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Intellectual Capital of Malaysian Banks

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Abstract

The importance of intellectual capital has induced drastic movement in conducted of businesses by switching from traditional labour to knowledge labour whereby to compete with the incumbents and the newcomers. On this note, services sector especially banking industry plays a vital role in the development of economies that affected overall in gross domestic product compared to the other production sectors thus intellectual capital is important to the growth of banking sector in a nation. Therefore, the general objective of this study is to investigate the intellectual capital of Malaysian banks over the study period of 2007 to 2016 by employing Model of Value Added Intellectual Coefficient (VAIC). In view of the above scenarios, the specific objectives of this study is to investigate the sources of intellectual capital namely human capital efficiency (HCE), structural capital efficiency (SCE) and capital employed efficiency (CEE) of the Malaysian banking institution. The results of this study show that human capital efficiency is the most influential components in the intellectual capital among Malaysian banks. Thus, the findings of this study recommend on the bank's management and policy makers to increase on the efforts to encourage the utilizing in human capital which is treated as an effective alternatives in creating bank's value as well as consider the human capital as a single resources of the intellectual capital in improving on the efficiency performance of the banks.

Keywords: Intellectual Capital, Malaysian Bank, VAIC Model

Introduction

Advancements in the information or knowledge economy has created a great impact on the increasing level of awareness and responsiveness on the importance of intellectual capital nationwide (Guthrie, 2001). However, the future benefits would only be loss if there is an existent of any ignorance and underestimation on intellectual capital (Roslender & Fincham, 2004). The evolution of the phases of social-economy has been proven based on the hierarchies among production factors which typically vary from one another. Beginning of the 1980s until present, the information society has started to develop with the world witnessing transformations and advancements in Information and Communication Technology (ICT) which thus changed the mechanism for the creation of wealth to be derived from labour, capital, natural resources, and entrepreneurship. In short, the efficient use of intellectual capital or intangible assets progressively gained a significant role in terms of the firms' performance. In fact, this transformation attached to

knowledge, information technologies, and intellectual capital has shown to be extremely pivotal in producing wealth (Marti, 2000). Nevertheless, Steward (1997) positively believes the traditional economy of capitals such as machinery, land and labour have been substituted with the current knowledge-based paradigm, whereby an old characters is becoming irrelevant in guaranteeing the production of wealth (Chen et al., 2005). Additionally, Drucker (1993) claims knowledge is the type of resources attached with the traditional factors of production and absolutely meaningful resources today (Bontis, 2001; Pulic, 2004) while the traditional factors of production served as secondary (Kozak, 2011). In this vein, most developing countries have started to transform on their economic systems to be based on knowledge economy since the knowledge act as an engine for the development in economic growth (Sengge, 2010). Align with the significant roles of intellectual capital which have clearly fostered the economic growth, (Stahle & Bonfour, 2008) therefore, the subject is treated as the major national investment that could support the national economic performance (Bismuth & Tojo, 2008).

Notwithstanding, intellectual capital has drawn a little concerned from the numerous industries, especially within the knowledge-based intensive sectors. One of the sectors that are heavily involved in the exercising and establishing of intellectual capital is the banking and financial services sector while the banking sector has the highest tendency of being subjects to the enthusiastic setting of this study. Banks are relatively more competitive within the market and being extremely influences from the globalized environment that forced the industry to be reshaped into the knowledge-intensive industry. Pulic (2004) suggests the relationship between intellectual capital and successful corporate performance is found to be positively strong and revealed the importance of intellectual capital through the sample among the Australian banking sector. Thus, it is particularly vital to identify the basic roles as well as the implications of the intellectual capital towards the advancement of the banking industry (Belkaoui, 2003; Goh, 2005; Najibullah, 2005; Saengchan, 2008). Therefore, the study is aims to investigate the Value Added Intellectual Coefficient (VAIC) and the main sources of VAIC components namely human capital efficiency, structural capital efficiency, and capital employed efficiency. The remaining of this paper is consists of sections that dealing with empirical studies of intellectual capital as presented under Past Studies section follows by Data and Methodology section. The subsequent section presents on results and the discussion of the results while the Conclusion sections offer a summary of the results as well the policy implications.

Past Studies

Edvinsson and Sullivan (1996) has define the intellectual capital as information that include values. However, the definition has been broadened and modest which refer to a combination of knowledge, experience, organizational, technology, customer relationship and professional skills for achieving on the real competitive edge within the market (Edvinsson & Malone, 1997). Steward (1997) suggests intellectual capital are extremely useful and full of information whereby information is describe the knowledge, information, technologies, skills, expertise, intellectual property, customer loyalty and team management in contributing and creating values within the organization. Steward (1997) has further classified the intellectual capital into three major components namely human capital, structural capital and customer or relational capital. Mohiuddin et al., (2006) describe main

characteristics of human capital that basically owned by individual or employee; however, the organizations owned the information by structuring on the procedures and system format only. Furthermore, Roos and Roos (1997) and Zeghal and Maaloul (2010) refer to the human capital indicate on employees' knowledge, experiences, and skills which will only be gone when they leave the organization since the human capital connected with employees' capabilities such as competencies, commitments, motivations, loyalty, and other similar attributes. Meanwhile, for the structural capital, Ashton (2005) suggest the various types including both internal and external of value drivers. The former refer to organizations that involved in the processes, routines, databases, and organizational structures, while the latter is refer to relationships with customers, suppliers and alliance partners (Appuhami, 2007). An organization that applied the strong structural capital tend to more developed in supportive the corporate cultures among its employees in attempting and exercising the new things at their workplace (Bontis et al., 2000). Prahalad and Ramaswamy (2000) indicate that customers are normally subject to reflect the firm's performance. Basically, the concept of customer capital or social capital has connected or linked to the social and interpersonal factors (Porters, 1998) between individuals or societies (Kale et al., 2000).

Sledzik (2013) who investigate intellectual capital performance among the Polish bank by measuring the level of intangible resources within the sector. The data collected within the period of 2005 until 2009 and calculated based on the formula given by VAIC model in measuring the intellectual capital efficiency. Findings revealed and argued that intellectual capital technically depends heavily on the human capital efficiency, thus has suggested that investments in human capital will provide security in creating high value added in futures rather investments in both structural capital and capital employed efficiency. Another recent empirical study conducted by Isanzu (2016), on the relationship between intellectual capital and financial performance of banks in Tanzania. The sample data collected from 6 banks within the study of period from 2010 until 2013. Thus resulted evidence that intellectual capital is highly connected and provide the positive impact towards the performance of Tanzanian banks.

Data and Methodology

The sample for the study consists of all the Malaysian Islamic and Conventional banks currently registered with a full licenses listed under Bank Negara Malaysia (BNM). According to the final list, there are only 16 Islamic and 27 Conventional banks that operated in Malaysia as of year 2017. In line with the data, the length of study has been selected for the 10-years period starting from the financial year ending 2007 until the financial year ending 2016. Whereby, 10 years period is assumed to be long enough for handling any short-term irregularities and provide reliable estimates of the banks' intellectual capital while those data is obtained from annual report of the respective Islamic and Conventional banks.

The traditional way of ranking on the Malaysian banks will render by comparing according to the sum of total VAIC scored from the highest to the lowest scored. Edvinsson and Malone (1997), the value are consists of capital employed (i.e., financial and physical capital) and intellectual capital namely refer to human capital and structural capital. In accordance with VAIC framework, the information for value creation efficiency on both physical and intellectual capital of the company will also be

computed (Tan et al., 2007). Therefore, VAIC model is not to measure intellectual capital only but it also the company's efficiency as a whole (Mohiuddin et al., 2006). Basically, VAIC model is treated as analytical procedures that formally design for the purpose of management, shareholders and other relevant stakeholders to monitor and evaluate the efficiency of Value Added (VA) from the total resource (Company) through the major components of intellectual capital (Firer & Williams, 2003). Based on Pulic and Bornemann, (1997), the VAIC model offer the easiest way in measuring on the idea of intellectual capital. Main reason is due to the reliable and availability of the data can be obtain from the company's annual report (Mavridis, 2004). In fact, study on intellectual capital within banking line is encouraging in which the bank's staff within this sector are homogeneous supported with the sector that are intellectually intensive in nature. (Kubo & Saka, 2002).

Measurement of Intellectual Capital

Previous studies such as Bontis (1998), Chen, et al., (2005), Tayles et al., (2007) and Stahle et al., (2011) acknowledged the importance of intellectual capital which has been previously accepted. Likewise, Chen et al., (2005) and Tan et al., (2007) postulated that the measurement of intellectual capital however still under the preliminary stage of development. Basically, the actual and accurate techniques that can be used to determine intellectual capital are to be based on underlying theories of intellectual capital which have not yet to be evolved. The VAIC measures the creation of value per money unit invested in each sources. Hence, the formula as follow:

$$VA = \text{Operating Profit} + \text{Employee Costs} + \text{Depreciation} + \text{Amortization}$$

Where:

VA = I (total interest expenses) + DP (depreciation expenses) + D (dividends) + T (corporate tax) + R (profit retain for the year)

Indicator for Human Capital Efficiency (HCE)

$$HCE = VA / HC$$

Where:

VA = Value added

HC = Total employee expenses (personnel cost/salaries and wages-considered as investment

Indicator of Structural Capital Efficiency (SCE)

$$SCE = VA/HC$$

Where:

SC = VA – HC

HC = Total Salaries and wages for a company

Indicator of Capital Employed Efficiency

$$CEE = VA/CE$$

Where:

CE = Physical Assets + Financial Asset = total asset - intangible asset

$$\text{VAIC} = \text{CEE} + \text{HCE} + \text{SCE}$$

Discussion of the Results

The results shows on Table 1.1 has demonstrated on the findings for Malaysian Islamic Banks indicated that the Maybank Islamic Bhd was revealed as the top performance among all Islamic banks with the highest average of total scoring of VAIC at 47.1791, followed by the Public Islamic Bank Bhd with total average VAIC scoring of 35.4844 and ranked as second position. The third ranked was under Amlslamic Bank Bhd with an average total of VAIC scoring at 33.7364 from 2007 until 2016. In contrast, Al-Rajhi Banking & Investment (M) Bhd, Kuwait Finance Bank (M) Bhd and the Asian Finance (M) Bank Bhd were the lowest average of VAIC scoring among all Islamic banks that recorded only at 1.1041, 1.2616 as well as at 1.3532 respectively. Basically, being an efficient alone is not consider as inefficient as the bank must be able to create values hence in the case of ranking for the value added scoring, it has shown that the Asian Finance Bank Bhd were listed on the highest value added with total average of value added at RM23, 101,004 while Maybank Islamic Bhd recorded at RM814, 289.33. As seen, the foreign Islamic banks namely HSBC Amanah (M) Bhd has denominated on the highest VAIC scored for Malaysian Islamic banks with total average of VAIC scored at 15.6571. Other ranking on the Islamic banks are illustrated listed under Table 1.1.

Table 1.1: VAIC and VA Rank for Malaysian Islamic Bank (2007-2016)

<i>ISLAMIC BANKS</i>	<i>HCE</i>	<i>SCE</i>	<i>CEE</i>	<i>VAIC</i>	<i>VA (RM)</i>	<i>VAIC RANK</i>	<i>VA RANK</i>
MAYBANK ISLAMIC BHD	46.190	0.978	0.010	47.179	814,289.	1	3
PUBLIC ISLAMIC BANK BHD	34.498	0.970	0.014	35.484	527,521.	2	4
AMISLAMIC BANK BHD	32.754	0.967	0.014	33.736	270,986.	3	8
HSCB AMANAH BANK BHD	14.797	0.845	0.014	15.657	172,285.	4	10
HONG LEONG ISL. BANK BHD	11.304	0.907	0.012	12.224	200,904.	5	9
CIMB ISLAMIC BANK BHD	8.5713	0.839	0.011	9.4228	520,230.	6	5
STAN CHART.SADIQ (M) BHD	8.1716	0.815	0.007	8.9940	48,835.6	7	16
RHB ISLAMIC BANK BHD	5.7129	0.773	0.012	6.4991	276,372.	8	7
OCBC AL-AMIN (M) BANK HD	3.4685	0.830	0.011	4.3106	109,935.	9	13
AFFIN ISLAMIC.BANK BHD	3.5647	0.400	0.015	4.2014	139,697.	10	12
BANK ISLAM (M) BHD	2.5192	0.601	0.197	3.3183	922,760.	11	2
ALLIANCE ISLAMIC B. BHD	2.4867	0.582	0.020	3.0903	142,905.	12	11
BANK MUAMALAT (M) BHD	1.9542	0.479	0.017	2.4508	319,821.	13	6
ASIAN FIN (M) BANK BHD	1.1880	0.155	0.010	1.3532	23,101,0	14	1
KUWAIT FIN HOUSE (M) BHD	0.6243	0.630	0.007	1.2616	62,360.2	15	15
AL-RAJHI BANK & INVST (M)	1.0555	0.038	0.010	1.1041	77,522.4	16	14

As oppose to the Islamic banks, Table 1.2 has shown on the findings for Malaysian Conventional banks and according to the previous studies done such as Goh (2005) and Nik Maheran et al., (2009) identifying the Public Bank Bhd as the pioneer for Malaysian Conventional banks that indicate the bank fully optimize on their intellectual capital efficiently hence, for the current study provide the similar finding that revealed the same banks namely Public Bank Bhd was still on the top ranking and

maintain their highest average of VAIC scoring at 5.9883 from the year 2007 until 2016. Following that, the Bank of Nova Scotia (M) Bhd and Bank of Tokyo-Mitsubishi UFJ (M) Bhd were the 2nd and 3rd ranked with their average VAIC scoring at 5.7928 and 5.6062 respectively.

Table 1.2: VAIC and VA Rank for Malaysian Conventional Banks (2007-2016)

CONVENTIONAL BANKS	HCE	SCE	CEE	VAIC	VA (RM)	VAIC ANK	VA NK
PUBLIC BANK BHD	5.1577	0.8038	0.0269	5.9883	6075755.70	1	2
BANK OF NOVA SCOTIA (M) B.	5.0072	0.7665	0.0191	5.7928	82638.40	2	18
BANK OF TOKYO- MITSUB (M) B	4.8055	0.7790	0.0217	5.6062	260860.56	3	14
DEUTSCHE BANK (M) BHD	3.7256	0.7077	0.0187	4.4520	217790.70	4	15
UNITED OVERSEAS BANK (M) B	3.5210	0.7142	0.0224	4.2576	1556421.80	5	8
BANK OF CHINA (M) BHD	3.3266	0.6947	0.0201	4.0415	97300.60	6	16
SUMITOMO-MITSUI BANK (M) B	3.3488	0.6761	0.0152	4.0401	68950.80	7	20
HONG LEONG BANK BHD	3.3230	0.6933	0.0201	4.0364	2320933.60	8	5
CITIBANK (M) BHD	3.2886	0.6897	0.0304	4.0087	1241589.90	9	10
HSBC BANK (M) BHD	3.1735	0.6825	0.0289	3.8849	1819692.90	10	7
MAYBANK BHD	2.9843	0.6353	0.0230	3.6426	7856531.10	11	1
AMBANK BHD	2.8622	0.6447	0.0252	3.5321	2181793.80	12	6
OCBC BANK (M) BHD	2.8346	0.6336	0.0252	3.4934	1533581.60	13	9
ALLIANCE BANK BHD	2.8099	0.6286	0.0236	3.4621	784632.00	14	13
RHB BANK BHD	2.8029	0.6353	0.0218	3.4600	2790125.10	15	4
STANDARD CHARTERED (M) B	2.8361	0.5961	0.0209	3.4532	945892.80	16	11
AFFIN BANK BHD	2.7892	0.7723	0.0207	3.4259	818340.00	17	12
CIMB BANK BHD	2.6670	0.6216	0.0241	3.3128	5127791.80	18	3
JP MORGAN CHASE (M) BHD	2.6472	0.5620	0.0165	3.2257	87442.44	19	17
BANK OF AMERICA (M) BHD	2.5932	0.5543	0.0213	3.1687	50853.43	20	22
BANGKOK BANK (M) BHD	2.2110	0.4704	0.0129	2.6943	40223.20	21	24
ROYAL BANK OF SCOTL. (M) B	2.1441	0.4458	0.0157	2.6056	70862.30	22	19

INDST. AND COMM BANK (M) B	1.9425	0.4720	0.0107	2.4252	54285.57	23	21
NATIONAL ABU DHABI(M) BHD	1.9459	0.4207	0.0262	2.3928	21144.60	24	26
MIZUHO BANK (M) BHD	1.5438	0.3155	0.0148	1.8741	30501.80	25	25
BNP PARIBAS (M) BHD	1.0371	0.6230	0.0114	1.6715	44372.00	26	23
INDIA INTERN. BANK (M) BHD	1.2764	0.0130	0.0114	1.3007	5181.80	27	27

In regard to the value added ranking, India International Bank surprisingly does not only design to be less efficient in used the VAIC as strategies to be more competitive but also inefficient in creating their value added. The mention bank has recorded on the VAIC and value added scored averagely at 1.3007 and RM5, 181.80 respectively and caused the bank to be ranked on the last position at number 27th. Other findings for Conventional and Islamic banks of the current study are portrays under Table 1.1 and 1.2. Based on the overall finding have practically discovered the human capital efficiency (HCE) as the major contributors on the total of VAIC scoring among the Malaysia banking sector. The reason is due to the facts that banking sector were primarily engaged in services sector which heavily relies on the customer service or banks' employees (human capital efficiency) which emphasize on the human mind and worker's knowledge (Mohiuddin et al., 2006). Prior on the current study is adding on another evidences towards the existing empirical findings that confirmed on human capital efficiency (HCE) that stand as primary leading factors and being a subject for the management in enhancing human capital to consider an effective alternatives for the banks in order to create more values for improving the efficiency level (Wang & Chang, 2005).

Conclusion

These results are particularly encouraging and exposed to the real possibility that the investment in intellectual capital efficiency somehow in return provide a greater efficient and effective way in creating the value added among the Malaysia banks. Thus, it would fostering the Malaysian banks in becoming more competitive within the market players as to continuously support the national economic performance (Bismuth & Tojo, 2008). The finding consider an additional empirical evidences towards the existing literatures that postulated on the subject of interest within intellectual capital. Nevertheless, although the empirical finding for the current study revealed to be imperative however this is only to be consider as another footstep and process in setting a standards to face the greater challenge of the knowledge economy paradigm. On this note, Malaysia is currently transforming towards the knowledge-based economy due to the fact of challenges in globalization and the advancement of information and communication technologies that induced most of developing countries to move forwards into knowledge-based economy (Bhatiasevi, 2010) and enforced to transform from being input driven into knowledge-driven as for the ticket in achieving the vision of 2020 in becoming a developed nation (Abdulai, 2004; Bhatiasevi, 2010). As current study demonstrate on the finding that consistent to the previous work done by Chen et al., (2005) hence describe on the main finding render on the main components of intellectual capital that command

on different values as opposed to the aggregate measure on the overall total VAIC scoring whereby the human capital is registered as the highest incidence of having the positive influences towards the efficiency performance rather than structural capital and capital employed. Therefore, highly recommend and suggest that investment and management of human capital is pivotal especially for the Malaysian banks technically in order to optimize their level of efficiency performance. On the other hand, to respond the advancement in technologies that could possibly replacing the human resource that may impact on the overall Malaysian banks in sustaining their long term survival, thus for that reason, the policy makers and management should not to lose sight on the standalone roles that contributed by one of the main components in intellectual capital namely human capital in influencing the efficiency performances of Malaysian banks as a whole. According to Becker (1964), although the technologies evolved and denominated the countries however, this is contributed only less in values to the countries as matter of fact, just only a number of skilled workers know how to control and use them. As for the alternatives to the policy makers and captains to take an initiative by considering their investment as well as to manage in human capital as for the single resources for optimizing the level of efficiency performance among the Malaysian banks.

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