INFORMATION QUALITY MANAGEMENT AND ORGANIZATIONAL PERFORMANCE OF TELECOMMUNICATION INDUSTRY IN RIVERS STATE, NIGERIA

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ABSTRACT

This thesis examined the relationship between Information quality management and organizational performance in telecommunication companies in Rivers State, Nigeria. The study was operationalized with the dimension of information quality management like accuracy. Organizational performance was measured by increased patronage and customer satisfaction. The target population comprised of the managerial and supervisory staff of four purposively selected telecommunication companies in Rivers State. The study used cross-sectional survey approach and descriptive research design, the sample sized used was 120. The objective of this study was to assess the relationship between information quality management and organizational performance in Telecommunication companies in Rivers State. Questionnaires were the major instruments used in gathering primary data which were analyzed using correlational analyses. The questionnaire used was subjected to face/content validity, this was done to ascertain the validity of the questionnaires to be administered. The scale used for this study had been previously adjudged reliable. Data was analyzed and results presented in tables, mean and standard deviation. And finally hypotheses were tested using the Spearman Rank Order Correlation Coefficient. The study found out that information quality management can bring about organizational performance by ensuring information accuracy. The study recommends that Organizations should work on the quality of their big data before it transcends to information, in order for the quality of information not been affected, thereby resulting to ineffective decision making that brings about loss.

Key words: Information quality management, accuracy, organizational performance, increased patronage, customer's satisfaction.

INTRODUCTION

Information is an asset and an asset is anything that adds value in an organization, therefore, Information Quality Management (IQM) focuses on managing information as effectively as you manage organizational asset and it adds value to every organization. IQM is defined as an assessment or measure of how fit an information object is for use, (Jason, 2011). Information quality management entails accuracy (correct, reliable), believability (regarded as true and credible), objectivity (unbiased) and reputation (trusted in terms of source or content) (Jason,

2011). It also includes, value added, relevancy, timeliness, completeness, reliability, conciseness of information. Information Quality (IQ) is important and highly sought after not only for decision making but also for avoiding failures, reducing costs and gaining competitive advantage. Professionals rely on information to successfully carry out their work and the quality of their information source impacts their decisions. Information quality is a characteristics of the output offered by the Information System such as accuracy, timeliness, reliability, and completeness McLean (2009). Quality of information serves as the background for all steps in communication process in the modern enterprise (Michnick, 2009). Information quality (IQ) can be measured in terms of accuracy, timeliness, completeness, relevance, and consistency (DeLone, 2003).

Jonsson, P. (2008) defines information quality as concept of 'fitness for use', and they also assert that the attributes of information quality are complete, concise, reliable, timely, valid, accessible, appropriate amount, credible, relevant and understandable. This means that for a user to be able to assess the quality of a piece of data, he or she must judge if the piece of data can be used for his or her purpose according to different "IQ dimension" Strong (2007) assert that for firms' processes that depend on information, the quality of information is one of the key determinants of the quality of their decisions and actions. Companies today are repeatedly recognizing that making quality decisions depends upon the quality of information available to support these decisions (Helfert, 2008), thus making the provision of quality information the key to gaining a competitive advantage (Salaun, 2001). In addition, the past decade presents the upcoming of information systems and technologies that make it possible for managers to use real-time data from the marketplace when making decisions (Laudon&Laudon, 2012).

Nevertheless, simply acquiring or possessing information is not directly related to organisation's performance, but it is rather the utilization of information that is the key link between information acquisition and the organisation's performance. If companies want the available quality information to contribute to their performance, such information must be used to improve their decision-making. In today's business environment, quality information is a matter of primary interest. For more and more organization, information has increasingly become a critical resource and an asset in their business processes. The contribution of high-quality information to companies is that it makes it easier to convert available information into knowledge, by helping to interpret and evaluate the information, by assisting the connection with prior knowledge, and by facilitating the application of the information to new contexts (Eppler, 2000). The goal of IQM is to increase the value of high quality information assets.

In an organization, there is always a product called information, which you manufacture from a constituent raw material called data. In your information "factory," as in any factory, the quality of your raw material directly affects the quality of your finished goods (decision making). When initiating your business-intelligence project, you're likely to be surprised at how bad your raw material data really is, and you'll discover that if you're going to be serious about business intelligence, you're going to have to get very serious about data quality as well.

It is estimated that 40% of all business initiatives fail to achieve their value due to deficiencies surrounding information quality (Friedman, 2011). Although alarming, the figure isn't necessarily surprising since a recent industry survey indicates that 90% of upper level managers lack sufficient information to undertake critical business decisions (Kielstra, 2007). In addition, 54% of managers express concern about making poor decisions based upon poor information

quality (e.g., inaccurate, incomplete data) (Kielstra, 2007). Decision quality measures the extent to which a decision is made based on valid information and assumptions and can contribute to the overall effectiveness of the organization. The literature contends that the quality of information can significantly affect the quality of the decisions (Raghunathan 1999; Mihm, 2010).

The literature suggests that information quality (IQ) problems are becoming increasingly prevalent. The growth of data warehouses and communication and information technologies has increased the need for, and awareness of high IQ management in organizations. There is strong evidence to suggest that IQ has become a critical concern of organizations (Al-Hakim 2004). Firms become so critically dependent on information that IQ problems must be identified and treated as urgently as possible. Poor quality of data and information can have a deleterious impact on decision making and therefore on the overall effectiveness of an enterprise. Incorrect and misleading information associated with an enterprise's production and service provision jeopardize both customer relationships and customer satisfaction and ultimately have a negative effect on revenue. Poor information quality is not only prevalent in manufacturing and service organizations; it can also be at the root of many issues of national and international importance which dominate the news (Redman, 2004).

Concept of Accuracy

Information Accuracy relates to "the correctness of the output information". It is one of the elements of intrinsic data quality (Wang & Strong, 1996). It includes: freedom from error (correctness), or closeness to truth or fact, resulting from exercise of painstaking care or due diligence. It is the degree to which information represents a real world state. Accuracy depends on how the data is collected, and is usually judged by comparing several measurements from the same or different sources.Put simply, data is used to provide insight. Organisations when armed with this, are able to improve the everyday decisions they make. This isn't just for management, either – it applies from the ground up. However, data is rarely useful in its raw state; it must be processed and presented in a way that works on the appropriate levels so that it can be applied properly. The latest analytics tools make this part much easier, but there is still a journey that information must follow before it's usable.

Concept of Organizational Performance

Organizational performance has been measured as competitive advantage and strategic value (Sethi, 1994), market value, organizational efficiency and effectiveness, and capacity utilization. Organizations' success refers to the attainment of the expected results, outcomes, or realization of the set objectives and hence organization performance. Performance is a complex and dynamic concept which has been conceptualized in two ways namely the drivers of performance and the results of performance (Olsen, 2008). It is concerned with the overall productivity in an organization in terms of stock turnover, customers, profitability, organizational growth, and image and market share and a consequent of accomplished strategy implementation Arthur (2010). Information quality management create economic value by increasing operational efficiencies and creating competitive advantage.

Organizational performance is broad concept encompassing both financial performance and operational performance indicators. In an uncertain and challenging environment, the firm's capability to better utilize their limited resources and capabilities can be a source of

competitiveness. Competition in the global economy has intensified the importance of discovering the capabilities of sustainable performance. Performance may be measured by both quantitative and qualitative methods. (Helgesen, 2009) have said that performance measures based on mere financial indicators are not enough so non-economic indicators including market share, product development, or production efficiency are used for business performance. There seems to be a general agreement that performance in an organization context refers to the quality of process or end product with both quantity or quality considerations (Postma, 2001).

Problems

Organizational environment is changing all the time, it is becoming more demanding, and managers must react fast to customers' and competitors' actions. They must make choices and decisions in a complex and uncertain environment. The significance of information as a company's competitive advantage has been emphasized during the last ten years, although top management has often been confronted with the continual problem of managing vast amount of information usually referred to a big data, which have resulted to ineffective decision making, therefore, comprehensive and real time information is needed to develop the organisation.

Poor information quality can wreak havoc in organizations and result in customer dissatisfaction, increased costs, reduced levels in the effectiveness of decision-making, and a diminished ability to plan, implement, and execute organizational strategies. Also, management has often been confronted with inaccurate information for effective decision making, and they are incapable to protect the confidentiality, integrity and availability of information in the system from those with malicious intentions.

Purpose of the Study

The general purpose of this study is to investigate and examine how Information Quality management can bring about organizational performance in the Telecommunication industry, and the study will specifically ascertain how Accuracy influences the Organizational Performance of selected firms in the telecommunication industry.

Questions

1. To what extent does Information Quality Management influence Organizational Performance of selected firms in the Telecommunication Industry of Rivers State?

2. To what extent does Accuracy influence Organizational Performance of selected firms in the Telecommunication Industry of Rivers State?

Hypothesis

Hypothesis is an idea or explanation for something that is based on known facts but has not yet been proven. Null hypothesis is a negation of the subject matter, indicating that there is no relationship between the variables. The following null hypotheses were formulated.

Where; H_o= Null Hypothesis

$H_{01:}$ There is no significant relationship between information quality management and increased Patronage in selected firms in telecommunication industry of Rivers State.

$H_{02:}$ There is no significant relationship between information quality management and customer satisfaction in selected firms in telecommunication industry of Rivers state.

$H_{03:}$ There is no significant relationship between accuracy and increased Patronage in selected firms in telecommunication industry of Rivers State.

$H_{04:}$ There is no significant relationship between accuracy and customer satisfaction in selected firms in telecommunication industry of Rivers state.
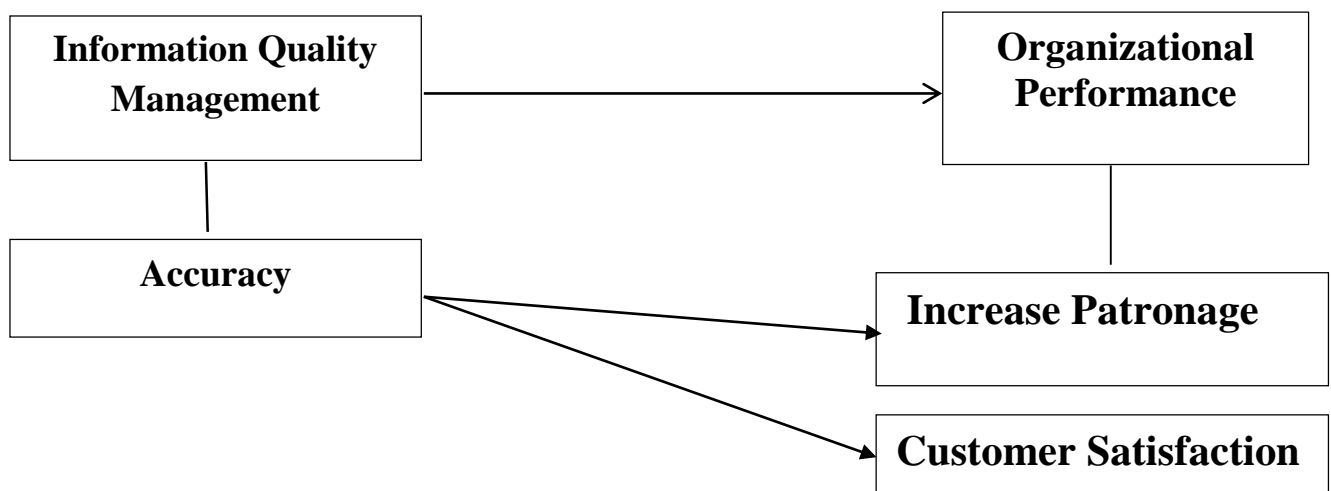
Source: Researcher's conceptualization from the review of related literature, 2019.
Figure 1.1   Contextual Framework showing information quality management and organizational performance.

METHODOLOGY

The type of design the researcher used here is the survey method which will ease collection of data. The accessible population of the study consists of the managerial and supervisory staff of four purposively selected telecommunication companies in Rivers State, namely – MTN, ELTISALAT, GLOBACOM and AIRTEL. The sample size used was 120. This sample represents 100% of the population. . It adopted a 4–Points Likert Scale of strongly agree (SA) = 4 Points, Agree (A) = 3 Points, Disagree (D) = 2 Points and strongly disagree (SD) = 1 point. Interpretatively, SA and A represent high response while D and SD represents a low response.

The data collected will be tabulated and itemized according to the responses in the questionnaire. The researcher will adopt the simple percentage method in the description of the sample characteristics as obtained from the questionnaire. While for the tests of hypotheses, the spearman rank order correlation coefficient statistical tool will be utilized. Analysis will be carried out using the statistical software for the social sciences (SPSS) version 21; with data presentations illustrated using contingency tables and charts.

Analysis

Descriptive statistics is used to analyse the mean and standard deviation of the data collected. This showed to what extent the respondents rate the various questions asked. Analysis of data enable the research to make summary of the various questions which will be used for the test of hypotheses.

Table 1: Accuracy

	N	Sum	Mean	Std. Deviation
Our system are consistent with the changes in the market	105	373	3.55	.832
We constantly update on current trends and market development	105	368	3.50	.774
Our information sources are highly reliable and dependable	105	326	3.10	.950
Valid N (listwise)	105			

Source: Research Survey, 2019

Table 1 above showed how the respondents responded to the questions on accuracy. From the table, it showed that the system are consistent with changes in the market with a mean of 3.55, question two showed that the company constantly update on current trends and market development and question three responded that the information sources are highly reliable and dependable.

Table 2: Relationship between Accuracy and increase Patronage

			Accuracy	Increase Patronage
Spearman's rho	Accuracy	Correlation Coefficient	1.000	.947**
		Sig. (2-tailed)	.	.000
		N	105	105
	Increase Patronage	Correlation Coefficient	.947**	1.000
		Sig. (2-tailed)	.000	.
		N	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research survey, 2019.

Table 2 showed the Spearman's correlation coefficient; r = 0.947** and the probability Value *(PV)* = 0.000 < 0.05 (level of freedom). This shows that there is a strong positive relationship between Accuracy and increase patronage of Telecommunication Industries in Rivers State. Therefore increasing the level of accuracy of information will also increase the level of patronage of Telecommunication Industries in Rivers State.

Table 3: Relationship between Accuracy and Customers satisfaction

			Accuracy	Customers satisfaction
Spearman's rho	Accuracy	Correlation Coefficient	1.000	.894**
		Sig. (2-tailed)	.	.000
		N	105	105
	Customers satisfaction	Correlation Coefficient	.894**	1.000
		Sig. (2-tailed)	.000	.
		N	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research survey, 2019.

Table 3 showed the Spearman's correlation coefficient; r = 0.894** and the probability Value *(PV)* = 0.000 < 0.05 (level of freedom). This shows that there is a strong positive relationship between Accuracy and Customers satisfaction of Telecommunication Industries in Rivers State. Therefore increasing the level of accuracy of information will also increase the level of customers' satisfaction of Telecommunication Industries in Rivers State.

Table 4: Increased Patronage

	N	Sum	Mean	Std. Deviation
Our service are unique and as such offer higher value and returns	105	349	3.32	.766
Our system are designed to support convenient user interfaces	105	360	3.43	.745
System networks offer strong links and rapport between departments and units	105	389	3.70	.634
Customers patronize our services	105	365	3.48	.798

Valid N (listwise)	105

Source: Research survey, 2019.

Table 4 showed how there is increased in patronized in the organization. Question one showed how the companies are being patronise with a mean of 3.32, question two showed that the system are designed to support convenient user interface with a mean of 3.43, question three showed that system network offer strong links and rapport between departments and units with a mean of 3.70, while question three showed that Customers patronize their services with a mean of 3.48.

Table 5: Customers satisfaction

	N	Sum	Mean	Std. Deviation
There is very few complaints if any about out services	105	350	3.33	.851
Most of our customers are repeat customers who tent	105	369	3.51	.856
It is our culture here to place the client as number one	105	360	3.43	.745
Valid N (listwise)	105			

Source: Research survey, 2019.

Table 5 showed how customers are satisfied with the level of services rendered. Question one showed that there are very few complaints if any about their service with a mean of 3.33, question two showed that most of the customers are repeat customer with a mean of 3.51 and the table also showed that it is their culture to place the client as number one with a mean of 3.43.

CONCLUSION

The idea which necessitates the study was to examine the relationship between information quality management and organizational performance. Findings from our analysis support a correlation between both variables as results show high levels of correlation and significant associations. Base on the findings, we therefore conclude that effective information quality management should be encouraged in order to achieve organizational performance.

RECOMMENDATION

In view of the research on information quality management, the following recommendations are important.

1. Mobile telecom service providers and organizations should focus more attention on information quality because of its close knit relationship with customer satisfaction and increased patronage.
2. Organizations should constantly protect the confidentiality, integrity and availability of computer system data from those with malicious intentions.
3. Organizational success depends on culture that drive growth. Therefore, management of telecommunication are advice to pay more attentions to creating cultural value that ensure accurate decision making.
4. Organizations should work on the quality of their data before it transcends to information, so it doesn't affect the quality of information thereby resulting to ineffective decision making that brings about loss.

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