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# The Moderating Role of Organizational Culture on the Relationship between Intellectual Capital and Sustainable Competitive Advantage

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**Abstract:** *The study investigated the moderating role of organizational culture on the relationship between Intellectual Capital and Sustainable Competitive Advantage. The population for the study consists of 819 Managers, particularly Branch, Operations and Customer Relationship Managers of Tier One Deposit Money Banks in South-South, Nigeria. Exploratory Factor Analysis (EFA) was used to validate the instrument, and preliminary analysis were performed to check normality, linearity and equality of variance. Using the Krejcie and Morgan's sample size determination formula, copies of questionnaire were administered to a sample size of 262 managers. Data obtained from 250 retrieved and usable copies of the questionnaire were analyzed by means of the Statistical Package for Social Science (SPSS) version 20.0 and Analysis and Moments of Structures (AMOS) version 24.0. The results revealed that organizational culture significantly moderate the relationship between intellectual capital and sustainable competitive advantage. The study recommended that deposit money banks in South-South should strongly consider making available to employees a means to voice concerns anonymously, such as a hotline. This channels will aid in maintaining and improving corporate culture.*

**Keywords:** *Deposit Money Banks, Intellectual Capital, Organizational Culture, Sustainable Competitive Advantage*

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## 1.0 Introduction

The phrase intellectual capital was first proposed by Galbraith in 1969 and popularized by Stewart in fortune magazine where he tried to introduce it as the amount of employees' knowledge and ability which could strengthen the company's competitiveness (Karmath, 2007). Nahapiet and Ghoshal (1998) define intellectual capital as sum of Awareness and expertise that can be used to provide a competitive advantage. Bontis (1998) defined intellectual capital as a collective knowledge embedded in human beings, organizational routines and relationship networks. Intellectual capital was also recognized as a key determinant of today's growth. It refers to developed economies such as Germany, the United States of America, China and Japan as a result of their competitive human capital advantage, businesses with a significant share of unskilled labor have moved to other parts of the world (Polasek, 2011).

Alderson (2005) suggests that companies should look for distinctive characteristics that differentiate themselves for a long time (i.e. sustainable competitive advantage) from rivals in

the eyes of customers. Sustainable competitive advantage is therefore the ability to deliver superior consumer value on an ongoing or continuous basis, a condition in which rivals cannot easily replicate the value-creating potential of the company (Collis & Montgomery, 2005). However, Barney (2001) aims at creating sustainable competitive advantages when important resources (resources help the company build goods and services), unique (competitors don't have access to them), inimitable (competitors can't easily duplicate them) and necessary (the company owns and can leverage them at will). Acquiring and maintaining sustainable competitive advantage and superior results are a feature of the tools and skills brought to the market (Aaker, 2009; Barney, 2005). Such information networks and skills, resulting from learning processes suggests an increase in response capability through a wider understanding of the environment (Dodgson, 2003; Sinkula, 2004).

Organizational culture refers to different organizational characteristics. They can include performance-oriented culture, long-term jobs, quality improvement (e.g. Rodsutti & Swierczek, 2002), as well as attitudes of workers regarding leadership, communication style, human resource management and working conditions (e.g., Hansen & Wernerfelt, 1989).

There are a few explanations why organizational culture occupies a significant term. Second, it might be important for candidates to consider an organization's culture. We could have a better sense of whether they'd like to work for an organization. Second, an appreciation of an organization's culture will help to train new employees. Thirdly, understanding organizational culture may help leaders to identify possible sources of problems in the organization. Other significance of organizational culture includes: it motivates employees for new innovation, good product quality and creative thinking; responsiveness to customer needs and extraordinary devotion to customer services, it helps to face global competition, changing patterns of technology and environment.

Abbas (2014) examined the moderator role of the corporate culture between business and intellectual capital performance: an empirical study in Iraq; Gorondutse and Hilman (2016) investigated the Moderating effect of organizational culture on corporate social responsibility (CSR) engagement and the success of SMEs in Nigeria; Tamunomiebi (2018) evaluated The moderating role of organizational culture in relation to ethical management practices and organizational resilience at Tertiary Health Institutions in Bayelsa State, Nigeria;

However, literatures on organizational culture as a moderating variable on the relationship between intellectual capital and sustainable competitive advantage, adoption of structural equation modelling to test the correlation is scant which motivated this study on the moderating effect of organizational culture on intellectual capital and sustainable competitive advantage in deposit money banks in South-South, Nigeria and on managers/executives.

### **1.1 Statement of the Problem**

The environment in which financial transactions take place in the 21st century is a combination of complex socio-, economic, political and technological factors that pose complex challenges for financial institutions worldwide (Tesfayohannes, 2012). This growing complexity has created challenge for Nigerian financial institutions as a study by KPMG (2012), titled 'Confronting Complexity' identified common factors in the Nigerian financial institutions among which are

the increased cost of business; greater number of risks; difficulty in making financial decisions; delay in deals and transactions.

Socio-cultural factors remain a significant component of the financial institutions' activities in Nigeria as they affect transactions, technology and efficiency (Odekunle, 1989; Olaoye, 2003; Aghalino, 1998; Odetola & Ademola, 1986). Nevertheless, rapid changes in the global banking environment, such as technology, transport, finance, finance, communication, are currently impacting financial institutions that are intrinsically attitudinal and sedentary in Africa in general (Ekeledo & Bewayo, 2009). Similarly, Aldrich and Zimmer (1986) explain the importance of socio-cultural factors in financial institutions' activities in their transactions, which they say to be socially ingrained. The socio-cultural dimension deals with the structures, traditions, roles and values that exist beyond the individual financial structures and the latter encompasses the subjective nature of culture as demonstrated by the interpretation of the cultural structure components by the individual.

An iceberg can be compared to a cultural structure. The external or conscious as well as the internal or subconscious aspect: where the former is the visible aspect which can be seen, such as behavior and some beliefs, whereas the subconscious aspect includes that unseen part, such as values and norms (Hall, 1976). Similarly, Hofstede (2001) noted that human behaviors, especially those of managers of financial institutions focused on in this analysis, are influenced by socio-cultural experience and other acts that cannot be separated from their socio-cultural background (Bloodgood & Sapienza, 1995).

Wetherly (2011) identified the socio-cultural variables as being all that is not in the economy or political system. It consists of activity set and relationships that include people in their personal and official duties, including population features, age, race, faith, beliefs, personality, lifestyles and associates. Such environmentally related patterns of behaviour lead to the creation of different cultural values in different societies, some of which affect the decision in financial institution.

To help ensure that the culture of a bank aligns with its purpose, core values should be considered carefully, and support the business goals that enable the bank to fulfill its purpose. When set up, the fundamental principles of the bank will be expressed within the organization. Instead of enforcing a bank culture should be instilled. Simple platitudes cannot create a desired community, particularly when acts are inconsistent with the cultural values expressed here. Instead, principles should be continually reinforced and expressed by the actions of senior leaders.

Therefore, this research aims to empirically analyze the moderating effect of organizational culture on the relationship between intellectual capital and the sustainable competitive advantage of deposit money banks in South-South, Nigeria.

## **1.2 Objectives of the Study**

To examine the moderating role of organizational culture on the relationship between intellectual capital and sustainable competitive advantage of deposit money banks in South-South, Nigeria.

### **1.3 Research Hypothesis**

**H<sub>01</sub>:** Organizational culture does not significantly moderate the relationship between intellectual capital and sustainable competitive advantage of deposit money banks in South-South, Nigeria.

## **2.0 Concept of Intellectual Capital**

The origins of the 20th century idea of intellectual capital are connected with Taylor and his 1911 book, *The Principles of Scientific Management*, in which he talks about employee expertise, experience and skills (Taylor, 1911). Sometime later, the concept of intellectual property was also present in Chamberlin's (1933) and Robinson's (1933) works, which emphasized that the skills, technological know-how, trademarks, labels, patents, etc. of the company are essential to business success.

The issue of intangible assets, also referred to as intellectual capital in the early 1990s, has gained considerable attention from scholars. They listed its value for organizations of all kinds such as Microsoft, Astra, Rentokil and Oracle (Kim et al., 2010; Ramezan, 2011; Wall, 2005; Chang & Birkett, 2004; Alcaniz et al., 2011; Mouritsen et al., 2001). As a strategy for quantifying the company's intangible assets, Edvinsson and Malone proposed intellectual property for the Swedish financial firm, Skandia (Peppard & Rylander, 2001; Kitts et al., 2001). In five key areas, they established a performance measurement index; economy, human, consumer, process, and renewal. They highlight people's role in organizations and the value of unlocking human potential (Andriessen, 2007). The secret elements of human and systemic capital, according to Skandia's model, when put together, comprise intellectual capital (Bontis, 2001). The value and quality of intellectual resources has been bestowed upon several other studies (Lu et al., 2010). Intellectual capital has become vital to maintaining competitive advantage, organizational success, creativity, superior organizational efficiency, key differentiator operator, improving new product development output, enhancing shareholder value, providing a structure to explain all the tools available to the business and how they communicate in order to generate value, organizational efficiency (Ramezan, 2011); Montequin *et al.*, 2006; Bontis, 1998; Kim & Kumar, 2009; Wall, 2005; Beskese, 2007; Joia, 2007; Hsu & Fang, 2009; Tai & Chen, 2009; Lu *et al.*, 2010; Bozbura & Beskese, 2007; Lee, 2010; Peppard & Rylander, 2001; Chen, 2009; Bozbura & Beskese, 2007). Nevertheless, many still do not know the definition of intellectual capital, as it is difficult to quantify directly (Lytras & Pablos, 2009). In other terms, a common definition of IC is not agreed upon (Peppard & Rylander, 2001; Kim et al., 2010; Beattie & Thomson, 2007; Montequin et al., 2006; Meca & Martinez, 2007; Beattie & Thomson, 2007).

## **2.1 Concept of Sustainable Competitive Advantage**

Sustainable competitive advantage is linked to the company's efforts to create and sustain long-term advantages. Three factors influence sustainable competitive advantage: target market size, greater access to capital and consumers, and limitations on competitors' forces. A company should usually build the sustainable competitive advantage whose managers apply their strategy based on features that cannot be easily replicated (Coyne, 1986).

Coyne believes that consumers need to understand the similarities between a company's goods and those of the rivals to establish sustainable competitive advantage. Such disparities may have been generated because of the advantages of the firm which its rivals cannot access (Coyne, 1986). Other researchers have discussed particular resources and skills more specifically that lead to the development of sustainable competitive advantage. For example, Barney (1991) argues that all of the company's resources are not capable of creating Sustainable Competitive Advantage (SCA), and SCA resources must have four characteristics: rareness, importance, impossibility of imitation, and impossibility of substitution. Potential SCA resources are divided into political, physical, legal, human, organizational, intellectual, and logical resources, according to Hunt, Shelby, and Robert Morgan (1995). They think that resource competitive advantage will become a competitive advantage on the marketplace (Hoffman, 2000). Prahalad and Hamel (1990) suggest that businesses match capital and expertise with core competencies in order to effectively build a consistent and special sustainable competitive advantage.

Wang, Han and Liu (2018) explored how distributor and supplier networks can enhance sustainable competitive advantage: evidence from China's paper-making industry. Based on data from 122 matched pairs of suppliers and distributors of a high-pollution and high-resource-consuming industry, the Chinese papermaking industry, our empirical findings show the positive effects of systemic holes on the distributor's sustainable competitive advantage in the distributor and the supplier networks. Furthermore, reciprocal confidence could negatively moderate the relationship between the distributor network's structural holes and the distributor's sustainable competitive advantage, but would positively moderate the relationship between supplier network's structural holes and the distributor's sustainable competitive advantage.

## **2.2 Concept of Organizational Culture**

The study on organizational culture has received a great deal of attention among researchers in many fields of study. Researchers from the resource-based thought school think it's an important explanatory variable of organizational success. Many use this term to describe the organizations' success in introducing new technologies or theory of management. Organizational culture refers to different organizational characteristics. They can include performance-oriented culture, long-term jobs, quality improvement (e.g. Rodsutti & Swierczek, 2002) as well as attitudes of workers regarding leadership, communication style, human resource management, and working conditions (e.g. Hansen & Wernerfelt, 1989).

From the point of view of the anthropologist and organizational researcher, culture is "a collection of cognitions held by members of a social unit and gained by processes of socialisation" (Cooke & Rousseau, 1988). Organizational culture is rooted in the fundamental principles of organisation, which are mostly implicit and seldom addressed (Hofstede, Neuijen, Ohayv & Sanders, 1990). In other words, culture has involved an evolution of the organizational context and is kept collectively by association members, as well as being nuanced enough to resist direct exploitation (Denison, 1996). Awareness in this field could be furthered by new sets of principles originating from well-trained observers (Schein, 1996).

The term culture is defined as a signal of message which is interpreted about how to behave around here. As human beings we are hardwired to adapt and blend into the societies we belong to. This is necessary if we are to be socially accepted, and if we are to keep our job in the case of an employer. Employees gather these planned behavior signals and change their own accordingly. Those who cannot or will not adjust tend to either leave of their own free will or be ejected. Meanwhile, culture can be described as the characteristic way in which work is done in different organizations (Taylor, 2007). There is an increasing need for organization to be responsive and competitive or else culture can react as a liability. This requires that the capability of soft assets (people) and hard (plant) be managed effectively. In addition, Hofstede (1980) describes culture as "collective mind programming that separates members of one group from those of another." The system for cultural values is developed using data from more than 88,000 workers from 72 countries. This leads to the initial identification of four cultural dimensions, which later are expanded to five. The cultural dimensions are as follows: a. Individualism-collectivism — refers to the incorporation of individuals into primary groups, and the degree to which individuals, when in group b, look after themselves. Power gap— the degree to which power imbalance between institutions and individuals is recognized by individuals. c. Avoidance of uncertainty— the rate at which culture feels dissatisfied with lack of order and confusion. d. Masculinity and femininity— the degree to which, in essence, a culture finds the prevailing values to be "male." e. Long-term focus and organization in the short term — value creation where deferred gratification is embraced and order is observed versus a society where immediate satisfaction is desired and results are expected quickly (Ergeneli, Gohar, & Temirbekova, 2007; Hofstede, Neuijen, Ohayv, & Sanders, 1990; Kirkman, Lowe & Gibson, 2006). These five dimensions have been measured using the values survey module (Ergeneli *et al.*, 2007).

### **2.3 Relationship between Organizational Culture, Intellectual Capital and Sustainable Competitive Advantage**

Naranjo-Valencia, Jiménez-Jiménez and Sanz-Valle (2016) investigated how the organizational culture play a significant role in creativity, and thus in the success of businesses. The writers had interviews with the CEOs at manufacturing firms and a questionnaire sample. They used four organizational dimensions to measure the organizational culture: a) adhocracy, b) hierarchy, c) clan and d) market. They selected 1500 companies in south-eastern Spain with more than 15 employees in each sector. There were analyzed a total of 446 accurate questionnaires. The results have shown that the corporate culture can either enhance innovation and company performance, or can be a barrier for both. That relies on the ideals upheld by the culture of organization. In addition, there has been a positive impact on company creativity for adhocracy society, and a negative relationship between hierarchy culture and innovation. In addition to that, the clan culture and the market culture had no important impact on innovation. The relationship between the four organizational culture dimensions and performance were also inconsistent. The performance was positively influenced by adhocracy and clan culture while hierarchy and market culture had a negative impact on performance. The

writers hypothesized that innovation mediates the link about a common culture of organization, and performance; namely, adhocracy culture.

In another instance Carlos Pinho, Paula Rodrigues, and Dibb (2014) examined the organizational commitment as a mediator between organizational culture and organizational performance in non-profit health organizations. The authors targeted the chief executive officer of 250 non-profit healthcare organizations to answer the questionnaire survey in Portugal. The culture of organization was calculated by a) tribe, b) adhocracy, c) hierarchy, and d) the market. For financial performance assessment, this analysis used gross sales volume; revenue growth; profit / surplus size; and financial equilibrium. While the non-financials were measured through the quality of working environment; increase in donations; rise rate of recipients; and degree of perceived social identity. The result showed that corporate culture is, in general, a vital element for an organization to succeed in the business world. Although there is no relationship between the organizational culture and organizational commitment, organizational culture has a significant effect on organizational performance. In fact, there is no link between organizational engagement and success of the organization. Managers are also expected to recognize the culture of their organization to improve those culture types which promote employee commitment. Finally, working in environments that encourage the particular cultural dimensions of atmosphere, connectedness and cutting-edge programming, with decreasing the constraining aspects of formalization, is required to improve corporate performance.

Yesil and Kaya (2013) used a questionnaire survey to investigate the position of organizational culture on CFP. In Gaziantep, Turkey, the authors collected data from a group of managers to 54 firms. They used four organizational culture dimensions to measure organizational culture: (a) clan, (b) clan, (c) business, and (d) hierarchy; the increase in revenue and the ROA was used to calculate CFP. The findings suggested that there is no connection between the dimensions of organizational culture and the CFP. They revealed there's an indirect effect for the organizational culture on performance.

## **2.2 Theoretical framework**

### **2.2.1 *The Games Theory***

This theory focuses on conflict and collaboration and is relevant, as stated by Adeniran and Eqwuonwu (2015), if the actions of many agents are interdependent. Those agents can be people, organizations, businesses, or any combination thereof. Game theory principles provide a vocabulary for formulating, structuring, analyzing, and interpreting strategic situations (Turocy & Stengel, 2001). In game theoretical models, firms are presented as being rational utility maximizers, in the sense that they strive to achieve the most preferred of outcomes subject to prevailing constraints as do their competitors. As a response on risk and uncertainty factors, a rational firm will likely form competitive conjectures and arbitrary calculations of likelihood of its rivals' expectations and behaviour so as to outwit its competitors and its sector optimisation potentials. This theory can be related to market positioning strategies, which are measures applied in organizations to gain an edge over competitors in the battle for control of the minds of their all existing and future customers (Adeniran & Eqwuonwu, 2015).

### **2.3 Empirical review**

Omar, Yusoff and Zaman (2019) studied the effect of organizational learning capability as a mediating variable in the relationship between green intellectual capital and business sustainability: evidence from the manufacturing sector. Therefore, in recent decades, green intellectual capital has increased interest in achieving the objective of business sustainability. Green intellectual capital refers to a new type of innovation and approach with a view to understanding and solving environmental issues. In addition, the role of green intellectual capital in sustainability is best supported by the organizational learning capacity to mediate the relationship between green intellectual capital and sustainability of businesses. The inspiration of this study therefore stems from the above-mentioned facts that the approach to green intellectual capital and business sustainability in Malaysia is still fresh. The hypotheses developed were tested on the basis of data collected to managers of SMEs in Malaysian manufacturing via mail survey. Data collected from 168 managers were analyzed using the Smart PLS 3.0 statistical techniques. Revealed three key results. Second, green systemic capital and green relational capital have a strong connection to the capacity to learn organizationally while green human capital does not. Secondly, there is a significant relationship between organizational learning capacity and company sustainability. Third, organizational learning mediates the relationship between green systemic capital and green relational capital, while green human capital has not. This current research has contributed to the knowledge body where this is the first research to connect green intellectual capital to sustainability of industry. Furthermore, there is no work done on organizational learning capacity as mediating in the relationship between green intellectual capital and sustainability of industry. Ultimately, this paper gives a range of possibilities and limitations.

Intellectual resources and the competitive advantage of selected commercial banks in Anambra State were examined by Nzewi, Eze, Adani, Monene and Ohodah (2019). The study aimed to evaluate the relationship that exists between Intellectual Capital and Competitive Advantage of selected Anambra State commercial banks. Research architecture for the survey was hired. The research population was made up of 100 employees from selected banks. Data were collected using standardized questionnaire on a 5-point Likert scale. Reliability test Cronbach Alpha was used to assess the instrument's degree of internal accuracy. The study was carried out using Simple Regression with Ordinary Least Square System (OLS) at a significance point of 5 per cent. The result showed that there is a positive relationship between human capital and employee creativity and that improvements in the independent variable (Human Resources) accounted for a 95 per cent shift in the dependent variable (Employee Innovativeness). It was concluded that human capital has an effective creative relationship with the employees. Hence, we suggest that companies ought to hire and encourage intellectually capable workers within the company to use their expertise and competencies. In addition, the organizational bottlenecks need to be reduced in order to allow workers to use their strategies and flexibility to conduct other aspects of their work.

Ikon and Ochumba (2019) investigated intellectual capital (IC) and competitive advantage in selected South-East Nigerian pharmaceutical companies. The analysis had adopted a research method for the survey. Population where the analysis was 1120 employees

and sample size 295 employees obtained by using the formula of Taro Yamane. Pearson's coefficient of product moment association has been used in data analysis. Findings suggested that employee productivity in the selected pharmaceutical firms in South-East Nigeria had a major positive relationship with organizational learning ability (cal. r. 793 > criter. r. 138). The study concluded that intellectual capital plays a major role and significantly impacts the studied firms' competitive advantage, and suggested that the management of the studied firms concentrate on the level of skills of prospective employees when hiring as this would enable them to integrate seamlessly into the company and job and increase their learning ability.

### **3.0 Methodology**

#### **3.1 Research Design**

This study utilized the survey design approach. A survey design offers a quantitative or numerical explanation of a population's patterns, behaviors or opinions by analyzing a specimen of that population (Saunders, Lewis & Thornhill, 2009). The choice of descriptive survey design is made because important aspects of variables of interest concerning deposit money banks (DMBs), particularly Tier One banks, are outlined.

#### **3.2 Population of the Study**

The population of this study comprised of a complete listing of deposit money banks in Nigeria, particularly those in South-South, Nigeria, which constitutes the sampling Frame. The sampling units were drawn from the sampling frame which is the list of tier one (1) banks in each of the six (6) South-South states (Akwa Ibom, Bayelsa, Cross Rivers, Delta, Edo & Rivers State) of Nigeria. The study population is eight hundred and nineteen (819) representatives of the tier 1 banks focusing on branch, operations and customer relationship managers. According to CBN (2019) cited in Bukola (2019), Nigeria's Tier one (1) banks includes; Access Bank, First Bank, Guaranty Trust Bank, United Bank for Africa and Zenith Bank.

The choice of these tier one (1) banks is because these banks have total assets of 24.6 trillion naira covering more than 50% of the total market share and seem to be highly competitive (CBN, 2019 cited in Bukola, 2019). Thus, the target population of eight hundred and nineteen representatives of managers becomes the sampling frame.

**Table 1: Population of the study**

S/N	Name	Number of Branches in the six south-south states x 3 managers from each branch (Branch, Operations & Customer Relationship Managers)
1	Access Bank	72 x 3 = 216
2	First Bank of Nigeria Limited	70 x 3 = 210
3	Guaranty Trust Bank	31 x 3 = 93
4	United Bank for Africa	60 x 3 = 180
5	Zenith Bank Plc	40 x 3 = 120
	<b>Total</b>	<b>819</b>

Source: Individual Organizations' Desk

This study utilized judgmental sampling to identify the branch managers, operations managers and customer relationship managers, though the use of the list of Banks in each of the six (6) south-south states of Nigeria. Based on the number of managers identified, the probability simple random sampling is used with the aid of random numbers to ensure each member of the population has equal chance of being selected.

### **Sample size determination**

This study utilized the Krejcie and Morgan's (1970) formula for sample size determination which is thus;

$$S = \frac{X^2 NP (1-P)}{d^2 (N-1) + X^2 P (1-P)}$$

Where:

**S**= required sample size.

**X<sup>2</sup>** = the table value of chi-square for 1 degree of freedom at the desired, confidence level (3.841), same as (1.96). (1.96)

**N**= the population size.

**P**= the population proportion (assumed to be .50 since this would provide the maximum sample size).

**d**= The degree of accuracy expressed as a proportion (.05).

**Since N = 819**

$$S = \frac{3.841 (819) (0.5) (1-0.5)}{0.0025 (819-1) + 3.841 (0.5) (1-0.5)}$$

$$= \frac{3.841 (819) (0.5) (0.5)}{0.0025 (818) + 3.841 (0.5) (0.5)}$$

$$= 786.44475 \div 2.045 + 0.96025$$

$$= 786.44475 \div 3.00525$$

$$= 261.69$$

**By approximation, S = 262**

### **3.3 Method of Data Analysis**

Inferential Statistics were tested using the Structural Equation Modelling (SEM).

The AMOS (Analysis of Moment Structure) was used in this study. AMOS is one of the popular specialized SEM software programs (Byrne, 2001; 2010; 2012).

### **4.0 Result and Discussions**

A sample size of 262 was determined based on the population of 819, however, a sample size of 262 was adopted, and thus 262 copies of the questionnaire were distributed to the target sample. Retrieval of the copies of questionnaire was achieved manually with the researcher, as well as research assistants, visiting, collecting and collating all copies of the questionnaire; unfortunately, 12 copies of the questionnaire were considered as lost given the absence of the units during the time of questionnaire retrieval, in some cases, due to the inability of the respondents to meet up with the time window stipulated for questionnaire completion. Therefore, the study utilized a representative size of 250 in the analysis.

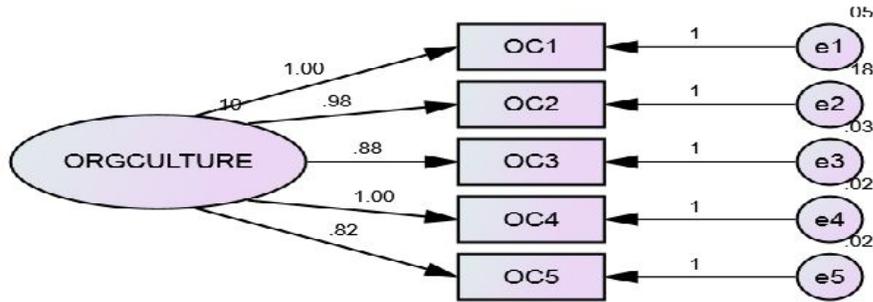


Figure 1: First Order Measurement Model of Organizational Culture

Table 2: First Order Measurement Model Analysis of Organisational Culture

Model	Chi-Square(df), Significance	NFI	TLI	CFI	RMSEA	Variable	Factor Loading Estimates	Error VAR
Organisational Culture	(5df) =192, P<0.000	0.81	0.62	0.81	0.38	OC1	1.0	0.05
						OC2	0.98	0.18
						OC3	0.88	0.03
						OC4	1.00	0.02
						OC5	0.82	0.02

Source: Amos 24.0 output on research data, 2019

The figure 1, depicts the complete specification of the one factor model. The measurement model had no double loading, and it was assumed that all measurement errors were uncorrelated. The model was overidentified with Five degree of freedom (5df). Each of the goodness of fit indices suggested that one factor model fit the data poorly, (chi-square (5df) =192, p<0.000, CFI=0.81, NFI=0.81, TLI=0.62, RMSEA=0.38). The inspection of modification indices showed that adding covariances between the error terms for OC1, OC2, OC3, OC4 & OC5 improved the fit.

Factor loading estimates revealed that the five indicators were strongly related to latent factor organizational culture and were statistically significant. According to Brown (2010), completely standardized factor loadings of 0.3 (or 0.4) and above are commonly used to operationally define a “salient” factor loading. The indicators OC1-OC5 had factor loadings of

1.0, 0.98, 0.88, 1.00 and 0.82 respectively and error variances of 0.05, 0.18, 0.03, 0.02 and 0.02 respectively. The average variance extracted (AVE) from the construct is 0.06. Thus,  $AVE=0.06 < 0.5$ . All freely estimated standardized parameters were statistically significant. These parameters are consistent with the position that these are reliable indicators of the construct of organizational culture.

The population variance-covariance matrix was analysed using AMOS 24.0, and a maximum likelihood minimization function (factor loadings and error variances are provided in table 2). Goodness of fit was evaluated using the root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker-Lewis index (TLI), and normed fit index (NFI).

Guided by suggestions provided in Hu and Bentler (1999), acceptable model fit was defined by the following criteria: RMSEA ( $\leq 0.6$ ), CFI ( $\geq 0.95$ ), TLI ( $\geq 0.95$ ), and NFI  $\geq 0.95$ . Multiple indices they have been used, as they have different information about model fit (i.e absolute fit, parsimony correction and comparative fit). Such indices allow for more reliable and conservative evaluation of solution; when used together. According to Brown (2010), completely standardized factor loadings of 0.3 (or 0.4) and above are commonly used to operationally define a “salient” factor loading.

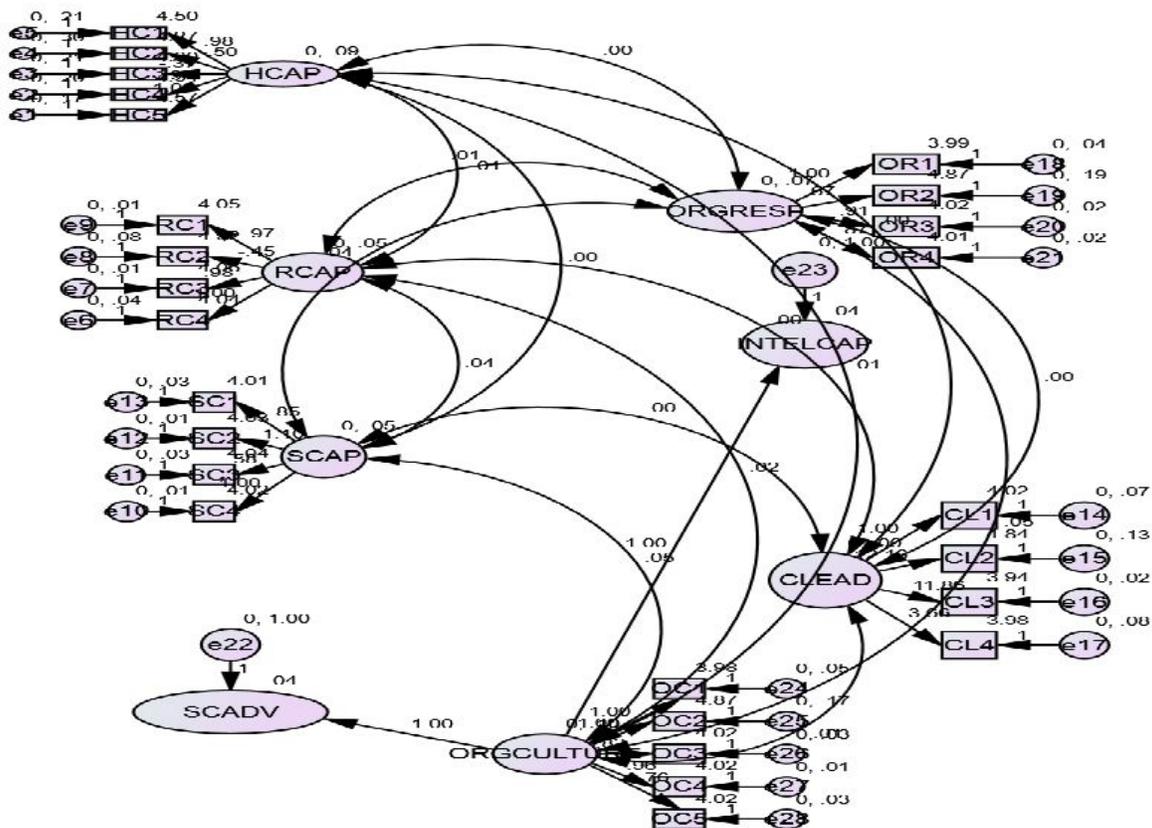


Figure 2: Moderating effect of Organizational Culture on intellectual capital and sustainable competitive advantage of DMBs in Nigeria.

**Test of Hypothesis**

**Table 3: Result of standardized and unstandardized regression estimate of the model.**

S/N	Mediation Stage	Relationship	Std. Beta	Actual Beta	S.E	C.R	P	Remark
1	OC→IC OC→SCA (Hypothesis 1)	Organizational Culture Vs IC and SCA.	0.72 0.65	0.83 0.72	0.52 0.71	2.07 2.25	0.000 0.000	Not supported

**Source:** Amos 24.0 output on research data, 2019

One hypothesized relationship were postulated in the study; all indicated in null form of no relationship. Data in this section is analyzed using the structural model to investigate and ascertain the effect of the moderating variable; on a multivariate basis. The analysis was based on significance criteria of  $\beta > 0.3$  (Brown, 2015);  $r > 0.7$  (Hair, Hult, Ringle & Sarstedt, 2016) and  $p < 0.05$ .

**Hypothesis One**

**H<sub>01</sub>:** Organizational culture does not significantly moderate the relationship between intellectual capital and sustainable competitive advantage.

Table 3 illustrates the analysis for the moderating effect of Organizational Culture on intellectual capital and sustainable competitive advantage of DMBs in Nigeria, where  $\beta = 1.00$ ,  $r = 0.86$ ,  $0.72 \dots$  and  $p = 0.000$ . The findings show a positive and significant association between both variables (where  $\beta > 0.3$ ,  $r > 0.7$  and  $p < 0.05$ ). Thus, based on the criteria for null hypothetical statement acceptance ( $\beta < 0.3$ ,  $r < 0.7$  and  $p > 0.05$ ); or rejection ( $\beta > 0.3$ ,  $r > 0.7$  and  $p < 0.05$ ), the null hypothesis is rejected and restate that culture significantly moderates relationship between intellectual capital and sustainable competitive advantage of DMBs in Nigeria. Therefore, Ho1 was not supported.

The result from the analysis reveals culture as having a strong and significant impact on the relationship between intellectual capital and sustainable competitive advantage of deposit money banks in the South-south of Nigeria. Statistically, it shows that organizational culture is a good mediator of the relationship between intellectual capital and sustainable competitive advantage  $\beta =$  for  $X \rightarrow M = 1.00$ ;  $M \rightarrow Y = 0.72$  and  $X \rightarrow Y = 1.00$ ,  $p < 0.005$ ). The evidence as illustrated in table 3 shows that organizational culture substantially effects and enhances the interaction between intellectual capital and sustainable competitive advantage of deposit money banks in the South-south of Nigeria; thus, the null hypothesis is therefore rejected.

The result for the multivariate analysis presents culture as a significant moderator of the relationship between intellectual capital and sustainable competitive advantage of deposit

money banks in the South-south of Nigeria. The evidence suggests that culture is essential to what degree organizations encourage team work for exchange of opinions and ideas. The result further demonstrates that culture is a major and substantial element of the functionality of the deposit money banks as it provides the platform upon which members of staff feel the bank has a real interest in the welfare and overall satisfaction of its employees. Thus it can be stated that: Culture enhances the impact of intellectual capital on the sustained competitive advantage of deposit money banks in the South-south of Nigeria.

This finding is in line with Ogbonna and Harris (2000) who investigated organizational culture as a mediator between leadership style and success at the company. They collected data from a multi-industry sample from the UK business database registered with FAME. The sample size was 1000 small and large sized companies. The authors used 342 questionnaires which were accurate. The key findings have shown that the relation between the four dimensions of culture and performance is not clear. This finding supports the claim that organizational culture is important for sustainable competitive advantages. This research also conforms to Naranjo-Valencia, Jiménez-Jiménez and Sanz-Valle (2016) who investigated how the organizational culture take a big part in innovation and hence in company performance. They selected 1500 business employing more than 15 people each company in southeast Spain. A total of 446 valid questionnaires were analyzed. The findings indicated that the organizational culture can either boost the success of innovation and the business, or can be a barrier to both. The authors concluded that creativity mediates the link between one specific type of organizational culture and performance; namely, the culture of adhocracy.

## **5.0 Conclusion**

Based on its findings and the empirical evidence, this study observed that as a moderator in the relationship between intellectual capital and sustainable competitive advantage, organizational culture makes a major contribution. The study affirms that the relationship between intellectual capital and sustainable competitive advantage of deposit money banks in South-South, Nigeria is moderated by organizational culture.

### **5.1 Theoretical implications and Recommendations**

In view of the findings and the position of this study with regards the moderating role of organization culture on the relationship between intellectual capital and sustainable competitive advantage of deposit money banks in the South-South of Nigeria, this study recommends as follows:

- i. Senior bank leaders need to clearly express and reinforce the core principles of the bank in their correspondence to workers, but doing so alone is not enough to keep a culture going. If behaviours at odds with core values are allowed to persist, such communications will not matter. They must exhibit behaviour consistent with the bank's core values.
- ii. Open dialog can be an effective way for management to think about the culture of the bank, and how it helps fulfill the purpose of the bank. Such dialog may also be a way of finding obstacles to value-driven behaviour or values-inconsistent behaviour instances.

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