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Effect of intellectual capital on organizational resilience in Faculty of Management Sciences of Bauchi State University

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This study sought to establish the effect of Intellectual Capital on Organizational Resilience in the Faculty of Management Sciences, Bauchi State University. The study used a cross sectional design. The population of the study was the academic staff of the departments of Accounting, Business Administration and public Administration all in the faculty of Management Sciences, Bauchi State University, Bauchi State totalling 40. The study adopted census due to the small size of the population. Descriptive statistics and multiple regression were used for data descriptions and hypotheses testing respectively. The results from the analysis confirmed that Intellectual Capital significantly affects Organizational Resilience in the Faculty of Management Sciences, Bauchi State University. The study concluded that Intellectual Capital has significant influence on Organizational Resilience (anticipation capability, dynamic capability and innovative capability). Therefore, the study recommended that, given the existing challenges and adversities, intellectual capital and resilience can play a crucial role in enhancing Bauchi State University's performance. Accordingly, administrators ought to understand the association between Intellectual Capital and resilience since they can influence all aspects of the institution to improve on performance of staff and students. This can be achieved by improving employee skills and abilities through training, implementing flexible strategies, and creating a supportive organizational culture that allows for cooperation.

Keywords: Anticipation capability, dynamic capability, innovative capability, intellectual capital, organizational resilience

1. Introduction

The over reliance on physical assets by firms in the last decade has led to failure of some firms, as well as being unable to compete in the market with other competitors. In today's cooperate world, the sudden rise in the use of technology in the process has been attributed to the drawback of the physical and labour-based process due to continuous changing of the activities in the world. Therefore, for firms to create additional value for the business, the firm is expected to invest in intangibles resources. For a firm to create additional value and gaining competitive edge in the market ahead of its competitors, the intangible assets to be possessed must be valuable, rare, inimitable and non-substitutable so as to implement the strategies of the firm.

However, the global competition is not only affecting the industrial world, but also affecting the world of education due to the increase in the challenge for higher education in different part of the world. This has led to stiff competitions among the local and international universities around the globe. As the competition among universities grows tougher day by day, attention has been turned to

intellectual capital so as to create a competitive advantage by attracting valuable staff and students as well as fund raising in order to be distinctive in the global market. Since Higher Educational Institutions, HEIs are considered as critical institutional actor in economic growth and national innovation system, it is necessary for each HEIs to find the suitable way of assessing its intangible assets and find a way of disclosing the results so that they can be useful for the understanding of their environment (Todericiu & Serban, 2015).

Leitner (2002) observed that the most valuable resources at any HEIs disposal is made up of its professionals and students, together with the relationship they establish with the environment as well as their organization's procedures. HEI such as university education is the highest level of an education process not only prioritizing the learning, process and transfer of knowledge, but also applying a role in the search and development of science itself which can be used as a tool and solution to the problems of the society (Istifenti & Lubis, 2015). Universities serve the main goals of production and dissemination of knowledge. Therefore, Sanchez, Elena & Castrillo (2007) opined that the higher the intellectual capital built by universities, the better the quality-of-service universities will achieve in carrying out its functions so that the impact on increasing the loyalty of educational services and value of higher education.

Different tools/indicators have been put in place in different part of the world in measuring and disclosing intellectual capital within the university systems. However, there is no such initiative in Africa and Nigeria in particular on the measurement of intellectual capital of their universities. The initiative for the measurement of intellectual capital in public HEIs was justified by the need for transparency of the activities of the institutions in order to compare systems of intellectual capital, to strengthen relationship between industry and universities as well as to evaluate the performance of public universities (Corcoles, 2013).

Resilience rich organizations are more prepared to create sustainable approaches towards their problems than resilience-poor organization ((Zolli& Healy, 2012). In a competitive environment, an organization that is aware of its resilience strengths is also more equipped to find opportunities out of a crisis situation (Knight & Pretty, 1997). Alastir (2010) contends that the aim of building resilience is to remove or reduce the exposure of organizations to threats and hazards by developing protective measures which aim to reduce the likelihood and consequences of a disruptive event, by preventing when possible, responding effectively and efficiently when an event occurs, and by recovering as quickly and completely as possible. Resilience rich organization has the capacity to adapt and more easily stay relevant and responsive to market or environmental changes.

According to Stephenson (2012) organizational resilience is now an established need within corporations and should be an embedded institutional capability and defining ethos within the day-to-day business operations of a company. The point for this is further explained by Umoh (2009) who proposed that, "only variety absorbs variety". The implication is that organizations cannot control the variety unless they possess the requisite variety to bring the organization to a state of acceptable space. Resilience rich organization need to have the right fit between internal structure and the external environment. Anticipation, Dynamic and

innovative capability responses are key qualities of a resilient system (Hollnagel & Woods, 2006) thus this study will look at the effect of intellectual capital on organizational resilience HEIs in Nigeria.

This paper would ultimately provide answers to the following research questions:

i. Intellectual Capital does not significantly affect anticipation capability of Bauchi State University Bauchi State?
ii. Intellectual Capital does not significantly affect dynamic capability of Bauchi State University Bauchi State?
iii. Intellectual Capital does not significantly affect innovative capability of of Bauchi State University Bauchi State?

2. Literature Review

2.1 Concept of Intellectual Capital

Every organization, either profit or non-profit making organization, needs both tangible and intangible assets for the growth and greater market share. The contribution of the intangible assets (Intellectual Capital) in the last two decades has attracted the interest of researchers in the role of through the internal organizational process, the scientific production and the relationship with the environment is increasingly recognized (Secundo, Dumay,Schiuma & Passiante, 2016). Different scholars have defined intellectual capital in different ways based on their disciplines and professions. Edvinsson (2003) defined intellectual capital as what helps company to be sustainable and have competitive advantage in the future as well as an indicator of whether a company will be able to maximize value. Intellectual capital was also seen as a means of creating and supporting connectivity between all sets of expertise, experience and competencies inside and outside the organization (Cabrita & Vaz, 2006). Omowumiodeniyi (2018) defined intellectual capital as a combination of intangible assets that allow firms to operate; he later defined intellectual capital as the difference between the book value of the company and market value of the company.

Umer, Zeeshan, Bushra, Farakh and Hafizee (2014) defined intellectual capital as factors consisting of knowledge, experience, information and skills which have a strong influence and effect on the current and future progress of an organization and as a result with respect to intangible assets (such as patents knowledge system, license agreement and copy rights), increase an organization ranking among its competitors. Therefore, it could be deduced from the definitions above that intellectual capital is the intangible assets of an organization which are combined together in creating a sustainable and competitive edge in the market thereby leading to a greater maximization of company's value. The intellectual capital is not explicitly stated in the balance sheet which makes its value difficult to measure in contributing to the value of the firm. This means that intellectual capital has significant influence on the performance of any organization in the present and future period.

However, in the education sector intellectual capital plays significant role in the formulation achievement of their various vision and mission statement. Ramirez and Gordillo (2014) define intellectual capital of a university system as the term that cover an institutions non-tangible asset and include patents, copy right, process, innovation capacity, society's recognition, members knowledge and their capabilities, skills and abilities,

its network and contacts. The intellectual capital of any university system comprises of human capital, structural capital and relational capital (Giustina, Mauizio, John and Carlo, 2018). Intellectual capital can either be static or dynamic (Pablos, 2003). Static capital consists of knowledge currently available to the firm, whereas a dynamic intellectual capital focuses on all the firm's activities that involves knowledge and create new resources for the firm, such as employee training, research and development and up skilling (Ul-Rehman, Asghar & Ur-Rehman,2013). In the present world, presentation of information about intellectual capital has become paramount importance in higher educational institutions (Corcles, 2012). A company can have many resources of different kinds and some are more important than others. Resources are defined as; "anything that could be thought of as a strength or weakness of a given firm" (Hillman & Dalziel, 2003). In the firm perspective a resource has a wide definition and includes all assets, capabilities, organizational processes, information knowledge etc. controlled by the firm and enables it to implement strategies and operate efficient (Barney, 1991). The company can obtain resources from the external environment and these resources are vital for the company to be able to operate their business (Nienhuser, 2008). A resource canbe vital even though the total cost to obtain or keep it in the business is small, if it is yet important for the company in order to maintain their business (Nienhuser, 2008).

There are also resources that are irrelevant in the discussion of competitive advantage and performance (Omowumiodeniyi, 2018). Some resources may even harm the firm by preventing it to implement valuable strategies or to implement strategies that reduce effectiveness. According to Omowumiodeniyi (2018), a firm resource needs to have four attributes to hold the potential of sustained competitive advantage and these are: valuable in that sense that it can exploit opportunities, rare among a firms current and potential competition, hard to duplicate and no equivalent substitutes for the resource. Firms that possess valuable and rare resources are able to attain a competitive advantage and improved performance in the short term, but to attain sustained competitive advantage, the resource also need to be imperfectly imitable and non-substitutable (Newbert, 2007).

2.1.2Concept of Organizational Resilience

Resilience is a Latin word pronounced resiliere which originally means "jumping back" and to have the ability of recovery. Resilience is about bouncing back from the turbulence which has affected the organization. It is a fundamental quality system that responds objectively to such a level of significant change that disrupts events (Braes & Brooks, 2010). Resilience is theorized in a number of disciplines which includes ecology (Walker et al., 2004), psychology (Dauo, Joseph & Fathallah 2019); biology (McEwen, 2007, Southwick &Charney, 2013); and business (Hamel & Välikangas, 2003, Lengnick-Hall et al., 2011). There is no unified definition of resilience from any discipline. This study will adopt a cross disciplinary perspectives towards having a coherent and unambiguous definition of resilience which can also be operationalize to suit the objective of the study.

Seville et al. (2008) submits that organizational resilience is the organization's "ability to survive, and potentially even thrive, in times of crisis". Organizational resilience calls for potentials and survival during crisis times. It is certain that organizations will

encounter challenges but the ability to come through the crisis and perform better is what matters most. Organizational resilience enables organizations to adapt and to be able to manage disruptive challenges (Durodie, 2003). Organizational resilience is the ability of the organization to cope with and to prepare for adversity and react to events without knowing them in advance.

Oh and Teo (2009) define organizational resilience as the competence of an organization to anticipate external shocks and disruptions, and to recover swiftly with a sufficiently rich variety of safeguards and responses. Anticipation has to do with the ability to sense the future and prepare for such occurrences. Resilience organizations make plans ahead and think in the direction of possible and likely perturbations that may affect the functionality of their organization and think of how to overcome such challenges. Ortiz-de-Mandojana and Bansal (2016) supports this view by stating that organizational resilience is the ability of organizations to anticipate, avoid, and adjust to shocks in their environment (Ortiz-de-Mandojana & Bansal, 2016).

According to Sutcliffe veVogus (2003) resilience refers to (1) the ability to absorb strain and preserve functioning despite the presence of adversity or (2) the ability to recover or bounce back from untoward events. Resilience from this perspective entails the ability to absorb strains and the ability to bounce back. Therefore, ability is a crucial tenet that must be considered in dealing with organizational resilience. This idea of organizational resilience is also in tandem with Tierney (2003) position that organizational resilience is "the capacity for both physical and social systems to withstand forces and demands generated by disaster events (e.g., earthquakes, hurricanes, human induced events) and to adequately cope with such events through employing effective response and recovery strategies".

Organizational resilience has to do with capability. Fine, Vardan, Pethick and El-hout (2002) averred that capabilities are a company's proficiency in the business processes that allow constantly distinguishes itself along the dimensions that are vital to its customers. A firm's real core capability and perhaps its only sustainable one is its ability to design and redesign its value chain, resources, and capabilities configuration in order to continually find sources of maximum advantage. This aspect of organizational resilience being able to sustain business processes through capabilities.

2.1.3 Measures of Organizational Resilience

Anticipation Capability

March (1991) cited in Ogan (2020) contends that anticipatory capability is characterized with exploiting and exploring new alternatives. According to Wildavsky (1988), in Ogan (2020) anticipation as a source of resilience, concerns dealing with uncertain and unexpected situations. Anticipation refers to a firm's ability to actively predict and forecast the future in order to prevent failures. Anticipation capability according to Wildavsky (1991) in Ogan (2020) is the capability to investigate, to learn, and to act, without knowing in advance what one will be called to act upon. Resilient firms specifically try to detect and act on the early signals of change (Schoemaker & Day, 2009) through making sense of weak signals (Schoemaker& Day, 2009); and to anticipate events and to simulate possible unexpected events (Weick & Sutcliffe, 2001).

It is required of resilient organization to react in a manner to develop appropriate solutions to overcome those situations. After the early anticipation of upcoming crises, it is particularly important to react in a resilient manner and develop appropriate solutions to overcome those situations. Organizations rely on their social capital because social resources are often considered as source of organizational resilience (Sutcliffe &Vogus 2003; Gittell et al., 2006; Powley 2009). Social capital offers contextual collaboration (information sharing, resource exchange, or crossfunctional collaboration) (Lengnick-Hall & Beck 2009). Observation has it that relationship of shared goals, shared knowledge, and mutual respect lead to high levels of coordination and positive performance effects (Gittell et al. 2000; Gittell 2001, 2002).

Dynamic Capability

The term 'dynamic capabilities' can be deconstructed into two main elements: capability and dynamic. The term 'capability' (i.e., ordinary/first-order/operational capability) refers to a routine-based activity inside the firm which develops over time through problem-solving and collective learning (Winter, 2003). Ad-hoc problem-solving or any kind of disjointed entrepreneurial improvisation are not capabilities, unless they initiate the emergence of some pattern over time and based on prior outcomes (Molitemo & Wiersema, 2007).

Winter (2012) noted that capabilities emerge over time by means of natural selection as firms respond to their competitive environment. Further, a capability is a patterned activity that generates some kind of output in a reliable (i.e., consistent) manner (Helfat & Peteraf, 2003). Capabilities refer to a firm's capacity to deploy resources, usually in combination, and encapsulate both explicit processes and those tacit elements (such as know-how and leadership) embedded in the processes. Hence, capabilities are often firm-specific and are developed over time through complex interactions among the firm's resources (Ogan 2020).

Helfat et al. (2007) defines dynamic capability as the capacity of an organization to purposefully create, extend and modify its resource base. Capabilities are essentially a fusion of skills and processes. The value of a process is non-existent without the accompanying skills needed to perform it; likewise, a skill has a very limited domain if it is not applied within an effective process (Dawson, 2012). Ogan (2020) stated that dynamic capability is the "ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments".

Eisenhardt and Martin (2000) contend that dynamic capabilities are "the firm's processes that use resources ... to match and even create market change". Firms have this resource which they use in matching market change. Dynamic resources are valuable, rare, inimitable and non-substitutable which is useful in the competitive advantage of the firm. These dynamic capabilities denotes a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness" (Zollo& Winter 2002).

Innovative Capability

Innovation refers to the application of new knowledge, ideas, methods and competencies that can generate unique skills and enhance the competitiveness of the organization (Daft, 1978; Andersson et al., 2008). In global markets, organizations must have the ability to identify new

opportunities, configure and protect technologies, skills, knowledge assets, in order to achieve a sustainable competitive advantage (Teece, 2000).

Wang and Ahmed (2007: 38) defined innovative capability as "a firm's ability to develop new products and/or markets, through aligning strategic innovative orientation with innovative behaviors and processes". There is a relationship between innovation and newness. Innovation is generally understood as the successful introduction of a new thing or method… innovation is the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or service" (Luecke and Katz, 2003).

According to Lorente et al. (1999) in Ogan (2020), organizations can adopt the innovation in two ways: through imitation or by developing their own innovations. The first strategy can be advantageous when organizations enjoy competitive advantages, such as low wages, easy access to raw materials, protected markets, etc. However, the second strategy translates into a better approach to gain a competitive advantage, not only with regard to the innovation of products and processes, but also for management innovation.

2.1.4Effect of Intellectual Capital on Organizational Resilience

Many resilience attributes are formed and strengthened through IC components. Though there are no common or general principles on resilience development (Linnenluecke, 2017), some research has found that firms developed resilience by resisting the influence of external threats through flexibility, redundancy, and innovation (Linnenluecke, 2017). Others noted that resilience is developed through improving individual resources such as self-control, cognitive skills, and successful planning, in addition to external support from the surrounding context and relationships (Schoon, 2012; Williams et al., 2017). Resources and capabilities are essential for resilience as they can facilitate how actors can interact with the environment and adjust. These are related to knowledge, skills, abilities, and processes (Teece et al., 1997; Williams et al., 2017). Hedner et al. (2011) explained that entrepreneurial resilience depends on personal characteristics, culture, society, and other internal and external factors. The authors categorized the aspects of resilience as external and internal. Internal aspects can be summarized as developing an anticipated personal identity (values, beliefs, purpose, spiritual and religious identification), experiencing control, being knowledgeable of cultural practices, experiencing social acceptance and equality, and having a sense of social responsibility (Hedner et al., 2011). External aspects include the availability of material resources and supportive relationships (Hedner et al., 2011). Both aspects are part of IC.

To illustrate, a strong human capital is characterized by strong psychological values and personal attributes. Such characteristics have been explained as part of resiliency. To comprehend how persons survive and succeed in adverse situations, it is essential to emphasize on a person's internal strength (Schoon, 2012). Linnenluecke (2017) showed that resilience is part of the psychological capital that is composed of optimism, hope, self-efficacy, and resilience. Resilient individuals have a high level of optimism that allows them to believe in survival under adverse situations (Schoon, 2012). Optimism can be explained through proactivity and positivity when encountering challenges in order to mitigate the effects of a situation in

unexpected ways (De Vries and Shields, 2006) by avoiding restrictions or modifying them to fit actions (Bullough et al., 2014). Positivity also supports resilience (Bullough et al., 2014). For example, a resilient person perceives failure as an incentive to learn from his/her mistakes (De Vries and Shields, 2006). In addition, Pena (2002) found that entrepreneurs who have previous experience in the field of management and are motivated and highly committed, spend more working hours in their business activities and consequently experience better business growth. Hence, values impact decisions, choices, and performance since personal values are standards that originate from anticipated goals that encourage specific behaviors and guide actions (Asah et al., 2015).

2.2 Theoretical Review

2.2.1 Human Capital Theory

This theory was propounded by Schultz in 1961but was extensively developed by Becker in 1964. The theory has its root from labour economics which is a branch of economics that focuses on general work force in quantitative term. Human capital theory contends that education or training raises the productivity of workers by imparting useful knowledge and skills, thus raising workers' future income through increase in their lifetime earnings. The theory postulates that expenditures on education or training and development is costly and should be considered as investment since it is undertaken with a view to increasing personal incomes. Human capital approach is used to explain or support occupational wage differential. However, the position of this study is that education or training and development will not only increase employee personal income, but also serve as a means of achieving corporate competitive advantage which reflects ultimately on ability of the organization to cope in the face of challenges.

According to Flamholtz and Lacey (1981), as cited by Baney and Wright (1997), human capital theory distinguished between general skills and firms' specific skills of human resources. General skills are skills possessed by individuals which provide value to a firm and are transferable across a variety of firms. For instance, all competitor firms have the potential to accrue equal value by acquiring employees with knowledge of general management, the ability to apply financial ratios, or general cognitive ability. On the other hand, specific skills provide value only to a particular firm, and such skills are of no value to competing firms. An instance of this is the knowledge of how to use a particular technology used only by one firm, or knowledge of a firm's policies and procedures provided to that firm, but usually would not be valuable to other firms. Thus, if these are investments like other physical assets which are reflected on the balance sheet, considerable effort must be made to also reflect such value of human capital on the balance sheet. For organizations to survive, there is a need for them to have specific skill (intellectual capital).

2.2.2 Knowledge-Based Theory

While the resource-based theory takes account of all resources, there is a knowledge-based view that has emerged from the resource-based theory, which argues that the only true resource that creates competitive advantage is knowledge embedded in people (Crook et al., 2011). While the resource-based theory focuses on the importance of knowledge and the issue of transferability between firms, the knowledge-based view also emphasizes the transferability within firms as even more important (Grant, 1996,). There are different kinds of knowledge

where "knowing how" is a tacit knowledge that only can be observed through its application and learned by practice and the transfer of this kind of knowledge between people is slow, costly and uncertain (Grant, 1996,). The other types of knowledge is stated as; "knowing about facts and theories" and it is an explicit knowledge revealed by communication (Grant, 1996,). Explicit knowledge is the traditional view of knowledge among economists, where the marginal cost is close to zero and the information is public (Grant, 1996). Most explicit knowledge and all tacit knowledge are preserved within individuals and most of it are created within the firm and are therefore firm-specific (Grant, 1996).

Production involves transformation of inputs into outputs (Grant, 1996). If the knowledge-based view would be taken to its edge, knowledge is the only input factor of value because all human productivity is knowledge dependent and machines are embodied with knowledge (Grant, 1996). Grant (1996) makes two assumptions about knowledge, which is that knowledge is created individually and businesses are hiring people to use and extend their existing knowledge to produce goods and services.

There has been a debate whether individual or organizational knowledge is the source of value creation (Felin & Hesterly, 2007,). According to Grant (1996) all learning takes place inside individuals and organizations learn by its members or by employed individuals that have the knowledge the organization is missing. The collective and organizational knowledge approach assumes that knowledge is stored in norms, procedures, rules and forms in the company (Grant,1996,), and that individuals are homogenous, formable and randomly distributed into organizations (Felin & Hesterly, 2007). The danger with the organizational approach, by viewing the organization as the entity that creates, stores and deploys knowledge, is that the value of individuals that engages in these activities are overlooked (Grant, 1996). According to Felin & Hesterly (2007) this has led to a development in the field where the starting point of new value creation is the individual because the individuals are the organization. This study would be underpinned using the knowledge-based theory as organizations can only survive when knowledge is acquired, retained and transferred within firms in this case the Higher Educational Institutions.

From the foregoing arguments, we hereby hypothesized thus:

H_{01}: Intellectual Capital does not significantly affect anticipation capability of Bauchi State University Bauchi State.

H_{02}: Intellectual Capital does not significantly affect dynamic capability of Bauchi State University Bauchi State.

H_{03}: Intellectual Capital does not significantly affect innovative capability of of Bauchi State University Bauchi State.

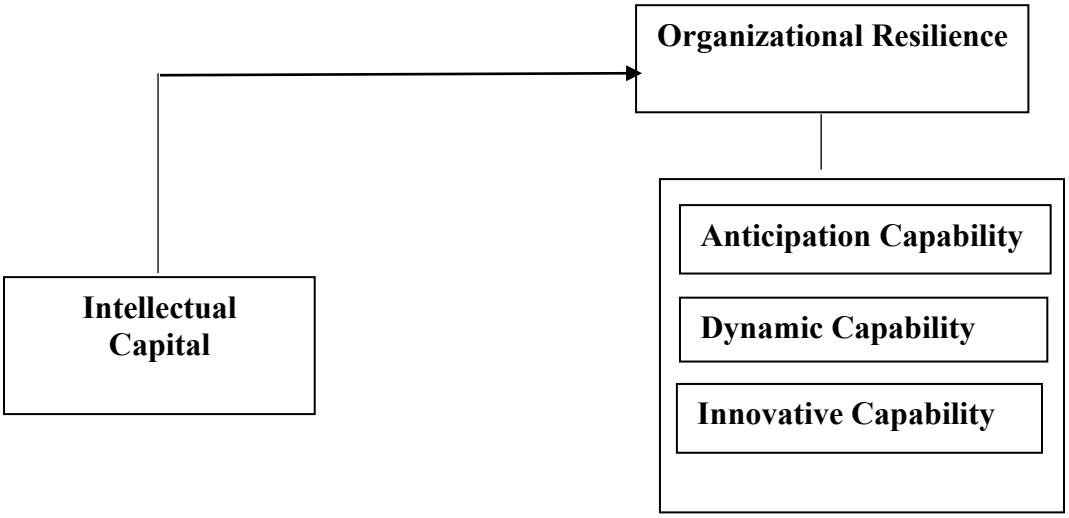

Fig 1 Conceptual framework showing relationship between independent and dependent variables.
Source: Author's Desk Research, 2021

3. Methodology

The study adopted the cross-sectional survey method in the generation of data. The population of the study was the academic staff of the departments of Accounting, Business Administration and public Administration all in the faculty of Management Sciences, Bauchi State University, Bauchi State totaling 40. Descriptive statistics and Spearman's rank correlation were used for data analysis and hypothesis testing with the aid of the SPSS Package version 23.

4. Data Analysis and Results

Bivariate Analysis

The test of hypothesis cover hypotheses Ho_1, Ho_2 and Ho_3 which were bivariate and all stated in the null form. We have relied on the Spearman Rank (*rho)* statistic to undertake the analysis. The 0.05 significance level is adopted as criterion for the probability of either accepting the null hypotheses at ($p>0.05$) or rejecting the null hypotheses at ($p<0.05$).

We shall commence by first presenting a proof of existing relationships.

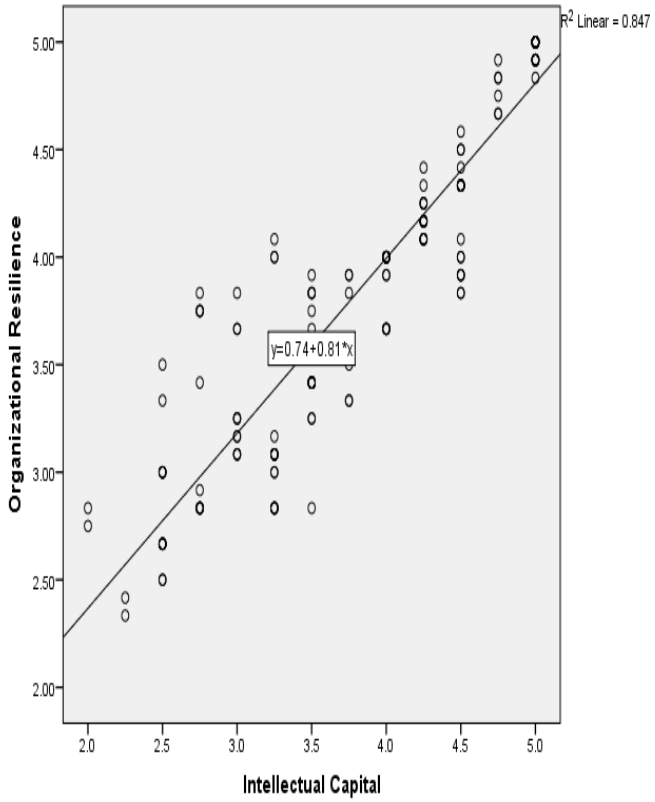

Figure 2: Scatter plot relationship between Intellectual Capital and Organizational Resilience

The scatter plot graph shows at R^2 linear value of (0.847) depicting a very strong viable and positive relationship between the two constructs. The implication is that an increase in intellectual capital simultaneously brings about an increase in the level of resilience in an organization. The scatter diagram has provided vivid evaluation of the closeness of the relationship among the pairs of variables through the nature of their concentration.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.830[a]	.689	.687	.45546

a. Predictors: (Constant), Intellectual Capital

Table 2: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.688	1	76.688	369.674	.000[b]
	Residual	34.644	167	.207		
	Total	111.332	168			

a. Dependent Variable: Anticipation Capability
b. Predictors: (Constant), Intellectual Capital

Table 3: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.028	.136		7.583	.000
	Intellectual Capital	.687	.036	.830	19.227	.000

a. Dependent Variable: Anticipation Capability
Source: Field Survey, 2021.

Test of Hypothesis One:

H_{01}: *Intellectual Capital doesn't significantly affect anticipation capability of Bauchi State University Bauchi State.*

Model Summary Table for hypothesis one shows R value of .830; R square .689. Anova table (Test using Alpha 0.5) shows F value of 369.674, P = 0.000, that is, < 0.05, mean square of 76.688 and Coefficient Table (Predictor Test at Alpha 0.05); t value of 7.583 with std. error of .036.

The result of the model showed R value of .830 which is the coefficient of determination and this simply depict that about 80% of the anticipation capacity in the institution is derived from the institution's intellectual capital.

Model Summary Table,
R square .689 which is approximated to R^2 = .69 this means the predictor has 69% variance with the measure of the dependent variable.

Anova table (Test using Alpha 0.5)
F (369.674), P value = 0.000 which is < 0.05 hence shows a strong significant relationship.

Coefficient Table (Predictor Test at Alpha 0.05)
The coefficient table shows significant value that Intellectual Capital doesn't significantly affect anticipation capability. Therefore, from decision rule we accept the Alternate hypothesis which states that Intellectual Capital does significantly affect anticipation capability of Bauchi State University Bauchi State.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.871[a]	.758	.757	.53743

a. Predictors: (Constant), Intellectual Capital

Table 5: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	151.288	1	151.288	523.799	.000[b]
	Residual	48.234	167	.289		
	Total	199.523	168			

a. Dependent Variable: Dynamic Capability
b. Predictors: (Constant), Intellectual Capital

Table 6: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.107	.160		-.672	.502
	Intellectual Capital	.965	.042	.871	22.887	.000

a. Dependent Variable: Dynamic Capability
Source: Field Survey, 2021.

Test of Hypothesis Two:

H_{02}: *Intellectual Capital doesn't significantly affect dynamic capability of Bauchi State University Bauchi State.*

Model Summary Table for hypothesis two shows R value of .871; R square .757. Anova table (Test using Alpha 0.5) shows F value of 523.799, P = 0.000, that is, < 0.05, mean square of 151.288 and Coefficient Table (Predictor Test at Alpha 0.05); t value of -.672 with std. error of .042.

The result of the model showed R value of .871 which is the coefficient of determination and this simply depict that

about 80% of the dynamic capacity in the institution is derived from the institution's intellectual capital.

Model Summary Table,

R square .757 which is approximated to R^2 = .76 this means the predictor has 76% variance with the measure of the dependent variable.

Anova table (Test using Alpha 0.5)

F (523.799), P value = 0.000 which is < 0.05 hence shows a strong significant relationship.

Coefficient Table (Predictor Test at Alpha 0.05)

The coefficient table shows significant value that Intellectual Capital doesn't significantly affect dynamic capability. Therefore, from decision rule we accept the Alternate hypothesis which states that Intellectual Capital does significantly affect dynamic capability of Bauchi State University Bauchi State.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.956[a]	.913	.912	.30507

a. Predictors: (Constant), Intellectual Capital

Table 8: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	163.069	1	163.069	1752.209	.000[b]
	Residual	15.542	167	.093		
	Total	178.611	168			

a. Dependent Variable: Innovative Capability
b. Predictors: (Constant), Intellectual Capital

Table 9: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.072	.091		.793	.429
	Intellectual Capital	1.002	.024	.956	41.859	.000

a. Dependent Variable: Innovative Capability

Source: Field Survey, 2021.

Test of Hypothesis Three:

H_{03}: *Intellectual Capital doesn't significantly affect innovative capability of Bauchi State University Bauchi State.*

Model Summary Table for hypothesis three shows R value of .957; R square .913. ANOVA table (Test using Alpha 0.5) shows F value of 1752.209, P = 0.000, that is, < 0.05, mean square of 151.288 and Coefficient Table (Predictor Test at Alpha

0.05); t value of .793 with std. error of .024.
The result of the model showed R value of .957 which is the coefficient of determination and this simply depict that about 90% of the innovative capacity in the institution is derived from the institution's intellectual capital.

Model Summary Table,
R square .957 which is approximated to R^2 = .96 this means the predictor has 96% variance with the measure of the dependent variable.

ANOVA table (Test using Alpha 0.5)
F (1752.209), P value = 0.000 which is < 0.05 hence shows a strong significant relationship.

Coefficient Table (Predictor Test at Alpha 0.05)
The coefficient table shows significant value that Intellectual Capital doesn't significantly affect innovative capability. Therefore, from decision rule we accept the Alternate hypothesis which states that Intellectual Capital does significantly affect innovative capability of Bauchi State University Bauchi State.

5. Discussion of Findings
The findings revealed that intellectual capital has an effect on organizational resilience using the multiple regression. The findings of this study specifically confirmed that intellectual capital has a significant effect on the measures of organizational resilience (anticipation capability, dynamic capability and innovative capability). This finding is supports by the views of Ramirez (2013) who collaborates our study with the importance of intellectual capital disclosure in Spanish universities. The result of the study shows that information on intellectual capital should be included in statement of account for relevant decision making. Similarly, Ramana and Alexandra (2016) examined universities intellectual capital in observing the European universities. The result of the study corroborates ours as it indicated that an evaluation of intellectual capital should be considered as a good starting point for a more efficient management in order to increase competitiveness.

Furthermore, Rehman, Rehman, Usma and Asghar (2012) investigation on the link between Intellectual Capital (IC) performances with on financial performance of banking sector in Pakistan substantiates our findings. The result reveals that Human Capital Efficiency (HCE) has substantive positive relationship with financial performance (Return on Equity and Return on Asset). Sharafi and Abbaspour (2013) accessed the relationship between intellectual capital and function in Iran universities and higher education institutes. The result shows that there was a significant difference between the human capital component and relational capital between universities but there was no significant relationship between structural capitals among universities.

In the same vein, Deep and Narwal (2014) examination on the relationship between intellectual capital and financial performance measures of Indian textile sector for a period of 10 years ranging from 2002 – 2012 supported our findings. They observed that intellectual capital in textile sector has significant positive relationship only with profitability of the companies. The result indicates that Indian investors consider only financial disclosure of the companies regarding their investment decision.

Salman, Mansor, Babatunde and Tayib (2012) research on the impact of

intellectual capital on return on asset in Nigerian manufacturing companies added support to our finds. The results show that, relationship exists between intellectual capital components efficiencies and company performance Return on Asset. Ekwe (2013) in his study on the effect of Intellectual Capitals on Employee Productivity of Banks in Developing Economies: with evidence from Nigeria. The study showed that there was a positive and significant relationship between components of VAIC, (Capital Employed Efficiency, Human Capital Efficiency, Structural Capital Efficiency) and employee productivity of the banks in Nigeria. The result established that intellectual capital has positive and significant effect on Employee Productivity of banks in Nigeria.

6. Conclusions and Recommendations

The study argues that Intellectual Capital has an effect on firm resilience. The research showed that intellectual capital significantly impacted resilience (anticipation capability, dynamic capability), and these effects could be also applied to academic institutions. The first finding indicated that resilience could be linked to human capital as it strengthens the inner foundations of the staff's attitudes and motivation. Similarly, intellectual capital was associated with resilience in terms of providing a supporting enterprise culture to face adversity. The study generally concludes that intellectual capital significantly affects resilience in the Bauchi State University.

The study however recommends that given the existing challenges and adversities, intellectual capital and resilience can play a crucial role in enhancing HEIs' resileinece. Accordingly, administrators ought to understand the association between Intellectual Capital and resilience since they can influence all aspects of the institution to improve on performance of staff and students. This can be achieved by improving employee skills and abilities through training, implementing flexible strategies, and creating a supportive organizational culture that allows for cooperation.

With the impact of the COVID 19 pandemic hitting hard on all sectors especially the educational sector and with the '*new normal*' stake holders need to drum up support for investment in intellectual capital as this would assist these institutions to remain afloat as well as achieve its aim and objectives.

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