AN ASSESSMENT OF BUSINESS INTELLIGENCE ON CORPORATE PERFORMANCE

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Abstract:

The need for intelligence in today's competitive globalised world is inevitable; hence organizations adopt business intelligence (BI) systems to outperform their competitors and achieved a sustainable advantage. The objectives of this study were to: evaluate the extent at which organizational learning contributes to employee commitment, examine the extent at which information gathering contributes to organizational innovativeness and investigate the influence of data warehousing on organizational survival. The population of the study was 115 staff in Portland Paints and Products Plc. The study adopted simple random sampling technique and a sample size of 89 copies questionnaires were administered. Data were analyzed using both descriptive and inferential statistics and hypotheses were tested using regression analysis. The findings of the study revealed that; R=0.840, R2 0.705 and P < 0.05 indicating that organizational learning contribute to employee commitment by 70.5% thus establishing that organizational learning has a significant impact on employee commitment, R=0.884, R2= 0.782 and P < 0.05 indicating that information gathering contribute to organizational innovativeness by 78.2% thus establishing a significant impact of information gathering on organizational innovativeness, R=0.845 R2= 0.714, and P < 0.05 indicating that data warehousing contributes to organizational survival by 71.4%, which implies that there is a degree of correlation between the variables. The study concluded that when BI systems are widely spread and used they improve corporate performance especially when more emphasis is placed on information gathering and data warehousing which has proven to have a higher influence on performance. The study recommended that organizations should involve the use of environmental scanning tools whereby relevant information will be gathered both internally and externally which provide the organization with reliable information for efficient decision making that could better the performance of the organization.

Keywords: *Business Intelligence, Corporate Performance, Competitors, Employee Commitment, Organizational innovativeness, Organizational Survival.*

INTRODUCTION

The global business economic environment, globalization and current nature of demand is seriously changing the way businesses/organizations are run today. The 21st century has already seen a lot of drastic changes, for example, breaking the access to and use of information and thereby making it possible for any individual located even in the remotest part of the world the ability to pick and choose or contribute to issues that may concern them. Continental market demand has gradually shifted towards customer-demands, challenging organization's decision makers to explore alternative strategies to meet complex demands. The competitive environment is getting highly unstable and organizations have to deal with the capricious conditions surrounding it (D'Aveni, 2004). The introduction of Information Technology (IT) and the emergence of globalization of industries have succeeded in blurring of the industrial boundaries resulting in a substantial re-arrangement of businesses (Hitt, Keats & DeMarie, 2008).

The advancement in IT has also made it possible for organizations to accumulate large amounts of data either internal, external or both through their business processes. For the continual existence of any organization, it must have a survival strategy in the face of fierce competition, especially current turbulences in the market environment. Eliminating waste, reducing costs and delivering efficient and reliable products or services is currently the prerogative of any organization and in doing so; they are turning to these large accumulated data for valuable insights. These insights also known as intelligence, what management needs in taking strategic actionable decisions in this ever changing business environment, which requires organizations to have a reactive response and changing competence (Pirttimäki, 2007).

Brackett (2001) states that intelligence is the ability to learn, understand or to deal with new or trying new situations; the skilled use of reason; and the ability to apply knowledge to manipulate one's environment. In the context of business organizations, only those that can fully utilize knowledge available to them will stay ahead of the competitions. This study assessed how deployment of business intelligence (BI) affects corporate performance. This strategic use of BI is defined as the extent to which organizations can understand their internal and external environment through systematic acquisition, collation, analysis, interpretation and exploitation of information in their business domains to support their organizational goals (Chung, Chen, & Nunamaker, (2003).; Liebowitz, 2005). When BI is successfully deployed, it is more likely that BI–based knowledge is fully utilized and thus holds or even sustains the organization's competitive position.

The term Business Intelligence (BI) was introduced by Gartner Group in the mid-1990s. However, this term has become very popular recently and it has its roots in the MIS reporting systems of 1970s. In that era, static reporting systems were two dimensional and

did not have the analytical capability. In the early 1980s, the concept of executive information systems (EIS) came into existence. This concept introduced computerized supporting systems to high-level managers and executive board. These systems had the capabilities of dynamic and multidimensional reporting (ad hoc or desire based), forecasting, trend analysis, analyzing the details and access to the key elements of successfulness. Until the mid-1990s, many commercial products used to have these features. Then some new products have been established in the name of business intelligence. Today, all of them have concluded that all the information needs of executives can be complied in the form of an information system based on Business Intelligent (Gartner, 2007).

STATEMENT OF THE PROBLEM

The applications of Business Intelligence technology have historical, contemporary and even predictive view points of the business undertakings of an organization. This technology contains certain unique functions that are intrinsic to the particular systems. The adoption of Business Intelligence systems is critical to the smooth and coordinated operation of each and every organization. However; it has not been fully integrated in many firms and organization. This has resulted to poor communication within the different enterprises and hence a loss of coordination and mismanagement.

In addition, a review of the current research indicates that the majority of studies in BI are conducted for developed countries, especially in Europe, America and Australia (Chaveesuk 2010; Elbashir, Collier & Davern 2008; Hawking, Foster & Stein 2008; Ramamurthy, Sen & Sinha 2008; Hill & Scott 2004). The current available literature has rarely explored the use of BI in developing countries such as Nigeria, even though IT spending in these areas is growing drastically.

As research on the adoption of BI technology by Manufacturing Industries in the context of Nigeria is scarce, there is insufficient knowledge for predicting and explaining their behaviors towards BI adoption. Thus the lack of understanding of factors influencing the adoption of BI technologies by manufacturing industries in Nigeria forms the basis of the present study with the main problem being to address the lack of any research framework designed to examine the adoption of BI in the Nigerian Manufacturing sector. Being a Manufacturing Company and for the purpose of this study, Portland Paints and Products Nigeria PLC has been selected to examine the situation of BI adoption on corporate performance.

OBJECTIVES OF THE STUDY

The main objective of this research is to assess the impact of business intelligence on corporate performance. However the following specific objectives are to:

1. Evaluate the extent at which organizational learning contributes to employee commitment.

2. Examine the extent at which information gathering contributes

to organizational innovativeness

3. iii. Investigate the influence of data warehousing on organizational survival

Hypotheses of the study

The following hypotheses were tested for the purpose of this study.

H_{01}: Organizational learning does not have effect on workers commitment

H_{02}: Information gathering does not have significant influence on organizational innovativeness

H_{03}: Data warehousing doesn't have effect on organizational survival

LITERATURE REVIEW

The principles of intelligence applied to business are referred to as Business Intelligence (BI) (Marren, 2004). The word intelligence which BI is based on, according to Encyclopedia Britannica Online (2012) "is used to refer to the collection, analysis, and distribution of such information and to secret intervention in the political or economic affairs of other countries, an activity commonly known as 'covert action'. Intelligence is an important component of national power and a fundamental element in decision making regarding national security, defence, and foreign policies".

The term 'Business Intelligence' first appeared in the work of Hans Peter Luhn, a computer scientist for IBM, in 1958. Luhn was recognised as a pioneer in developing BI systems (Prokopova, Silhavy & Silhavy 2011; Varshney&Mojsilovic 2011; Agrawal 2009; Chung, Chen &Nunamaker

2003). He defines BI as 'the ability to apprehend the interrelationships of presented facts in such a way as to guide action towards a desired goal' (Luhn 1958).BI became widely used after its introduction in 1989 by the analyst Howard Dresner, of the Gartner Group, an IT research company that employs BI in information communication technology (ICT) (Wixom & Watson 2010; Dekkers, Versendaal & Batenburg 2007). He described BI as a group of concepts and techniques to develop business decision-making by extracting and analysing data from databases for strategy formulation (Power 2002). However, some researchers regard BI as replacing the traditional information support systems, such as MIS, DSS, and EIS (Alter 2004; Negash 2004; Petrini&Pozzebon 2004; Thomsen 2003). On the other hand, Popovic, Turk and Jaklic (2010) argue that although sometimes BI is seen as a synonym for the traditional information support systems, there are differences between them. The main distinction is that traditional information support is more application-oriented where data in an organizations is dispersed around various data sources, while BI is a data-oriented approach in which the centre of the architecture presents integral data sources for analytical decision-making (Frolick & Ariyachandra 2006). Wixom and Watson (2010) defines Business intelligence as a broad category of technologies, applications, and processes for gathering, storing, accessing, and analyzing data to help its users to make better decisions'.

BI is a concept and there are several definitions depending on the field and

perspective. The various definitions of BI as derived from the different fields of experts and viewed from several approaches are as follows:

Managerial perspective, BI is seen as a process that accumulates data integrated from both inside and outside the enterprise, in order to create actionable information to improve the decision-making process. The main focus in this perspective is to generate an informational environment in order to reveal 'strategic' business dimensions. An informational environment is created by analyzing the data gathered from transactional and operational systems, including from both internal and external sources (Petrini & Pozzebon 2009).

Technical perspective, BI represents a set of tools, software, solutions and technologies that support the decision-makers in collecting, organizing, and accessing heterogenic data from dispersed sources (Olszak & Ziemba 2007; Moss 2004). This perspective is focused not only on the process itself but also the technologies that allow for storing, consolidating, recovering, mining and analysis of corporate data. For instance, Hackathorn (1999) observed that establishing a single corporate BI platform is a challenge because it must represent a convergence between related technologies like data mining, data warehousing and web mining. Moreover, if these technologies are mixed properly, it could reveal the 'insights' deeply embedded in the data (Marakas 2003).

Product perspective, BI is considered a product which emerges from advanced processing of high quality data, information and knowledge, and analytical practices that support decision-making and performance measurement. The source of data in this perspective comprises operational, transactional and legacy systems. These systems could come from their organization and customers, suppliers, business partners or third parties like government agencies and information service providers (Chang 2006). Although there are differences among these approaches, they share two common characteristics. The first is the fundamental aspect of BI which includes collecting, storing, analyzing and delivering information that is available both internally and externally (Lonnqvist & Pirttimaki 2006). The second is the aim of BI, which is to support the strategic decision-making process of the firm (Marshall, McDonald, Chen, & Chung 2004,). Petrini and Pozzebon (2009) define strategic decisions as those involving the implementation and assessment of organizational objectives, goals, mission, and vision. The definition from Wixom & Watson (2010) is adopted in this study due to its included managerial, technical and product perspective. However, a problem arises when considering the existing definition of BI because it only discusses the process, software and technology components. English (2005), claims that the key component of BI is to understand what is occurring within the firm and what the most suitable action to take in order to reach the firm's goals. Therefore, the human factor is also important because BI cannot be evaluated independent of

interpreting its meaning, but must be considered according to information gained from the practical knowledge of users.

CLASSIFICATION OF BUSINESS INTELLIGENCE

Researchers have defined BI into several different categories according to its level of utilization. Most researchers and practitioners categorized BI applications into three types of (1) Strategic BI, (2) Tactical BI and (3) Operational BI (Loftis, 2007; White, 2006; Imhoff & Pettit, 2004; Sullivan, 1996). The only real difference between these three types of BI application lies in the granularity of the data being analyzed and the frequency, at which it is being captured, analyzed and reported.

The strategic BI is used to support long-term corporate goals and objectives, which usually drive the short-term initiatives by tactical BI applications. Common data operations behind these applications include aggregations, statistical analysis, multidimensional analysis, data mining and exploration. The business purpose includes trend and pattern discovery, development of business and behavioral models and what-if analysis. A hotel franchise uses BI analytical applications to compile statistics on average occupancy and average room rate to determine revenue generated per room. It also gathers statistics on market share and data from customer surveys from each hotel to determine its competitive position in various markets. Such trends can be analyzed year by year, month by month and day by day, giving the corporation a picture of how each individual hotel is faring.

Operational BI is used to manage and optimize daily business operations and the concepts and techniques discussed for tactical and strategic BI apply equally to operational BI (White, 2006). This type of BI evolved to meet the need to respond to specific events that happen in the operational world. The target audience is the customer-facing staff. Nadeem & Jaffri (2004) stated that BI applications can be deployed either strategically across functional departments or tactically within functional departments. They posit that strategic BI has the potential of big rewards by giving senior managers a holistic view of the company. BI enables companies to identify trends and opportunities for growth as well as for monitoring key performance indicator (KPI). Tactical BI on the other hand, can be applied to the 'pain' areas of their business. This type of BI can help companies with the knowledge and insights which will bring quick and quantifiable results.

THE BENEFITS OF BI

The advantages of implementing BI to support business operations are clear, and by utilizing BI technology appropriately, a number of benefits can be anticipated (Ko & Abdullaev 2007; Watson & Wixom 2007; Ranjan 2005). Many studies have reviewed the potential benefits of adopting BI in various types of business (Popovic, Turk &Jaklic 2010; Sahay &Ranjan 2008; Ko&Abdullaev 2007; Ranjan 2005; Anderson-Lehman, Watson, Wixom, & Hoffer. 2004; Eckerson 2003). For

instance, automobile manufacturers have increased returns on investment (ROI) using a financial BI solution by identifying repossessed vehicle loans more quickly. Electronics retailers have accrued substantial amounts of money by identifying smaller quantities of out of stock items using BI solutions (Eckerson 2003). Similarly, BI has reduced inventory expenses through identifying more accurate information on supplier shipments (Sahay &Ranjan 2008). More recently, Dumitrita (2011) found that BI can also help access more reliable and faster reports, improve decision-making processes, increase the quality of client relationships, increase incomes and cut non-IT expenses. According to Liautaud and Hammond (2000), the benefits from implementing BI are classified into four categories: 1) improving internal communication; 2) leveraging the investment in ERP; 3) rising revenue; and 4) lowering costs.

However, the benefits of BI are divided into the tangible and intangible. In term of tangible benefits, Davern and Kauffman (2000) claim that IT investment benefits firms on an operational level. For example, companies can invest in more hardware for keeping large amounts of data or invest in new business data processing systems in order to process many tasks faster than before. Such investments have clear quantitative benefits. Companies can process business better and could save on manpower.

BARRIERS TO WIDESPREAD USE OF BI

Although BI systems have many advantages, there are barriers to their wider implementation by organizations. There are many barriers such as workforce strategy issues, lack of human and financial resources and technical concerns. However, Guide (2009) announces that the main barriers to BI adoption are 'cost' and 'complexity'. This is further compounded by the fact that a 2007 study by Information Week cited in the Guide reveals that in a survey of 388 business technology professionals, over 30 percent of respondents claimed that BI vendors were 'unable to demonstrate the benefits of BI to internal stakeholders'. Most companies considering BI are being hounded by a certain business problem which invariably lies in a 'specific' business unit. The resulting BI/data storage initiative then creates business silos which prevent cross company examination of data sets residing in disjointed IT systems (Guide, 2009). This lack of cross organizational data analysis capability is explained by the fact that there is no single vendor that excels in all areas of business intelligence leaving it up to the customer to pull together various business components. The result is that client organizations excel only in their specialty areas such as in managing customer churn or in predictive analytics (Guide, 2009). The Guide (2009) further notes that 40% of the cost involved in developing sophisticated analytics and modeling for BI projects comes from 'moving data between systems'. This means

that data migration and integration becomes the single most potent 'barrier' to BI adoption.

THEORETICAL APPROACH
Resource-Based Theory (RBT)

Penrose in 1959 theorized about how a firm's resources influence its growth, in particular, growth is constrained when resources are inadequate. Resource-based theory also sometimes referred to as the 'resource based view of the firm' (Barney, 2001), describes, explains, and predicts how firms can achieve an improved performance through acquisition of and control over resources. RBT has no single accepted definition. Hence, the term resources and capabilities are used interchangeably (Ringim, Razalli & Hasnan, 2012). Resources are given different categorization by so many researchers, some of them include Mills, Platts, & Bourne, (2003) where they classified resources as follows: tangible resources, such as financial, organizational, physical and technological; Knowledge resource, such as system and procedural resources; skills and experience; network resources and potential dynamic capabilities; cultural values and resources; and intangible resources, such as innovation, human resources and reputation. More so, Fahy (2000) classified resources as tangible, intangible and capabilities. The RBT has a focus on organization to develop and deploy its core resources for an effective and efficient result attainment (Harrison, Hitt, Hoskisson & Ireland, 2001). Therefore, resources are organizational input injected into the production process to improve

competitiveness and performance. Indeed, RBT places a great deal of attention on intangible assets that may be more firm specific such as knowledge and learning and have the potential to be more significant profit generators than purchasable resources.

RBT widely acknowledges that firm's unique resources and capabilities are important for achieving sustained positive performance. The theory gives emphasis on available resources including assets, skills, abilities and knowledge that are internal and developed within the firm – not those acquired externally (Barney, 2001). It is suggested that resources are inputs in to firm's production process and a firm's resources are classified by Michalisin, Smith, & Kline (1997) as either tangible or intangible resources (Barney, 2001). The tangible resources typically refer to the property-based resources, whereas the intangible resources refer to the knowledge-based resources, the ways in which firms combine and transform these tangible resources.

Building on the RBT, a knowledge-based perspective of the organizations has emerged in the management literature in 1990s (Huang, 2008; Nonaka, Santhanam & Hartono, 2003). The knowledge-based perspective suggests the services rendered by tangible resources depend on how they are combined and applied, which is a function of the firm's know-how, which is the knowledge.

In a recent study that used RBT (Ravichandran & Lertwongsatien, 2005) posits that intangible Intelligence

System resources and capabilities are critical determinants of Intelligence System successful deployment that have direct effect on firm's performance (Kim, Cavusgil & Calantone 2006). Specific knowledge acquired through appropriate deployments of knowledge-based systems are considered to be the resources to generate long-term sustainable performance. Caldeira & Ward (2003) views RBT as treating enterprises as potential creators of value-added capabilities. These involve viewing the assets and resources of the firm from a knowledge-based perspective.

DIFFUSION OF INNOVATION (DOI) THEORY

Diffusion of innovation (DOI) theory was developed by E.M Rogers in 1962; this theory takes into account the perception about an innovation before adoption takes place. Perceptions are important elements in the successful adoption process as it enhances people's awareness of the innovation. This study adopts Diffusion of Innovation (DOI) theory (Rogers, 1962) as a theoretical basis firstly because it is a well established theory and is widely used in information technology diffusion-related research (Mustonen-Ollila & Lyytinen, 2003; Wainwright & Waring, 2003). The other reason of adopting this theory is that very limited research has been aimed at identifying sources of innovation and the integration of innovation perceptions from a knowledge-based perspective, particularly Business Intelligence systems (Chen, 2007).

An innovation is viewed as an idea, practice, or object that perceived as new by an individual or other unit of adoption. It is argued that innovation adoption is a process of uncertainty reduction and information gatherings. Information about the existence of innovation and its characteristics is gathered and the potential users engage in information-seeking behaviors to learn about the expected consequences of employing the innovation. The assessment and evaluation about this innovation determines users' behavior towards it. This information process leads to the formation of perceptions about the innovation. In line with perceptions, a decision to adopt or reject the innovation is made. This theory posits that perceived newness of an idea determines the individual's reaction to the innovations.

Previous studies have found the importance of the innovation characteristics in the adoption and diffusion of information systems. Agarwal and Prasad (2009) stated that visibility or observability, compatibility and triability of the innovation characteristics were the significant forces of initial use of a system, while relative advantage and result demonstrability are relevant in predicting the intended continuous use of a system. Tornatzky and Klein (2002) also found that factors of relative advantage, compatibility, and complexity constantly relate to adoption. Premkumar and Ramamurthy (2005) concluded that relative advantage, technical compatibility, and cost influence the decision to adopt electronic data interchange.

EMPIRICAL REVIEW

Acheampong Owusu (2017) study was carried out to empirically evaluate the impacts of adopting BI systems on organizational performance of banks in Ghana. A conceptual model was developed using the balanced scorecard. Data were collected through hand-administered survey questionnaires from the universal banks in Ghana where 130 samples from executives were analyzed through partial least squares structural equation modeling (PLS-SEM). The results indicate that BI Systems indeed have a positive significant effect on the learning and growth, internal process and customer performances of the banks. However, the findings proved that the adoption of BI systems does not directly lead to the financial performance of the banks, but rather through the indirect effects of learning and growth, internal process and customer performances thus confirming the core premise of the balanced scorecard. A major practical implication from the study is that vendors can capitalize on the findings to promote their BI products.

Azizah Ahmad (2015) study was carried out to examine the impact Business Intelligence for sustainable competitive advantage in the Telecommunication Industry of Malaysia. The research focused on the influencing perceptions held by telecommunications decision makers and executives on factors that impact successful BI deployment. The research further investigates the relationship between successful BI deployment and sustainable competitive advantage of the telecommunications organizations.

The research adopts the positivist paradigm and a two-phase sequential mixed method consisting of qualitative and quantitative approaches are employed. The findings revealed that some internal resources of the organizations such as BI governance and the perceptions of BI's characteristics influence the successful deployment of BI. Organizations that practice good BI governance with strong moral and financial support from upper management will have better chance in realizing their dreams of having successful BI initiatives in place. The scope of BI governance includes providing sufficient support and commitment in BI funding and implementation, laying out proper BI infrastructure and staffing and establishing a corporate-wide policy and procedures regarding BI.

Mehrdad, Mohammad & Fattaneh (2013) study investigated the relationship between business intelligence and the performance of food industry companies in Rasht industrial city, Iran. The paper was a descriptive - analytical research and a co relational one, and in aspect of applied target is based on structural equation. Statistical universe of the research included all food industry companies in Rasht industrial city, which are 32 companies, and sample size through Krejcie and Morgan Table includes 30 companies which are selected by simple random sampling method. A researcher made questionnaire, special to managers, was used for data collection. The content validity of the questionnaire was confirmed by experts and

scholars, and its reliability calculated respectively 0.937, 0.871 by Cronbach's alpha coefficient for two variables of business intelligence and performance. Business intelligence questionnaire in the research is researcher made, and according to dimensions of business intelligence includes 42 questions, and performance includes 11 questions. Collected data was analyzed using SPSS software; research findings indicate that business intelligence has positive and significant impact on the performance. Thus, organizational learning has the strongest relationship with the performance of company, and policies of continuous improvement are the second strong one.

Mohammad Aghaei and Amin Asadollahi (2013) study was carried out to examine the impact of Business Intelligence on Strategic Decision making. The main objective of the study was to investigate the relationship between Business Intelligence systems and systems to support strategic decisions. In this research, there was a review of studies done in the past, a conceptual model of the effect of business intelligence on strategic decisions was designed and provided questionnaire and distributed the questionnaire among the elite experts in business intelligence in the office of undersecretary of information technology and communication of the ministry of industry, mining and business and the scientific society of E-commerce in Iran, reliability and validity of the presented model were assessed. Factor analysis, correlation analysis and structural equations in LISREL and SPSS statistical software

were used in order to analyze the results of the assessment. The results show that business intelligence can improve strategic decisions; and it can have significant positive effects on aspects of strategic decisions such as efficiency, effectiveness, agility, flexibility and integration. At the end of the study, based on the hypotheses of the research, some suggestions were presented to expand the utilization of business intelligence in organizations and also to conduct future studies.

Shaheb, Shah & Shahadat (2017) study was conducted in Australia, the study is aimed to analyze literature and explore an integrated view of literature analyzed on how BI and SMEs learn from each other and contributes to the business environmental performance. A qualitative content analysis was conducted for the procedure, which considers 43 articles for data source. Findings of the literature review suggest enhancing capability of SMEs and new innovation of BI, which may affect each other. Findings of the study may become useful for further research in terms of BI implementation success.

METHODOLOGY

The study examined the impact of business intelligence on corporate performance in the manufacturing industry with Portland Paints and Products as a case study. The population of the study was 115 staff in Portland Paints and Products PLC. The study adopted simple random sampling technique and a sample size of 89 copies questionnaires were administered. Data were analyzed using both descriptive and inferential

statistics and hypotheses were tested using regression analysis at 0.05 level of significance (i.e. 95% confidence interval).

Hypothesis one: organizational learning does not have effect on workers commitment.

Table 4.3.1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.840a	.705	.702	.32105

a. Predictors: (Constant), ORGANIZATIONAL LEARNING

Source: Field survey, 2019

The result shows the R2 which is the coefficient of determination gives approximately 70.5%. This implies that workers commitment (dependent variable) 70.5% affected by organizational learning (independent variable) while the remaining 29.5% of the workers commitment may be affected and determined by other unexplained factors. Also, the R which is the level of correlation between the two variables i.e organizational learning and workers commitment shows .840 (84%) which indicate that there is high degree of correlation between the variables. Thus, the objective is achieved and answered.

Table 4.3.2 ANOVAª

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1.	Regression	21.437	1	21.437	207.976	.000b
	Residual	8.967	87	.103		
	Total	30.404	88			

a. Dependent Variable: EMPLOYEE COMMITMENT
b. Predictors: (Constant), ORGANIZATIONAL LEARNING

Source: Field survey, 2019

The F-statistic as shown from the ANOVA table is significant since the ANOVA significance of .000 is less than the alpha level of .05, thus the result is achieved. Also, the regression sum of square of 21.437 is greater than residual sum of square, this further show the significant of the overall model.

Table 4.3.3 Coefficientsª

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.120	.291	.291	.413	.681
	Organizational Learning	.969	.067	.840	14.421	.000

a. Dependent Variable: EMPLOYEE COMMITMENT
Source: Field survey, 2019

The coefficients of individual independent variable indicated that organizational learning (.969) has a strong effect on employee commitment. In addition, the {probability} and t-statistics value of {.000} and 14.421 further suggest that the relationship between organizational learning and employee commitment is significant since alpha level of 0.05 is greater than the p-value of 0.000 The conclusion therefore is that null hypothesis is

rejected and alternative hypothesis accepted.

DECISION RULE

Since the R2of 70% is positive and the conclusion therefore is that null hypothesis is rejected and alternative hypothesis is accepted because alpha level of 0.05 is greater than the p-value of 0.000. which means that there is a significant effect of organizational learning on employee commitment. This is supported by the findings of Archipong (2007) which stated that there is a positive relationship between learning on growth and performance.

Hypothesis Two: Information gathering does not have significant influence on organizational innovativeness.

Table 4.3.4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884[a]	.782	.779	.25513

a. Predictors: (Constant), INFORMATION GATHERING

Source: Field survey, 2019

The result shows the R2 which is the coefficient of determination gives approximately 78.2%. This implies that 78.2% of organizational innovativeness (dependent variable) is affected by Information gathering (independent variable) while the remaining percentage 21.8%, of organizational innovativeness may be affected and determined by other unexplained factors. Also, the R which is the level of correlation between the two variables i.e Information gathering and organizational innovativeness gives .884 which indicates that there is a degree of correlation between the variables. Thus, the objective is achieved and answered.

Hypothesis one: organizational learning does not have effect on workers commitment.

Table 4.3.5ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1.	Regression	20.314	1	20.314	312.084	.000[b]
	Residual	5.663	87	.065		
	Total	25.978	88			

a. Dependent Variable: ORGANIZATIONAL INNOVATIVENESS
b. Predictors: (Constant), INFORMATION GATHERING

Source: Field survey, 2019

The F-statistic as shown from the ANOVA table is significant since the ANOVA significance of .000 is less than the alpha level of .05, thus the result is achieved. Also, the regression sum of square of 20.314 is greater than residual sum of square, this further show the significant of the overall model.

Table 4.3.6 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	**Std. Error**	**Beta**		
1	(Constant)	.387	.222		1.745	.085
	Organizational Learning	.919	.052	.884	17.666	.000

a. Dependent Variable: ORGANIZATIONAL INNOVATIVENESS

Source: Field survey, 2019

The coefficients of individual independent variable indicated that Information gathering (.884) has a strong effect on organizational innovativeness. In addition, the {probability} and t-statistics value of {.000} and 17.666 further suggest that the relationship between information gathering and organizational innovativeness is significant since alpha level of 0.05 is greater than the p-value of 0.000.

DECISION RULE

Since the R2 of 78% is positive and the conclusion therefore is that null hypothesis is rejected and alternative hypothesis is accepted because alpha level of 0.05 is greater than the p-value of 0.000. This means that there is a significant effect of information gathering on organizational innovativeness. This result is supported by the study conducted by Reyes (2017). The study showed that innovation is key to the survival of business organizations in today's knowledge society.

Hypothesis Three: Data warehousing doesn't have effect on organizational survival.

Table 4.3.7 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845[a]	.714	.711	.30070

a. Predictors: (Constant), DATA WAREHOUSING

Source: Field survey, 2019

The result shows the R2 which is the coefficient of determination gives approximately 71.4%. This implies that 71.4% of organizational survival (dependent variable) is affected by data warehousing (independent variable) while the remaining percentage 28.6%, of organizational survival may be affected and determined by other unexplained factors. Also, the R which is the level of correlation between the two variables i.e data warehousing and organizational survival gives .845 which indicates that there is a degree of correlation between the variables. Thus, the objective is achieved and answered.

Table 4.3.8 ANOVAª

	Model	Sum of Squares	Df	Mean Square	F	Sig.
	Regression	19.639	1	19.639	217.187	.000[b]
1.	Residual	7.867	87	.090		
	Total	27.506	88			

a. Dependent Variable: ORGANIZATIONAL SURVIVAL

b. Predictors: (Constant), DATA WAREHOUSING

Source: Field survey, 2019

The F-statistic as shown from the ANOVA table is significant since the ANOVA significance of .000 is less than the alpha level of .05, thus the result is achieved. Also, the regression sum of square of 19.639is greater than residual sum of square, this further show the significant of the overall model.

Table 4.3.9 Coefficientsª

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.286	.269		1.064	.290
	Data Warehousing	.937	.064	.845	14.737	.000

a. Dependent Variable: ORGANIZATIONAL SURVIVAL

Source: Field survey, 2019

The coefficients of individual independent variable indicated that data warehousing (.937) has a strong effect on organizational survival. In addition, the {probability} and t-statistics value of {.000} and 14.737further suggest that the relationship between data warehousing and organizational survival is significant since alpha level of 0.05 is greater than the p-value of 0.000.

DECISION RULE

Since the R2 of 71% is positive and the conclusion therefore is that null hypothesis is rejected and alternative hypothesis is accepted because alpha level of 0.05 is greater than the p-value of 0.000. This means that there is a significant effect of data warehousing on organizational survival. This is supported by the findings of Mutaz (2011) which stated that data warehousing has a significant effect on organizational survival.

CONCLUSION AND RECOMMENDATIONS

BI needs to become more than just a series of technologies that are rolled out throughout an organization, or a series of systems relied on to resolve a lack of knowledge generation or knowledge sharing. Instead, BI needs to be a catalyst of information exchange and the development of knowledge within an organization. BI initiatives however cannot be made in the context

of short-term, "fix the sales problem or customer problem" mindset. Instead, the focus needs to be on a systemic, complete change to the development of a strategy where knowledge, not necessarily price, promotion, or even distribution channels become the core focus of the initiative. Business Intelligence won't affect corporate performance if not properly utilized or managed, from the findings of the study, it can be concluded that, variables of Business Intelligence such as organizational learning, information gathering and data warehousing have a significant impact on corporate performance.

Organizational learning has an impact on employee commitment. This is because a workforce that have acquired adequate knowledge about their roles and tasks are able to work efficiently thereby increasing their commitment on the job and are able to cooperate with one another through exchange of knowledge, concepts and issues as related to their job and the organization.

Information gathering has a significant positive effect on organization innovativeness. Therefore, Managers should make optimal use of intelligence gathered to be proactively act to issues in the business environment as related to the company and weaknesses, also, managers should prioritize gathering information pertaining to daily activities in the business environment to better support their decision making processes to achieve improved performance.

Finally, the study concluded that data warehousing has a significant effect on organizational survival. It is evident managers make decisions frequently as concerned to the organization, data warehousing helps to quickly access their organizational historical activities, collect and store all data for effective decision making. This will assist the organization to reduce chances of failure when accurate and adequate decisions are put into action steps as necessary.

From the review of relevant literatures, it is therefore recommended that:

1. Managers should provide enabling environment for the creation, retaining and transferring of knowledge within the organization by engaging the employees in both on and off the job training, providing serene working environment, encouraging collaborative culture and promoting the virtues of fairness among the employees, this is because if the employees are not motivated to learn or to share information, then the best technology won't help. This will help the organization to improve overtime as it gains experience, from this experience, it is able create knowledge that could better the organization.

2. Information has been described as an important business resource; therefore, the management should be proactive by constantly interacting with the environment to gather relevant and adequate information for optimal decision

making that could improve the performance of the organization. This can be done by involving the use of environmental scanning tools whereby relevant information will be gathered both internally and externally which will form part of the input for the organization innovation. The management should also encourage participatory leadership to encourage the employees to contribute to the information needs of the organization as they have been identified as a reliable source for valuable and relevant information towards the organization success.

3. Also, for the organization to survive and achieve improved performance, the management should create a platform that presents the organization information consistently and add value to business operations. This would enable the organization to store current and historical activities in a single data set that are used for creating better enterprise intelligence. Data warehousing will go a long way in increasing the productivity of corporate decision, makers by creating an integrated database of consistent, subject oriented of current and historical data for more cost effective decision making that could improve the performance of the organization.

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