger generation also. Organizations should give stress on retention of employees, as older the employees (i.e., having higher experience), better for the organization to gain the competitive advantage.

Also, even today's education pattern provides no major qualification regarding human asset valuation as it gives in core financial area, organizations should take steps to organize training and development programmes relating to valuation of human asset.

Organizations should have a systematic integrated way of measuring people with a measure of the value they are able to contribute (Singh, 2000).

Also, "the decisions regarding Human Capital (HC) cannot be taken properly unless the relevant, timely, and accurate information regarding HC is made available to the decision makers" (Singh, 2001).

Singh (2000) developed a Human Resource Valuation model based on the Human Asset Accounting Information System (HAAIS) which may be used for decision making pertaining to human asset to manage their responses.

The salaries and other compensation paid to the Human Resource in an Organisation is actually the cost incurred by the Organisation and value to the individual from his point of view. The Value of Human Asset for the Organisation should be perceived in terms of the contributions made by him/her to the Organisation which is useful for management accounting.

Hence, there is a need for proper information system which can account for Human Asset. The information system should consider both the cost and value of human beings and should be able to make inter-firm and intra-firm comparisons making use of external information including global benchmark as well.

References

- Amir, E. and Livne, G. (2001), Accounting for Human Capital when Labor Mobility is Restricted, London Business School Working Paper.
- Cascio, W.F. (1991), *Costing Human Resources: The Financial Impact of Behaviour in Organisations*, Third Edition, Boston: PWS-Kent Publishing.
- Cascio, W.F. (1992), International Human Resource Management Issues for the 1990s, *Asia Pacific Journal of Human Resources*, Vol. 30, No. 4, pp.1-18.
- Cleland, J., Pajo, K. and Toulson, P. (2000), Move it or Lose it: An Examination of the Evolving role of the Human Resource Professional in New Zealand, *International Journal of Human Resource Management*, Vol. 11, No. 1, pp.143-160.
- Drucker, P.F. (1973), *Management*, New York: Harper & Row.

- Eustace, C. (2000), *The Intangibles Economy: Impact and Policy Issues - Report of the European High Level Expert Group on the Intangible Economy*, European Commission.
- Fitz-enz, J. (1984), *How to Measure Human Resources Management*, New York: McGraw-Hill.
- Fitz-enz, J. (1990), *Human Value Management*, San Francisco, CA: Jossey-Bass.
- Lev, B. (2001), *Intangibles*, US: Brookings Institution Press.
- Singh, A.K. (1996), *Accounting for Human Resource: Acquisition, Development, and Retention*, Ph.D. Thesis, Delhi: University of Delhi, India.
- Singh, A.K. (1999), Human Capital Information System, *The Indian Journal of Accounting*, Vol. 30, No. 1, pp.40-50.
- Singh, A.K. (2000), Human Asset Information System: A Model based Approach, *Delhi Business Review: An International Journal of SHTR*, Vol. 1, No. 2. pp.1-11.
- Singh, A.K. (2002a), Human Development: A Holistic Perspective for Developing Transformational Leadership from within. *Delhi Business Review*, Vol. 3, No. 1, pp.29-45, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2113979, Accessed on October 13, 2012.
- Singh, A.K. (2002b), *Accounting for Human Resources: Acquisition, Development and Retention*, New Delhi: Society for Human Transformation and Research.
- Singh, A.K. and Gupta, N. (2008), Measurement of Human Asset: An Empirical Analysis, *Indian Journal of Accounting*, Vol. 38, No. 2, pp.13-22.
- Singh, A.K. and Gupta, N. (2010), Contribution based Measurement of Human Asset for Strategic Decision Making using HCIS, *International Journal of Business and Management Studies*, Vol. 2, No. 1, pp.97-105, Available from 2010 ISSN: 1309-8047.
- Singh, A.K. and Gupta, N. (2013), "Stock Investment Decisions: An Empirical Study of the Impact of Human Asset Valuation Information", Conference Proceedings, *World Finance conference*, Cyprus, 1-3 July, http://world-finance-conference.com/papers_wfc2/339.pdf.
- Singh, A.K. and Rastogi, L. (2001), Human Value Added, *Delhi Business Review: An International Journal of SHTR*, Vol. 2, No. 1, pp.21-34.
- Toulson, P. and Dewe, P. (2004), HR Accounting as a Measurement Tool, *Human Resource Management*, Vol. 14, No. 2, pp.75-90.
- Verma, S. and Dewe, P. (2006), Valuing Human Resources: Perceptions and Practices in UK Organizations, *Department of Management Studies*, University of York, Working Paper 17.
- Verma, S. and Dewe, P. (2008), Valuing Human Resources: Perceptions and Practices in UK Organizations, *Journal of Human Resource Costing and Accounting*, Vol. 12, No. 2, pp.102-123.
- United Kingdom Department of Trade and Industry (1998), *Corporate Reporting Under a Knowledge Economy*, London: Jossey-Bass.
- Kahn et.al. (1964). "Organisational Stress: Studies in Role Conflict and Ambiguity", New York: Wiley.