Intellectual Capital and Financial Performance of Banks in Pakistan

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Abstract

The study examines the impact of intellectual capital on the financial performance of banks in Pakistan. Data is obtained from annual reports of banks. Value added Intellectual coefficient (VAIC) approach is employed to analyze the efficiency of banks. ROA is used to measure the financial performance of the banks. The intellectual capital (and its components human capital and structural capital) of banks have been analyzed and their impact on financial performance has been estimated using multiple regression techniques. The VAIC value of conventional banks is high as compare to Islamic banks. Human capital efficiency (HCE) is the main driver of the intellectual capital performance of banks operating in Pakistan. The findings show that VAIC is positively associated with ROA while three components of VAIC showed mix results on banks' performance. This study could not take into account different types of banks operating in Pakistan like foreign banks, specialized banks and microfinance banks due to the limitation of the data. Future study should therefore further improve on the aspect of different types of banks. The VAIC approach may be useful for the banks and policy makers in a knowledge economy to integrate the intellectual capital in the decision making process. This is one of the first studies in Pakistan that explores the impact of intellectual capital on the financial performance of banks in Pakistan.

Keywords*:* Intellectual capital; Value added intellectual coefficient (VAIC); financial performance; Pakistan banking sector

Introduction

The banking sector over the years of its operation has become more competitive and efficient. Banks, whether small or big, are distinguished on how efficiently and competitively they employ their scarce resources

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(physical and financial resources) so as to earn higher profits in the long run. Besides efficiency and competitiveness the role the intellectual capital plays is becoming more challenging in creation of value (in terms of profitability) for the banks in the banking sector.

The success factors in this age of competition are intellectual capital (IC) and customer relations which are also considered and defined as driving forces behind success of the firms and a long term solution for sustaining competitive edge over competitors in the banking industry. Firms that prioritize intellectual capital stay in the market, exercise and sustain market dominancy and market shares respectively whilst firms failing to do so are ousted by these highly competitive banks. This is reality in industries like financial one dominated by the banks which add value to themselves by means of intellectual capital, an intangible asset.[1]

The importance of intellectual capital cannot be ignored specifically in case of banking industry because of employment of and efficient utilization of intellectual capital are now defined as most crucial and pivotal in the success of the banks as compared to other industries operating in the financial system of the economy for reason that banks that are equipped with intellectual capital tend to deliver on high quality services backed by banks' continuous training of its human resources, building of its brand, internal system and processes.[2] The efficient and effective management of intellectual capital therefore becomes of utmost significance for the banks to operate both competitively and efficiently.

It is evident from international perspective that banks around the globe are taking maximum advantage of technology and intellectual capital to maximize their profits. This trend now, in particular, is not uncommon in banking sector of Pakistan. Banking sector of Pakistan is now prioritizing intellectual capital over merely employing high number of employees to achieve higher goals of profitability. Banks now employ professionals and ones who possess knowledge and capabilities to accomplish desired outcome of the banks for a targeted period during a calendar year.

Given its significance and its spinal role in banking industry this study aims to extend scope of the intellectual capital and its influence on banks' financial performance by employing widely used VAIC technique. Therefore, this study aims to investigate IC impact on banks' financial performance for reason that no previous studies have been done on the banking sector. It is therefore of great significance, due to rarity of the study related to banking sector, to conduct the study on banking sector of Pakistan.

Intellectual Capital

The concept of intellectual capital has not been defined in single definition; however, researchers have struggled to make their own domains. Intellectual capital, interpreted as an intangible assets, have zero value on firm balance sheet but it positively impact the performance and success of it.[3,4]

There is no universally accepted definition of IC and that its relationship is indirect to creation of value for the firms. It is very difficult to quantify intellectual capital and knowledge assets; their contribution however is recognized in productivity of the firms, efficiency of the firms and the overall

profitability of the firms. It is in fact limitation of the financial statement to not show its value besides economic values which are shown on firms' financial statements because economic value is not outcome of material goods only, intellectual capital too is now very important.[5] Three components characterize intellectual capital (IC), namely human capital, relational capital and structural capital.

VAIC and Financial Performance

The widely used VAIC methodology is employed to measure banks' IC performance. The study also intends to examine whether IC and its three major components (CEE, HCE and SCE) influence banks' profitability. Different studies are conducted to measure the impact of intellectual capital performance of firms in different sectors and countries.

The findings of a study on banking sector of Australia, for the period 2005-2007, by employing VAIC approach; reveal that the bank has high HCE as compare to CEE and SCE, respectively.[6] In another study he found that the role of human capital is very important in the financial sector of Australia as compared to structural and customer capital.[7]

HCE affects the intellectual capital performance of banks in Turkey. However, it is concluded that more positive impact on ROA is by CEE as compared to HCE whilst SCE has no impact on profitability of banks.[8]

In a recent study on investigation of 64 Islamic Financial Institution (IFIs hereafter) for the period 2007-2011 operating in 18 countries by employing the widely used VAIC methodology.[9] Their findings indicate statistically significant positive association amid VAIC and ROA respectively. It is evident that ROA has positive significant links with CEE and HCE, however, no significant relationship related to the SCE. The value creation capability of IFIs is strongly impacted by the HCE and SCE respectively.[10]

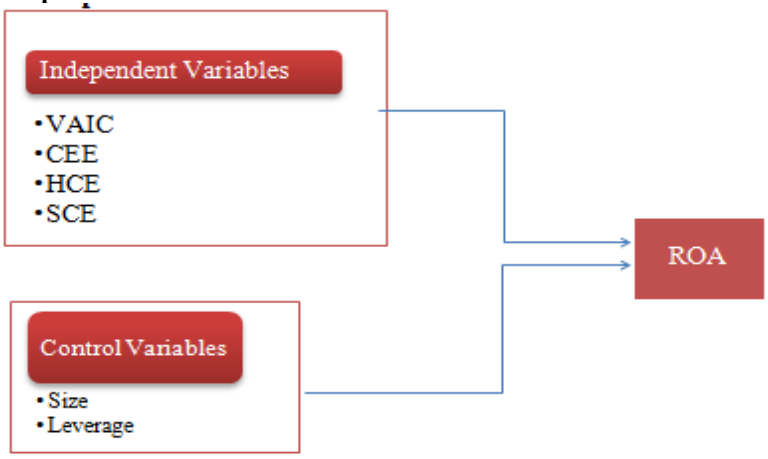
The results of a study to investigate the impact of IC on market performance among R&D engaging firms in the U.S., by employing VAIC, indicate that the total IC efficiency and market performance of the R&D firms are positively and statistically significant.[11] The empirical results of the components indicate that HCE and R&D firms have no significant association; however there is positive and significant association between SCE and tangible capital efficiency of the R&D firms.[12]

Using VAIC and trade model, a study investigated the IC performance of financial industries in Pakistan for the period 2008-13.[13] The findings indicate IC as vital causal element of the firms' financial efficiency under investigation in Pakistan. A significant role is played by human capital on the performance of the firms. All the companies have greater HC performance than SC and tangible capital efficiency.[14] On examining Lahore Stock Exchange (LSE hereafter) the findings of study, by employing VAIC, show that on one hand the performance of banking sector was average as compared to top performers such as cement, oil and gas and chemical sector respectively while private sector performance, on the other hand, was weaker.[15] Pakistan oil and gas sector is explored for period 2007 to 2011.[16] Findings indicate positive and significant relationship of HCE and SCE with financial performance of the firms. Furthermore the study

shows that the relationship of VAIC is statistically significant and positively related to firms' profitability.[17] The findings of another study show IC has significant influence on financial performance of pharmaceutics in Pakistan.[18] There is no direct improvement in financial performance of corporate governance however the performance is improved by exploiting intellectual capital resources.[19]

Due to higher usage of VAIC by existent literature to assess the impact of IC on the firms' financial performance, this study will use VAIC method as formulated by Pulic[20] that gauges the performance of the banks. The VAIC model brings out the intellectual capability irrespective of the use of resources being used efficiently or not. The high value of VAIC represents the high value added formed by utilizing the organization's whole resources.[21]

Conceptual Framework



Conceptual framework depicts the link amid IC and financial performance (ROA). Intellectual capital is presented by VAIC, CEE, HCE and SCE directed towards return on asset (ROA) which shows that intellectual capital influences the financial performance. Control variables such as bank size (LNTA) and leverage (LEV) have effect on return on asset (ROA) i.e. dependent variable.

Data and Methodology

By the end of 2015, the total number of banks operating throughout Pakistan is 44 banks out of which 24 banks are selected as a sample. The sample comprised of 20 conventional banks and 4 Islamic banks. The remaining 20 banks were skipped because of the non-availability of data. This study uses data from 2007 to 2015. Data has been obtained from annual reports uploaded on the websites of the concerned banks.

This study employs VAIC methodology, introduced by Pulic[22, 23] to measure IC influence on financial performance of banks operating in Pakistan. The VAIC model alarms the investor and firms that intellectual capital is utilized efficiently or not. The VAIC value helps investors in decision making because it gauges the new created value per monetary unit invested in each source.

Dependent Variable

Return on asset (ROA), traditional performance measure is used in this study representing financial performance of the banks. ROA is the key measure of bank profitability. ROA is calculated by dividing the net profit (the loss) for the current year by total assets.

Independent Variables

In this study the independent variables are the components of the VAIC model. VAIC is calculated as :

$$VAIC = CEE + HCE + SCE \quad (1)$$

Here VAIC is the value added intellectual coefficient, CEE refers to capital employed efficiency coefficient, HCE is human capital efficiency coefficient and SCE is the structural capital efficiency coefficient. To calculate the above variables we have to compute total value added (VA) created by banks. Total value added is calculated as follows :

$$VA_i = OP_i + EC_i + A_i \quad (2)$$

Here OP_i is the operating profit of the bank i, EC_i is the employee cost of the bank i and A_i refers to the amortization plus depreciation of the bank i.

The components of VAIC can be calculated by following equation (2). The first component of VAIC is computed as

$$CEE_i = VA_i/CE_i \quad (3)$$

CE_i is the capital employed or book value of the assets. In other words equity value of the bank i. $HCE_i$and SCE_i are calculated as follows

$$HCE_i = VA_i/HC_i \quad (4)$$

$$SC_i = VA_i - HC_i \quad (5)$$

$$SCE_i = SC_i/VA_i \quad (6)$$

In equation 4, HC_i is the personnel expenses of the bank i while in equation 6, SC_i is the difference between $VA_i$and HCi.

Control Variables

Bank size is the total assets' natural log (LNTA) and leverage is equal to long term debt over total assets. Deposit is taken as a dummy variable in the study which means that the banks which are conventional are marked as 1 and the Islamic banks are valued 0. This variable is incorporated as it show that either the bank type impact the financial performance of banks.

Regression models and Hypothesis

In this study we have four regression models to test the following four hypotheses.

H1. There is positive relationship between VAIC and financial performance (ROA).

H2. There is positive relationship between CEE and financial performance (ROA).

H3. There is positive relationship between HCE and financial performance (ROA).

H4. There is positive relationship between SCE and financial performance (ROA).

The four regression models are given below.

Regression Models

Table 1: Regression models

Model	Regression equation
1	$ROA_{it} = \beta_0 + \beta_1 VAIC_{it} + \alpha_{it}$
2	$ROA_{it} = \beta_0 + \beta_1 VAIC_{it} + \beta_2 LNTA_{it} + \beta_3 LEV_{it} + \beta_4 DEPOSIT_{it} + \alpha_{it}$
3	$ROA_{it} = \beta_0 + \beta_1 CEE_{it} + \beta_2 HCE_{it} + \beta_3 SCE_{it} + \alpha_{it}$
4	$ROA_{it} = \beta_0 + \beta_1 CEE_{it} + \beta_2 HCE_{it} + \beta_3 SCE_{it} + \beta_4 LNTA_{it} + \beta_5 LEV_{it} + \beta_6 DEPOSIT_{it} + \alpha_{it}$

In model 2 and 4, control and dummy variable are included. Model 1 and 2 measure the relationship between ROA_{it} and $VAIC_{it}$ while model 3 and 4 examines the association between ROA_{it} and components of $VAIC_{it}$ (CEE_{it}, HCE_{it}, SCE_{it}).

Empirical Results

Table 2 indicates the average value of the variables concerning banks' IC performance for the period 2007-2015. As the banking sector of Pakistan is divided into two panels i.e. Panel A shows the average value of VAIC and its components for Conventional banks while Panel B for Islamic banks. According to VAIC average value the banks are sorted out. The highest average VAIC value in conventional banks is of MCB (5.9589) and is at the top of the group. Similarly in group of Islamic banks, Meezan Bank is at the top with average VAIC value of 3.3468. If we look in the group of conventional banks, the bank with lowest average VAIC value is BOP (-0.6020) and from Islamic banks, Albaraka Bank (0.2927) with the lowest average VAIC value. When the average VAIC values are evaluated on the basis of bank groups, conventional banks (2.5031) has the highest average VAIC than the Islamic banks (1.7282). If the VAIC components in Table 1 are analyzed, it can be concluded that the most important component of VAIC value for than banks operating in the Pakistan banking sector is HCE. This result is also consistent with many other studies in the literature.[24, 25, 26, 27]

Table 2: VAIC and its Components for the Sample Banks.

Bank Name	CEE	HCE	SCE	VAIC
Panel A: Conventional *Banks*				
MCB Bank	0.3274	4.8389	0.7926	5.9589
United Bank Limited	0.2990	3.9325	0.7382	4.9697
Habib Metro Bank	0.2350	3.1935	0.6729	4.1014
Habib Bank Limited	0.3204	3.0415	0.6666	4.0285
Bank Al Habib	0.3428	3.2448	0.6902	4.2778
Standard Chartered Bank	0.2372	2.8539	0.6095	3.7006
Soneri Bank	0.1965	2.4742	0.5604	3.2311
National bank of Pakistan	0.2027	2.3658	0.5350	3.1035
Bank of Khyber	0.1190	1.8256	1.0484	2.9930
ZTBL	0.1412	2.0040	0.4933	2.6385
Bank Alfalah	0.2487	1.9223	0.4657	2.6367
Faysal Bank	0.1914	1.8421	0.4102	2.4437
Samba Bank	0.0415	0.6854	1.3604	2.0873
Askari Bank	0.1670	1.2860	0.5253	1.9783

Allied bank	0.3222	0.3364	0.6649	1.3235
JS Bank	0.0879	1.0058	0.2029	1.2966
NIB bank	0.0142	0.2548	0.5768	0.8458
Summit Bank	-0.0736	-0.3671	-0.0222	-0.4629
Silk Bank	-0.0708	-0.4236	0.0062	-0.4882
Bank of Punjab	-0.2638	-1.0216	0.6834	-0.6020
Average (20)	**0.1543**	**1.7647**	**0.5840**	**2.5031**
Panel B: Islamic Banks				
Meezan Bank	0.3154	2.4432	0.5882	3.3468
Dubai Islamic	0.1779	1.4252	0.1400	1.7431
Bank Islami	0.1499	1.3276	0.0529	1.5304
Albaraka Bank	0.0374	0.2175	0.0378	0.2927
Average (4)	**0.1701**	**1.3533**	**0.2047**	**1.7282**

Table 3 presents the average annual values of the variables (CEE, HCE, SCE and VAIC) concerning IC influence on financial performance of banks. The average VAIC of all banks is 2.4860 for the period 2007-2015. When this value is compared with the results of the studies conducted in other countries, it can be observed that it is lower than the average VAIC of the banks operating in the United Kingdom (10.80), United Arab Emirates (7.94), Australia (3.67), Saudi Arabia (3.65), Turkey (3.88) but higher than Malaysia (1.78). Only 12 of the 24 banks included in the analysis have a higher average VAIC than this one (see Table 2). Moreover, average VAIC values from the year 2007 to 2010 are lower than this value. Table 3 indicates that the most important component for the VAIC is HCE.

Table 3: VAIC and its Components from 2007 to 2015.

Year	CEE	HCE	SCE	VAIC
2007	0.1188	1.7023	0.4219	2.2430
2008	0.0616	1.2354	0.4881	1.7851
2009	0.0391	0.8457	0.9075	1.7923
2010	0.1072	1.5012	0.4845	2.0929
2011	0.2255	2.2666	0.7563	3.2482
2012	0.2078	2.0803	0.3956	2.6837
2013	0.2081	1.9858	0.4134	2.6073
2014	0.2158	2.2881	0.4389	2.9428
2015	0.2283	2.3699	0.3811	2.9793
2007-2015	0.1569	1.8083	0.5208	2.4860

Descriptive Statistics

The descriptive statistics in the table 4 gives the summarized picture of the data during the period 2007 to 2015. The VAIC ranges from -11.1492 to 6.4821 with average mean value of 2.4862 and standard deviation 2.3130. The maximum value of VAIC is of MCB in 2015 and lowest value is of BOP in 2008.

Table 4: Descriptive Statistics

	Observations	Mean	Maximum	Minimum	S.D
ROA	216	0.0032	0.0335	-0.0653	0.0172
VAIC	216	2.4862	6.4821	-11.1492	2.3130
CEE	216	0.1569	0.5224	-1.8955	0.2417
HCE	216	1.8083	5.3886	-10.3503	1.9288
SCE	216	0.5208	4.7500	-7.4450	1.0311
LNTA	216	342478	2124898	8940	374234
LEV	216	0.8898	1.0307	0.4979	0.0801

The mean value of HCE from the period 2007 to 2015 is 1.8083 with minimum value -10.3503 and maximum value 5.3886. The maximum value is of MCB in 2015 and minimum value is of bank of Punjab in 2008. The standard deviation of HCE is 1.9288. SCE has minimum value -7.4450 of Summit bank in 2008 and maximum value 4.7500 of Samba bank in 2009. SCE has mean value 0.5208 with standard deviation of 1.0311. The CEE ranges from -1.8955 to 0.5224 with mean value of 0.1569 and standard deviation of 0.2417. The minimum and maximum value is of bank of Punjab in 2008 and Silk bank in 2011. If the mean values of CEE, SCE and HCE are compared, this shows that HCE plays an important role in value creation of banks in Pakistan rather than the rest of the two components SCE and CEE.

The control variable total asset (LNTA) has mean value 342478 and standard deviation 374234. The minimum value of LNTA is of Albarka bank (8940) in 2007 and maximum value is of HBL (2124898) in 2015. Standard deviation and mean value of control variable (LEV) is 0.0801 and 0.8898. The maximum value is 1.0307 of BOP in 2010 and minimum value is 0.4979 of Silk bank in 2015.

Correlation Analysis

Table 5: Pearson Correlations Between variables

	ROA	VAIC	CEE	HCE	SCE	LNTA	LEV
ROA	1						
VAIC	0.7646***	1					
CEE	0.7766***	0.7985***	1				
HCE	0.8829***	0.8974***	0.8960***	1			
SCE	-0.1183*	0.3771***	-0.1191*	-0.0674	1		
LNTA	0.3886***	0.4092***	0.3139***	0.4125***	0.0725	1	
LEV	0.1284*	0.1215*	0.0296	0.0907	0.0959	0.2951***	1

*** and ** represents statistical significance at 1% and 5% levels, respectively

Correlation analysis results related to the variables used in the analysis are shown in Table 5. Statistically significant positive correlation is seen amid ROA and VAIC at 1 percent suggesting that banks financial performance is significant and positively associated with their value creation. Higher the VAIC value, larger ROA the banks can obtain. The findings also suggest that HCE among independent variables is positively and statistically significant with ROA. HCE is the variable with the highest correlation with ROA (r = 0.8829). Relationship amid CEE and ROA is positive and statistically significant. SCE has negative but statistically significant relationship at 10 percent with ROA. It is observed that there is no strong correlation between independent variables. The finding is consistent with Ozkan et al., (2016) and Ting and Lean (2009) where VAIC, CEE and HCE have positive and significant relationship with ROA respectively. But, it is contradicted for SCE in the case of Turkey and Malaysia. This result suggests that multicollinearity problem between independent variable is weak or non-existent.

Regression Analysis

The table 6 shows that VAIC in model one and two, HCE in model three and four, SCE in model three and four, LNTA in model two and model four, LEV in model two respectively are statistically significant at one percent significance level. The table also shows that CEE in model three and four, LEV in model

four and DEPOSIT in model two and four respectively are statistically insignificant.

Table 6 shows the relationship between the between dependent variable and explanatory variables. When explanatory power of all the models are compared, it is concluded that adjusted R-squared values (0.6776 and 0.4992 respectively) of model one and model two are lower than the adjusted R-squared values (0.7298 and 0.7368 respectively) of model three and model four. This result proved that VAIC components are better in explaining banks' profitability than VAIC alone.

Table 6: Regression Results.

Independent variables	Model 1	Model 2	Model 3	Model 4
C	-0.0074 (0.0025)	-0.0378 (0.0116)	-0.0092 (0.0013)	-0.0311 (0.0092)
VAIC	0.0042*** (0.0008)	0.0042*** (0.0003)		
CEE			-0.0002 (0.0050)	-0.0011 (0.0051)
HCE			0.0073*** (0.0007)	0.0069*** (0.0007)
SCE			-0.0013*** (0.0004)	-0.0014*** (0.0004)
LNTA		0.0056*** (0.0011)		0.0027*** (0.0009)
LEV		-0.0371*** (0.0119)		-0.0110 (0.0091)
DEPOSIT		-0.0055 (0.0033)		-0.0016 (0.0033)
R-squared	0.7136	0.5085	0.7336	0.7442
Adjusted R-squared	0.6776	0.4992	0.7298	0.7368
F-statistics	19.8358	54.5951	194.6558	101.3548
p-value	0.0000	0.0000	0.0000	0.0000

Dependent Variable : ROA
The figures in the parentheses are the standard errors.
**** and ** represents statistical significance at 1% and 5% levels, respectively.*

After applying several tests (F test, LM test and Hausman test) with respect panel data analysis, Models (2, 3 and 4) are estimated using one way individual specific random effect model and Model (1) is estimated using one-way individual specific fixed effect model. In order to deal with heteroscedasticity for all four models, White (1980) heteroscedasticity consistent standard errors are used.

The results show that the dependent variable ROA is impacted by the explanatory variables of all models to different extents. VAIC in model 1 and 2 is statistically significant at one percent significance level and it positively

impact ROA indicating that higher the VAIC of the banking sector higher returns and profitability are reaped by the banking sector. The point estimates in model 1 and 2 suggests that an increase of one unit in VAIC would increase ROA by 0.0042 percent respectively. This means that the profitability of the banking sector is positive if and when banks spend more on their capital employed, human resource and non-physical assets (for instance organizational chart, management process and strategies employed by the banks in the banking market). The findings of model one and two is supported by the study of Ku Ismail and Kareem (2011) suggesting that the return on assets of banks in Bahrain is higher when the value added is higher.

In table 6, model three and model four indicate that one unit increase in CEE leads to 0.0002 percent and 0.0011 percent decrease in ROA which means, CEE in the model three and four negatively impact ROA. This is possible because the failure to employ efficient capital costs banks in terms of earning higher profits in the longer run. CEE is statistically insignificant in model three and model four. The results are not consistent with the literature.

The point estimates in model 3 and model 4 shows that one unit addition of HCE will raise the ROA by 0.0073 percent and 0.0069 percent. Human Capital Efficiency (HCE) positively impact ROA showing that better trained employees and skilled intellectuals tend to add value to the banking sector in the form of higher ROA of the banks. The employment of efficient human capital lowers expenses of the banks and in turn increases ROA of the banks. The better trained, well-equipped and efficient human resource increases profitability of the banks and the finding is consistent with Ozkan[28] and Ting and Lean[29].

The point estimates of model 3 and model 4 show that if SCE is raised by one unit, ROA will decrease by 0.0013 percent and 0.0014 percent. It is not necessary to have consistent results with previous studies. For instance the table six shows that SCE in the model three and model four have negative statistically significant relationship with the dependent variable ROA.

Finally the values of LNTA show that assets have positive and statistically significant impact on ROA; greater the asset of the banks higher is profitability of banks. As the size of the bank increase, the more it will have resources due to which it will perform better in terms of intellectual capital performance. The negative effect of LEV on ROA in model two and four is possible because higher or increasing leverage significantly erodes ROA of the banks. Leverage in model two is statistically significant but insignificant in model four. According to model two and four the type of banks (the type of services banks offer, for instance Islamic banks, Conventional banks, specialized banks) matter and impact ROA of the banks. This is possible because Islamic banks over the years since it started to operate in the economy have created and given competitive environment for non-Islamic banks due to its nature of services it offer to the customers. The bank type (Deposit) in model two and model four show negative and statistically insignificant relationship with ROA.

Conclusion

There are number of studies that measured IC relationship with financial performance of banks. If literature is reviewed positive impact of IC on banks'

financial performance is evident. This study from 2007 to 2015 measures the intellectual capital efficiency of 24 banks (divided into two group types) through VAIC and this shows how financial performance of Pakistan banks is affected by intellectual capital.

From table 3 the results of this study found that banks' IC is primarily affected by HCE in Pakistan. The other two components of VAIC (CEE and SCE) are less effective in creating value in the Pakistan banking sector rather than HCE. The average VAIC value from the period 2007 to 2015 is 2.4860 and 50 percent of the banks has higher average VAIC than this value. Between banks type, conventional banks has the high VAIC value.

In table 6, the regression results show VAIC as a whole has positive significant impact on profitability of banks so we accept H_1. The higher the VAIC value the higher will be the returns of bank. When VAIC is split into three components (CEE, HCE, SCE) it is concluded that HCE has more influence on financial performance of banks in Pakistan. The HCE positively impact the financial performance of bank so H_3 is accepted. Therefore it may be concluded that banks should use their human capital in order to reach at higher level of profitability. CEE and SCE do not have positive impact on financial performance of banks therefore H_2 and H_4 are rejected.

Limitations

As this study is done with the value added intellectual coefficient (VAIC), there are various methods other than VAIC to measure intellectual capital performance. Unfortunately the study does not cover all the banks due to unavailability of data. Thus future studies may take the missing banks and adopt other techniques to measure IC performance of banks. The future studies may also include the other financial sectors.

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