

HUMAN CAPITAL EFFICIENCY AND PROFITABILITY: WITH SPECIAL REFERENCE TO SELECTED SAVING AND CREDIT CO-OPERATIVE OF KAPILVASTU, NEPAL

Indra Mani Pandey

Research Scholar, Parul Institute of Commerce, Parul University, Vadodara

Dr. Ritesh Patel

Assistant Professor, Parul Institute of Commerce, Parul University, Vadodara

Abstract

The study offers insights on the impact of human capital efficiency on the profitability (ROA and ROE) of saving and credit co-operative in Kapilvastu, Nepal. The paper has used Pulic (1998) value-added intellectual capital (VAIC) model to measure the efficiency of Human Capital Efficiency (HCE) that can be ascertained through quantitative assessment using secondary data collected from the sample co-operative financial statement. The data used for the analysis of the study has been collected from the annual report as well as researcher direct visit in co-operative. The period considered for the study is from 2016 to 2020. To find out the impact of Human capital on profitability simple regression analysis, Karl Pearson correlation coefficient, and t-test analysis has been conducted. The finding infers that human capital efficiency should be Significant association on Return on Assets (ROA) in Swabhimani saving and credit co-operative. But positive association with insignificant on Return on Equity (ROE) and Return on Assets (ROA) in Swabhimani, Merit and Siddhartha saving and credit co-operative. Finding from this study may be useful to co-operatives managers to make better decision pertaining to the proper deployment of their strategic asset, namely human capital.

Keyword: HCE, Profitability, ROA, ROE, VAIC

1.1 Introduction

The paradigm of a physical product-based economy has shifted to a knowledge base economy. In the contemporary era, it is credible that knowledge has become the main source of social, cultural, and economic development. Knowledge is feeling in human beings in tacit and explicit forms. Tacit knowledge is derived from common sense while explicit knowledge is obtained from academic accomplishments (Smith, 2001). In a knowledge base economy, nearly all activities are based on knowledge and it is the most important economic resource and is replacing physical and financial capitals as the most critical capital (Regan, Coates, Keary&Bekery, 2003).

Human capital is the elements of intellectual capital (Bontis et al.,2000; Tayles et al., 2007). Human capital is a combination of skills, knowledge, intelligence, aptitudes, and expertise. it contributes to production and profitability so Human capital is the value of the most important

assets of an organization. (Bontis et al.,2000; Tayles et al.,2007; Gazor et al., 2013). On the other hand, Yusuf (2013) told that the competitiveness of a corporate organization is to successfully implement business strategies is depends on the efficient use of intangibles assets, particularly human capital. In today's knowledge and intelligent based economy, many researchers claim that "Human is our major asset" According to (Fitz-enz; 2000). Humans are the most powerful factor in the value creation of every organization Shorhren and Geert, (2015). Bontis (1998) argued that the dominance of knowledgeable workers are the distinguishing characteristics of the recent economy and have developed as an outcome of global competition.

Human capital efficiency is one of the most controversial topics in accounting. It is difficult to measure and represent knowledge workers on the balance sheet. (Fitz-enz 2000; Gan and Saleh 2008; Santoso 2011; Mitost 2012).

The Value-Added Intellectual Coefficient (VAICTM) has been developed by Ante Pulic (2000). Which can be used to measure the efficiency of intellectual capital within a company. The introduction of these monetary intellectual capital measurement techniques provides basic criteria for comparing the intellectual capital of different companies. (Kujansivu and Lonnqvist, 2005).

Although the term Intellectual capital is widely used in current times by the researcher in the developed countries, there have been very few studies that have used emerging economies for evaluating the implications of Intellectual capital for the industries. Therefore, it becomes necessary to understand whether this research is being efficiently utilized by the industries in the emerging economy to their advantage in creating value over time (Kamath, 2007).

The objectives of the study are to provide a relationship of human capital efficiency on profitability in Nepali saving & Credit co-operative firm from 2015/2016 to 2019/2020. There is not much literature on human capital efficiency, especially in Nepal. Most of the studies focusing on intellectual capital performance which majority of the studies focus on the finance sector. This research paper differs from other studies. It uses a sample of Saving and credit co-operative. Therefore, it contributes to the selection of sample size. Furthermore, the study measures the utilization of human capital efficiency on sample saving and credit co-operative in Kapilvastu, district in Nepal. Thus, the results from regulatory impact especially in drawing up future guidelines and policies about human capital performance. Additionally, it may facilitate the accountants and managers of the companies for better allocation of resources in those organizations.

1.2 Review of Literature:

Human capital concern with the productive capabilities of the human being. Skill, knowledge, and experience have economic value to the firm because they empower it to be productive and adaptable; thus, people constitute the firm's human capital (Becker, 1964).

Value Added Intellectual Coefficient (VAICTM) developed by Ante Pulic is an analytical tool for measuring the efficiency of intellectual capital within a Business firm. It was planned to empower Employees, management, shareholders, and other relevant stakeholders to efficiently

monitor. It was evaluated the efficiency of the firm total resources and each major resource component. VAIC™ model gives an understanding of how value creation efficiency in Business firms is measured and monitored using accounting base figures (Mavridis, 2004).

One of the VAIC™ elements is human capital efficiency (HCE). HCE measures the value added by the human resources of a Business firm (Kwarbai and Akinpelu, 2016). Many works of literature have demonstrated the advantages of using the VAIC™ methodology usefully (Chan, 2009; Chen et al., 2005; Firer and Williams, 2003; Goh, 2005; Mavridis, 2004; Tseng and Goo, 2005; William, 2000). The availability of these studies adds further credibility to the usage of this methodology. The commencement of these monetary intellectual capital measurement model gives new opportunities for companies and their stakeholders because it provides an absolute basis for matching the intellectual capital among different companies (Kujansivu and Lonnqvist, 2007).

Profitability is the potential of a given investment to earn a return from its use. Although, the term 'Profitability' is not synonymous with the term 'Efficiency'. Profitability is an index of efficiency and is considered as a measure of efficiency and management guide to greater efficiency, the extent of profitability cannot be taken as final proof of efficiency (Harward& Upton, 2012).

The study disclosed that there is a significant relationship between intellectual capital and firm performance. That human resource capital has a highly significant relation on return on asset and price to book ratio. In some way, managers think about the performance of human resources own evaluated, as far as possible they reduce the cost of humans and increase the profit (wang, 2011).

Higher ROE will increase the profit growth (Wang, 2011). The Effect of intellectual capital on the financial performance (earning per share, return on equity, the annual rate of return) of companies listed in Tehran stock exchange and identified that the efficiency co-efficient of each of the components of human capital has a significant positive effect on financial performance (Abbasssi and Sedghi, 2001).

The widespread perception of knowledge has developed the intellectual property concept to include human capital as one of the important assets for the reporting purpose of firms (Mouristen, 2004; Roslender, 2009). Human capital accounting helps potential investors judge a company offer the same rate of return on capital employed, information on human resources can help investors decide which company to choose for investment (Rao, 2005)

1.3 Objectives of the Study

This study aims to establish the extent to which human resource accounting affects profitability of Saving & credit co-operative in Kapilvastu, Nepal. Specifically, the objectives of the study are:

1. To Explore the extent of Human Capital Efficiency has affected on Return on Asset (ROA).
2. To Examine the of human Capital Efficiency on Return of Equity (ROE).

1.4 Research methodology

This study used quantitative approach; the study engaged a descriptive. The ex-post facto (Causal comparative) research design methods adopted by this study involves carrying out research on something that has occurred. The research does not have direct control over independent variable because they have already occurred. In other words, they can't be manipulated unless we have hypothesized situation in which event is replicated. (Onyeizugbe, 2013). The data were extracted from the company's annual reports. Bontis (2003) argued that annual reports are observed as an important source of organization information to external users such as stakeholders. However, the final data consists of three saving and credit co-operatives from Kapilvastu district

Our main independent variable is Human capital Efficiency which is component of The VAICTM model founded by (Pulic, 1998). The value-added intellectual capital efficiency and its components namely human capital efficiency, capital employed efficiency and structural capital efficiency. and this method has been widely used by researchers (Chen et al., 2005; Kamath, 2007; Nazari & Herremans, 2007; Chan, 2009; Ghosh & Mondal, 2012). therefore, the selection for this model in Nepal context is suitable. Human Capital Efficiency (HCE) measure the value added by the human resources of an organization. Human capital efficiency is computed as the ratio of Value Added (VA) to Human Capital (HC). The algebraic equation is as follows:

$$\text{Human Capital Efficiency (HCE)} = \frac{\text{Value Added (VA)}}{\text{Human Capital (HC)}}$$

Where, HC= Personnel expenses (Salaries and benefits)

$$\text{VA} = \text{Total revenue} - (\text{Operating Expenses} - \text{Salaries})$$

Our main dependent variables are Return on Assets (ROA), and Return on Shareholder Equity (ROE). ROA create the ratio of net income to the total asset. ROA is invented by Levy, G.W. (1973) and this model called levy process model. This method has been broadly used by researcher (Firer & Williams 2003; Chen, Cheng & Hwang 2005; Shohren and Geert, 2015). This ratio measures the ability of a firm in generating income on a certain level of the total asset it had

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Asset}}$$

ROE generate the ratio of net income to the total shareholder equity. ROE is invented by Levy, G.W. (1973) and this method has been broadly used by researcher (Jeffrey, 2011). The ratio measures the ability of a firm in generating income on a certain level of the total shareholder equity, it had

$$\text{ROE} = \frac{\text{Net Income}}{\text{Total Shareholder Equity}}$$

1.4 Result and Discussion:

Correlation Detail:

To examine the association among variables the Karl Pearson correlation analysis was conducted. About the correlation value there are various interpretations. Cohen (1988) infers the following guidance for interpreting the value of correlation.

Table no 1 Guideline for interpreting value of correlation analysis

Particulars	Results
$r = 0.10$ to 0.29 or $r = -0.10$ to -0.29	weak
$r = 0.30$ to 0.50 or $r = -0.30$ to -0.49	medium
$r = 0.50$ to 1.00 or $r = -0.50$ to -1.00	Strong

In this research correlation among variable are as follows.

Table no. 2: Result of correlation

Correlations of Swabhiman					Correlations of Merits			correlations of Siddhartha		
		HCE	ROA	ROE	HCE	ROA	ROE	HCE	ROA	ROE
HCE	Pearson Correlation	1			1			1		
	Sig. (2-tailed)									
	N	5			5			5		
ROA	Pearson Correlation	.969**	1		0.117	1		0.844	1	
	Sig. (2-tailed)	0.007			0.851			0.072		
	N	5	5		5	5		5	5	
ROE	Pearson Correlation	0.71	0.706	1	0.222	.984**	1	0.852	.993**	1
	Sig. (2-tailed)	0.179	0.183		0.72	0.003		0.067	0.001	
	N	5	5	5	5	5	5	5	5	5

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

sources: output of SPSS 22

Referring table 2 correlation of Return on Asset (ROA) and Human Capital Efficiency (HCE) of Swabhiman, Siddhartha, and Merits are 0.969, 0.844, and 0.117 with significance level 0.007, 0.072, and 0.851 respectively. The results show that strong positive significance association of swabhiman but other two co-operative Siddhartha and Merits are strong positive and weak positive insignificant correlation respectively.

Similarly, correlation of Human Capital Efficiency (HCE) and Return on shareholder equity (ROE) of Swabhiman, Siddhartha, and Merits are 0.71, 0.852, and 0.222 with significance level 0.179, 0.067, and 0.72 respectively. The results show that strong positive insignificant association of Swabhiman and Siddhartha but weak insignificant relationship of Merits.

Regression Analysis:

perceived human Capital Efficiency (HCE) as independent variable (X) and Return on Assets (ROA) as dependent variable (Y).

Table no 3: Regression result

	Swabhiman HCE-ROA	Merits HCE-ROA	Siddhartha HCE-ROA
R^2	0.939	0.014	0.712
coefficient of HCE	0.177	0.28	0.263
t-value	6.786	0.204	2.723
Std. Error	0.088	0.717	0.629
Adj R^2	0.918	-0.315	0.616
Std. coefficient Beta β)	0.969	0.117	0.844
sig. α	0.007	0.851	0.072
r	0.969	0.117	0.844

The result of Swabhiman, the value of R^2 is 0.939 reveals that among total variation in Return on Assets (ROA) 93.9% is explained by Human capital efficiency. similarly, the p-value 0.007 is less than alpha value 0.01 that means the model is statistically significant at 1% level of significance. The regression coefficient of Human Capital Efficiency is 0.177, which shows that one unit change in HCE causes 0.177 units change in ROA. So, it can be concluded that, Human Capital Efficiency is a good predictor of ROA with significant impact.

But, the level of significant of Merit and Siddhartha were (α value 0.851, and 0.072) respectively. All value is more than 0.05 ($P > 0.05$) so it is insignificant. The β value and t-value of Merit, and Siddhartha were (0.117, and .844) and (0.204, and 2.723) respectively. The evidence therefore indicated that the model could not be used in explaining the effect of human capital on Return on Assets.

Table no 4: Regression result

	Swabhiman HCE-ROE	Merits HCE-ROE	Siddhartha HCE-ROE
R^2	0.504	0.049	0.727
coefficient of HCE	0.125	2.031	1.21
t-value	1.744	0.394	2.823
Std. Error	0.173	2.685	12.034
Adj R^2	0.338	-0.268	0.688

Std. coefficient Beta (β)	0.71	0.222	0.875
sig. α	0.17	0.72	0.067
r	0.71	0.222	0.852

perceived human Capital Efficiency (HCE) as independent variable (X) and Return on Shareholder Equity (ROE) as dependent variable (Y). The level of significant of Swabhimna, Merit and Siddhartha were (α value 0.17, 0.72, and 0.067) respectively. All value are more than 0.05 ($P > 0.05$) so it is insignificant. The β value and t-value of Swabhimana, Merit, and Siddhartha were (0.71, 0.222, and .875) and (1.744, 0.394, and 2.823) respectively. The evidence therefore indicated that the model could not be used in explaining the effect of human capital on Return on equity.

1.5 Conclusion:

This research was conducted to determine the impact of Human capital Efficiency on the profitability of saving and credit co-operative. Human Capital Efficiency has been the dominating factor for profitability and it is continuing to be the important one for a much longer time. An overall test was carried out to discover that there is a statistically significant effect on the independent variable (Human Capital Efficiency) on the dependent variable (Return on Assets) of Swabhimana saving and credit co-operative ltd only. which is supported to previous studies (Goh 2005; Makki et. al., 2008; Gan and saleh, 2008; Ting and lean, 2009; phusavant et al., 2011; Mondal and Gosh, 2012; Komnenine and Pokrajcic, 2012) also identified that organizational performance is positively influenced by Human Capital Efficiency. It concluded that Human capital Efficiency impact on return on assets and also a good predictor of ROA with significantly.

The study revealed that there is a positive relationship between Human Capital Efficiency and return on equity, and Return on Assets but not significant, of Swabhimana, Merit, and Siddhartha co-operative. However, our finding is consistent with the study of Yusuf (2013), who concluded that Human capital Efficiency does not have any significant impact on the Return on Equity (ROE). Also, Firer & Williams, (2003) Puntillo, (2009). An insignificant relationship between human capital efficiency and firm performance.

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