



Moderating Effect of Board Financial Expertise on the Relationship between Intellectual Capital and Market Value of Listed Deposit Money Banks in Nigeria

¹Isah Danladi Yahaya
(isahdyahaya@gmail.com)

¹Hassan Ibrahim
(hassanibrahim@gmail.com)

²Muhammad Akaro Mainoma
(mainomaakaro@gmail.com)

¹Department of Accounting, IBB University Lapai, Niger State, Nigeria

²Department of Accounting, Nasarawa State University Keffi, Nasarawa State, Nigeria

Abstract

The global economic environment has witnessed transformation from traditional tangible to new intangible economy due to globalisation, exponential growth of technological changes. The new economy, which has been tagged as knowledge-based economy, has the capability to improve the competitive advantage of organizations. Intellectual capital is knowledge assets which belongs to an entity and most importantly capable of improving the competitive power of the entity by adding value to the corporate organization. It is based on this that the study examined moderating effect of board financial expertise on the relationship between intellectual capital and market value of listed deposit money banks in Nigeria from 2011-2020. The study adopts ex-post facto research design while intellectual capital is measured by human capital and structural capital while market value is measured by market value added. Panel multiple regression is used for the analysis. From the analysis, the study found that human capital efficiency has positive significant effect on market value added. However, structural capital efficiency has negative significant effect on market value added. Furthermore, moderated human capital efficiency has negative significant effect on market value added while moderated structural capital efficiency has a positive but insignificant effect on market value added. Based on the finding, the study recommends that banks should pay sufficient attention to the human capital since it is considered as the most significant asset to the company by implementing policies that will enhance and upgrade their employees' skills and competence in the area of training and development.

Keywords: Intellectual Capital, Human Capital, Structural Capital, Market Value

1. Introduction

The current trend of global economy requires the companies to have highly competitive ability in the challenging global market. The ability is very important and leads to a knowledge-based resources as a major factor in maintaining the competitive advantage for the company. This is in line with the opinion of Al-Musalli and Ku-Ismael (2012) who stated that with the presence of the knowledge-based economy, intellectual capital compared to physical and financial capital has become one major factor in creating corporate value as well as maintaining the competitive advantage of the companies. The emergence of new economy that is principally driven by developments in information



technology and science has also showed the growing interest in the disclosure of intellectual capital (Bontis, 2002). Mandatory financial reporting is becoming less informative to investors of large highly technical firms around the world. Companies are now investing largely in Research and Development (R&D) projects, intangibles, and intellectual properties. But traditional financial statements do not consider the true value of these intangibles and intellectual properties. As a bridge between this existing gap of information regarding valuable intangibles and intellectual properties, a new form of corporate voluntary disclosure has emerged which is called intellectual capital disclosure. Good forms of corporate reporting help to eliminate the information asymmetries underlying the capital market investors (Kaplan & Norton, 2004).

Intellectual resources are capital inputs for firms that have the capacity to increase competitive advantage, growth and sustainability, especially in a knowledge-transiting economy. Intellectual capital because of its intangibility in usage is acclaimed as a hidden source of wealth creation for firms (Anifowose, Abdul Rashid & Annuar, 2017). This is because it encapsulates the human, structural and relational capitals of firms and the efficient use of each of this capital has numerous beneficial effects on performance. Hence, the capital resources possess unique value additions to the firm because of their rare and imitable nature. The optimal use of these resources can be directly attributed to the competence, skills, experience and diversity of the board of directors (Shettima & Dzolkarnaini, 2018). This is because they tend to make strategic decisions on the creation, usage and management of intellectual resources. In particular terms, board homogeneity with participation of female directors tends to contribute to the efficient and effective decision-making process, which had a positive effect on the optimal usage of intellectual capital and firm performance (Adams & Kirchmaier, 2016). The company always strives to maintain and enhance corporate value. One of the steps that can be taken by a company in order to maximize corporate value is by owning intellectual capital, disclosing intellectual capital, and performing good corporate financial. Intellectual capital disclosure will be a good signal for a company and help stakeholders in making a decision. The intellectual capital disclosure is intended to meet stakeholder's needs for intellectual capital information. According to Ching, Luther, Tayles and Haniffa (2013), there is a demand for information disclosure about intellectual capital, especially the human capital. It can provide a competitive advantage and value creation to the company. Bhasin (2012) states that organizational managers must have initiatives to measure, manage, and distribute information about intellectual capital that refers to value creation for corporate stakeholders.

Intellectual capital is an addition from all of the knowledge that support company could gain to maintain its competitive advantage continuously. Human capital and structural capital, are related to organization itself, while relation capital is related to the relationship between the organization and the external parties such as customers, suppliers, investors, and other external stakeholders. Human capital includes knowledge, skills, and abilities of



employees. It is an organization's combined human capability for solving business problems. It encompasses how effectively an organization uses its people resources, as measured by creativity and innovation (Edvinsson & Malone, 1997). Structural capital is the supportive infrastructure that enables human capital to function (such as: buildings, hardware, software, processes, patents and trademarks). Intellectual capital disclosure is needed because it is a mechanism to cut down the agency cost which arises from the possibility that the manager acts not for the sake of the stakeholders (Hassan, Romilly, Giorgioni & Power, 2009). Therefore, intellectual capital is needed to improve the utilization of organization's resources in innovation (Achoki, Kule & Shukla, 2017). Market value is used as a tool to attract investment and increase the number of investors in the company, because it is the point of decision by the investor existing or expected, and the most reliable indicator of the performance of the company, and helps the company to plan its management and achieve the highest level of competition in the market. Due to a series of economy reforms embarked upon, there is evident dynamism in the Nigerian economy through shifting from its traditional product-based economy to a knowledge-based orientation and diversification approach (Ibikunle & Damagum, 2013) which signifies the significance of intellectual capital in the corporate organization. Since intellectual capital are all employees' abilities that create value addition and also, it is intangible resources that contribute to the firm's value creation process, it is expected that intellectual capital disclosure by companies should impact on their market value added. However, none of the empirical studies used market value added to measure corporate market value. Most of the studies used market capitalization, Market value of shares, Tobins Q and other measures of performance (Joseph, Asamoah, Safianu, Saah & Baghr, 2018; Abraham & Oforu, 2018; Ali, 2018; Subaida & Mardiati, 2018; Mačerinskienė & Survilaitė, 2019; Shubita, 2019).

Furthermore, board financial expertise has the potential to increase board effectiveness and corporate value process. Financial experts, however, might affect firm policies beyond more accurate disclosure. A board with financial expertise members is more liable to integrate the interest of multiple stakeholders, including employees, customers, suppliers and the communities with the performance-based interests of shareholders (Harrison & Coombs, 2012). With this, it is expected that disclosure of intellectual capital in the financial statement shall surely be affected by board financial expertise. Some of the studies that examined such influence of board expertise on the relationship between intellectual capital and corporate performance are Rabaya, Saleh and Hamzah (2020); Heryana, Wahyudi and Mawardi (2020); Isola, Adeleye and Olohunlana (2019). It is based on the above assertion that this study is motivated to assess how board financial expertise had affected the interaction between intellectual capital disclosure and corporate market value of deposit money banks in Nigeria. Specifically, the study seeks to determine the moderating effect of board financial expertise on the relationship between human capital efficiency and corporate market value of listed deposit money banks in Nigeria. Also to examine the moderating effect of board financial expertise on the relationship between



structural capital efficiency and corporate market value of listed deposit money banks in Nigeria.

2. Literature Review

Concept of Intellectual Capital (IC)

Intellectual capital is a valuable and skillful resource based on knowledge, both tacit knowledge, and explicit knowledge. Tacit knowledge is a hidden knowledge that cannot or is difficult to imitate by others. Explicit knowledge is the knowledge that is easily transferred or imitated by others (Christa, 2011). According to Engelman, Fracasso, Neto and Schmidt (2015), intellectual capital is the knowledge assets of the company and how those assets change are expected to change over time. Anam, Fatima and Majdi (2011) defined intellectual capital as the knowledge-assets that can create value for firms as well as achieve and sustain a competitive edge for them; also, Saleh (2010) seen intellectual capital as a non-monetary asset that can generate future economic values in firms. Such intellectual assets themselves, according to Bismuth and Tojo (2008), do not create value nor generate growth and development but need to be combined with other factors of production. The focus of Intellectual Capital is on the resources of organizations which are clearly relevant in decision making as to the wealth-creating ability of the firm; whilst Intellectual Capital Disclosure, on the other hand, is about achieving full disclosure of these intangibles, thereby guaranteeing fairness and transparency. Therefore, the disclosure of Intellectual Capital is to ensure that the firm has steady control of its value-creation intangibles and to enhance their transparency as well as facilitate their effective and efficient management.

Human capital; Edvinsson and Malone (1997) defined human capital as knowledge, skills, and abilities of employees. It is an organization's combined human capability for solving business problems. Human capital is inherent in people and cannot be owned by organizations. It also encompasses how effectively an organization uses its people resources, as measured by creativity and innovation. Sonnier (2008) describes human capital (HC) as the knowledge, skill, expertise/know-how, problem solving capacity, education, training, judgment, experience, abilities, and loyalty of the employees of the firm; represented as the collective capabilities of a company's workforce to solve customer and operational problems (Phusavat, Comepa, Sitko-Lutek & Ooi, 2011). Human capital is the firm's collective capability to extract the best solutions from the knowledge of its people. It is important because it is a source of innovation and strategic renewal, whether it is from brainstorming in a research lab, daydreaming at the office, throwing out old files, reengineering new processes, improving personal skills or developing new sales leads. This study aligns with the definition of human capital by Sonnier (2008) that human capital (HC) is the knowledge, skill, expertise/know-how, problem solving capacity, education, training, judgment, experience, abilities, and loyalty of the employees of the firm.



Structural capital: Edvinsson and Malone (1997) defined structural capital as everything in an organization that supports employees (human capital) in their work. It is the supportive infrastructure that enables human capital to function (such as: buildings, hardware, software, processes, patents and trademarks). In addition, structural capital includes things such as the organization's image, organization structure, information system, and proprietary databases. Riahi-Belkaoui (2003) described structural capital (SC) as the knowledge that belongs to the organization as a whole in terms of technologies, inventions, data, publications, strategy and culture, structures and systems, organizational routines and procedures. Structural capital is the firm's organizational capabilities to meet market requirements. It involves the organization's routines and structures that support employees' quests for optimum intellectual performance and, therefore, overall business performance. An individual can have a high level of intellect, but if the organization has poor systems and procedures by which to track his or her actions, the overall intellectual capital will not reach its fullest potential.

Market Value

Market value is used as a tool to attract investment and increase the number of investors in the company, because it is the point of decision by the investor existing or expected, and the most reliable indicator of the performance of the company, and helps the company to plan its management and achieve the highest level of competition in the market. Market value is therefore defined as the price of a stock traded in the financial markets during the interaction of supply and demand forces, which is affected by the surrounding economic, social and social environment (Kapoor, Dlabay & Hughes, 2009). Ross, Westerfield and Jordan (2002) defined market value as the benchmark used to measure the performance of firms and their development at the end of the period after reaching their value by averaging their shares multiplied by the total number of shares listed, or the number of shares acquired multiplied by their prices.

Board Financial Expertise

The affairs of an organisation are determined by the boards of directors (Butt, 2012). The daily operational activities of organisation are handled by the executive directors which is headed by the CEO. Role of board for acting as advisor to the CEO is necessary to enhance value of the organization (Kirkpatrick, 2009). It then means that the presence of board directors with accounting and finance (i.e., have financial literacy) to perform effective monitoring of company's financial reporting process and its disclosure practices to ensure integrity (Xie, Davidson, & DaDalt, 2003). This also can help increase the value of an organisation and its performance (Finegold, Lawler & Conger, 2001). Kor and Sundaramuthy (2009) states that directors who had reasonable financial backgrounds were more effective in providing internal control system mechanisms to control firm performance. The revised corporate governance code of 2018 suggested that there is a need for the board to have people with requisite skill and knowledge on the board. Abbott et al. (2000) asserted that firms in which its board of director has at least one financially literate



member are less likely to be sanctioned by the SEC for financial reporting problems. The Boards of directors which have financial experts on its board argued to be more diligent and monitor management more effectively (Kanagaretnam et al., 2007). According to Jensen (1993) board expertise are one of the most important corporate mechanisms to ensuring compliance, corporate discipline and also the effectiveness of corporate monitoring. Theoretically speaking, experience of the board in general and financial accounting expertise in particular, plays a vital role in mitigating agency costs. Resource dependency theory ensures that the company is not only reliant on the abilities of the management of the company to efficiently manage the resources but also on the capacity of the members to save these resources (Hillman & Dalziel, 2003). The strategic knowledge of the board allows it to perform oversight functions as regards risk management, corporate strategy, succession plans of CEO and the questions about meeting the targets for financial and strategic objectives (Dehaan, Hodge & Shevlin, 2013).

Intellectual Capital and Market Value

Onyekwelu and Ubesie (2016) examined the effect of intellectual capital (IC) on corporate valuation of firms quoted in Nigeria. The study adopted the panel research design and used time series and cross-sectional data for the period 2004-2013. Intellectual capital was measured using human capital efficiency, structural capital efficiency and capital employed efficiency. Market to Book Value Ratio and earnings per share. Multiple regression correlation analysis was used for the analysis. The results revealed that human capital efficiency has a positive and significant effect on Market/Book Value. structural capital efficiency has a negative and insignificant effect on M/BV; capital employed efficiency has negative but significant effect on M/BV; positive but no significant effect on Earnings per Share. The model of the study does explain only little variation on corporate value. Also, despite using time series and cross-sectional data, it is expected that the study should analysed the data from fixed and random effect model but however, the study was unable to do same. This could cause limitation in the result of the study. Arifin (2016) assessed the influence of corporate governance and intellectual capital on financial performance of Bank Sector companies listed at Jakarta Indonesia Stock Exchange (IDX) period 2008-2012. Data was analysed with Generalized Structured Component Analysis (GSCA). Result of research indicates that corporate governance does not have significant influence on the intellectual capital. Similarly, that intellectual capital does not have significant influence on corporate governance. However, corporate governance and intellectual capital significantly influence financial performance of banking sector companies. Based on the significance of intellectual capital to an organization and various stakeholders, it is paramount that firms should be able to disclosed their intellectual capital to an organization for prompt decision making as well as empirical assertion to corroborate the significance of the disclosure however, from the empirical evidence of this study, their finding does not portray current effect of intellectual capital on corporate value even at the sector in which the study was conducted due to passage of the study scope. Ali (2018) examined the effect of the disclosure of intellectual capital (human, structural and relational capital) on the



market value of shares in Jordanian commercial banks during the study period 2013–2016. The results showed that there was increase towards the level of disclosure of the components of intellectual capital. This indicates the continuous increase by the industrial companies at the level of disclosure. However, this level was below the required threshold, not exceeding in all years (56.0%). There is also a relative increase in the level of disclosure of structural capital and interest relative to the disclosure of human capital, which may be seen as a decline in the interest of companies in the development of their human resources compared to the structural aspect and relations with other parties. In the overall analysis, it was found that the human capital disclosure has positive significant effect on market value of shares while other components has no significant effect on market value of shares. The study does not conduct fixed and random model analysis despite the fact that the model is stated in a model regression form.

Hatane, Angeline, Wedysiage and Saputra (2019) assessed the impact of Intellectual Capital Disclosure (Human Capital Disclosure, Structural Capital Disclosure, and Relational Capital Disclosure), Firm Size and Leverage on firm value (Tobin's Q) of 36 Indonesia's listed companies from infrastructure, utility, and transportation industry from 2013 to 2017. The results found that none of the components from ICD has an influence on firm value during the pre-Jokowi's era. The negative effect of RCD on firm value is found without differentiating the presidential era. In addition, the negative response from firm value is found when the interaction of ICD and the time period is increasing. Shubita (2019) applied the value-added intellectual coefficient (VAIC) model to test the impact of intellectual capital (IC) on market value of 73 Jordanian manufacturing companies during the period 2005–2017. Market value was measured using the market capitalization over the total assets. The IC and its components: capital employed (CEE), structural capital (SCE), and human capital (HCE) of industrial firms have been analyzed, and their impact on market value has been estimated using regression models. The results show that there is no relationship between IC and the market value; HCE is associated with the market value, and SCE and CEE are not associated with the market value. Difference in the sectoral analysis of the study hinder generalization of the findings to other sector like financial services companies in Nigeria. Ousama, Al-mutairi and Fatima (2020) investigate the relationship between the intellectual capital (IC) information reported in the annual reports and market value of the companies listed on the Qatar Stock Exchange. The study is based on a panel data for six years from 2010-2012 and 2016-2018. The regression model is based on Ohlson's model, which has been modified by including IC information. The study found that there is a significant relationship between IC information and firm market value. This study is recent but however, intellectual capital was not examined based on the various component of human capital, structural capital and relational capital.

Knowledge-Based View Theory

Knowledge is the life-wire of any organisation such that it is unique, valuable, rare and not easy to replicate as it provides the firm with a capability and competence needed to achieve



a competitive advantage via knowledgeable workers who are embodied in the human capital and structural capital of the firm. Drucker (1999b) states that the most important contribution management needs to make in the 21st century is similarly to increase the productivity of knowledge worker. The knowledge-based view of the firm identifies the primary rationale for the firm as the creation and application of knowledge (Demsetz, 1991; Nonaka, 1994; Grant, 1996; Pender, 1996). The transition of society from the industrial era to the knowledge era has shifted the importance from tangible assets to intangible ones. Hall (1992) in a survey of CEOs found that employee know-how and reputation were viewed as the most critical intangible resources for the firm. Therefore, the ability of firms to generate and exploit new forms of knowledge is very important (Anand, 2007). The relevance of the theory to this study is that it considers cost of education, training, development and even workers' medical treatment as investments towards improved productivity of individual workers and also creates a sort of competitive advantage which ultimately results in improved organizations corporate value. Thus, if these are investments like other physical assets which are reflected on the statement of financial position, considerable effort must also be made to reflect such value of knowledge in human capital on the statement of financial position.

3. Methodology

The study adopts ex-post facto research design. The population of the study comprised of the entire listed deposit money banks on the Nigeria stock exchange from 2011-2020. The data on intellectual capital components and corporate market value is sourced from audited annual reports of the companies.

Table 1: Measurements of Variables used in the study

Variables	Measures	Validity Construct
Market Value (MV)	Market Value Added (MVA) = Market Capitalization - Shareholders' Funds	Thenmozhi (2000); Stern (1991)
Board Financial Expertise (BFE)	Proportion of board with financial expertise to the total board size	Anifowose, Rashid and Annuar (2017)
Human capital disclosure (HCD)	Aggregate of human capital disclosure in the annual report	Mehralian, Reza, Akhavan and Sadeh (2012); Ali (2018)
Structural capital disclosure (SCD)	Aggregate of structural capital disclosure in the annual report	Jihene (2013); Umar (2017)

Source: Compiled by the Researcher

Panel multiple regression is used to determine the moderating effect of board financial expertise on the relationship between intellectual capital and corporate market value of deposit money banks in Nigeria. The study also conducts descriptive statistics of the variables, correlation matrix, multicollinearity test using variance inflation factor, heteroskedasticity test and normality test of the variables. The linear model for the study is specified as:



$$MVA_{it} = \beta_0 + \beta_1 HCD_{it} + \beta_2 SCD_{it} + \beta_3 BFE_{it} + \beta_4 BFE * HCD_{it} + \beta_5 BFE * SCD_{it} + \epsilon_{it} \dots\dots\dots 1$$

Where MVA_{it} = Market Value Added of firm I at time t, BFE_{it} = Board Financial Expertise of firm I at time t, HCD_{it} = Human capital disclosure of firm I at time t, SCD_{it} = Structural capital disclosure of firm I at time t, RCD_{it} = Relational capital disclosure of firm I at time t, β_0 = constant, β_1 - β_5 = coefficients of estimates, and ϵ = error term.

4. Result

Table 2: Descriptive Statistics

	MVA	HCE	SCE	BFE	BFE_HCE	BFE_SCE
Mean	0.392215	8.593113	9.217431	0.199154	1.684400	1.826052
Median	0.224221	9.366160	9.594424	0.210000	1.826239	1.932383
Maximum	2.674372	10.49307	11.80582	0.670000	5.333000	5.823462
Minimum	-1.071343	6.347749	6.704897	0.000000	0.000000	0.000000
Std. Dev.	0.617295	1.517427	1.027663	0.112567	0.950940	1.029932
Skewness	1.099026	-0.320124	-0.322013	0.569634	0.495216	0.458147
Kurtosis	5.049153	1.330349	2.494108	4.774517	4.194357	4.160526
Jarque-Bera	48.91498	17.32062	3.632938	24.08706	13.04032	11.84309
Probability	0.000000	0.000173	0.162599	0.000006	0.001473	0.002681
Observations	130	130	130	130	130	130

Source: Authors' Computation, 2021

The descriptive of the variables indicates that banks had a maximum market value added value of 2.674373. This therefore means that there is an addition on the value of the asset to the companies while the minimum of -1.071343 indicates a loss on the asset of the companies. Averagely the sector had market value added of 0.39. Human capital efficiency which shows knowledge, skills, and abilities of employees had a maximum of 10.49 while the minimum is 6.347. Averagely the sector had human capital efficiency of 8.59. Structural capital efficiency which is the supportive infrastructure that enables human capital to function has a mean of 9.217431 while the maximum and minimum is 11.80582 and 6.704897 respectively. The board financial expertise shows the proportion of female directors on the board. It was found that the maximum proportion of female directors is 67% while the minimum is 0%. With the minimum of 0%, it therefore means that at a point in time, there is no female representative on the board of the companies. Furthermore, the moderated human capital efficiency shows a maximum of 5.333000 and the minimum of 0 which indicates absence of interaction between the female directors and human capital efficiency. Also, the minimum of 0 in the structural capital efficiency indicates absence of interaction between female directors and structural capital efficiency however, the maximum interaction between the female directors and structural capital efficiency is 5.823462.



Table 3: Correlation Matrix

	MVA	HCE	SCE	BFE	BFE_HCE	BFE_SCE
MVA	1.000000					
HCE	-0.128339	1.000000				
SCE	-0.239234	0.729314	1.000000			
BFE	0.152862	-0.159008	-0.083936	1.000000		
BFE_HCE	0.096146	0.173181	0.153980	0.932262	1.000000	
BFE_SCE	0.098536	-0.010518	0.131494	0.970304	0.965389	1.000000

Source: Generated from E-view, 2021

The relationship between the variables is check with the correlation result above. It was found that human capital efficiency has negative relationship with market value added to the extent of 12%. Also, structural capital efficiency is negatively correlated with market value added to the extent of 23.9% while board financial expertise is positively correlated to market value added. Furthermore, moderated human capital efficiency is positively correlated to market value added and moderated structural capital efficiency is positively correlated to market value added.

Table 4 Heteroskedasticity

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.879726	Prob. F(5,124)	0.4969
Obs*R-squared	4.453488	Prob. Chi-Square(5)	0.4861
Scaled explained SS	8.528102	Prob. Chi-Square(5)	0.1294

Source: Generated from E-view, 2021

The Obs. R-square and p-value of the heteroskedasticity which is greater than 5% level of significance indicates that there is no heteroskedasticity problem on the variable.

Normality Test

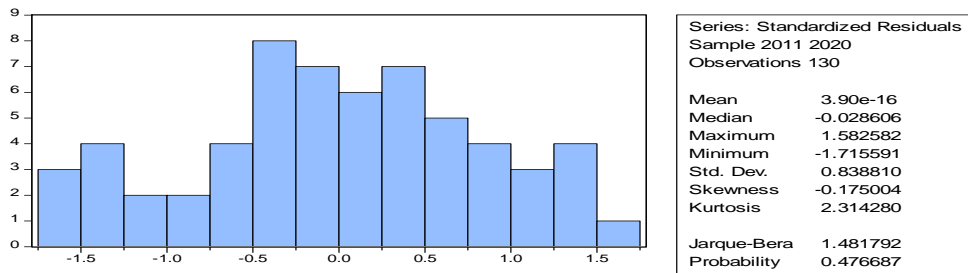


Figure 1: Normality Test

Source: Generated from E-view, 2021

The residual normality indicates that the variables used are normally distributed because it has a probability greater than 5% level of significance.



Table 6: Hausman Specification

Correlated Random Effects - Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	11.257219	5	0.0465

Source: Generated from E-view, 2021

The Hausman result above indicates that the model is appropriate for the study. It was found that fixed model regression is appropriate because the p-value of Hausman specification is less than 5% level of significance.

Table 7: Regression Result

Variables	Coefficient	t- statistics	P-Value	VIF
HCE	0.325045	2.275051	0.0248	7.867825
SCE	-0.463128	-2.362469	0.0198	3.199172
BFE	0.436013	0.101199	0.9196	3.374188
HCE*BFE	-1.249687	-2.111429	0.0369	8.478863
SCE*BFE	1.246717	1.601750	0.1120	3.893982
C	1.609489	1.516015	0.1323	
R ²	0.191693			
F-statistics	1.948047			
F-significance	0.028142			

Source: Generated from E-view, 2021

The result shows that human capital efficiency has positive significant effect on market value added which indicates increase in skills, knowledge and abilities of the employees will enable them to perform better. This will increase the market value added of the companies. However, structural capital efficiency has negative significant effect on market value added. This indicates that when the companies spend more on the supportive infrastructure such as: buildings, hardware, software, processes, patents and trademarks, it will reduce the market value added because that might not be the priorities of the company. Also, the result shows that board expertise has a positive but insignificant effect on market value added with p-value greater than 5% level of significance. Furthermore, moderated human capital efficiency has negative significant effect on market value added. This indicates that the higher the female on the board the lower the market value of the companies. The result also shows that moderated structural capital efficiency has a positive but insignificant effect on market value added. The coefficient of determination indicates that the independent variables used in this study explained 19% variation on market value added while the remaining variation is explained by other variables not included in the model. The multicollinearity between the independent variable is explained by variance inflation factor which indicates that there is no collinearity problem between the variables because all the centered VIF is less than 10.



5. Conclusion and Recommendations

The study concludes that intellectual capital is a significant factor that affect the market value added of the companies. Hence, human capital has a significant effect on market value, therefore, increase in human capital efficiency will increase market value added because human capital indicates skills, knowledge and abilities of the employees. However, structural capital has a negative significant effect on market value of listed deposit money banks. This signifies that increase in structural capital efficiency will decrease market value added. Furthermore, moderated human capital efficiency has negative significant effect on market value added. This indicates that the higher the board expertise the lower the market value of the companies. It therefore means that less board expertise on the board is necessary to increase market value added. However, moderated structural capital efficiency has a positive but insignificant effect on market value added. The study therefore recommends that banks should pay sufficient attention to the human capital since it is considered as the most significant asset to the company by implementing policies that will enhance and upgrade their employees' skills and competence in the area of training and development.

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