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Digital technology and organizational competitiveness at MTN Ghana

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Abstract
Information system is very important because it improves the effectiveness and efficiency of administrative duties in an organization. Therefore, there is the need to evaluate and suggest ways in which these systems can be used in order to improve performance in organizations. Information is also of value because it can transform and capture the various ways in which documents are stored and retrieved. Relating performance to the use of information system is particularly difficult because often times, it is impossible to obtain valid measure of users' performance. The average respondent is relatively well educated. Twenty (20) respondents representing 67% of total respondents holds at least a first degree. The remaining Ten (10) respondents (representing 33% of respondents) were Commercial Noc/tech school certificate holders. As a result of the information obtained from self-administered questionnaires the study revealed that the organization involved with E -Business and E-Commerce information system. It was however encouraging knowing that the information system has improved the service at delivery by given staff the opportunity to provide good service delivery to customers and through effective survey. Due to in adequate maintenance and lack of training and education the use of information has negative effect on administrative work and organizations so need to be given proper attention.

Keywords: Technology, competitiveness, organizational, Digital, MTN, Ghana

Introduction
Chapter One
1. Introduction
1.1 Background of the study
Information comes from data. Locey (2003) [63] defines data as the facts obtained by reading, observation, measuring, weighting, etc. which are then recorded. Information can therefore be known as data that have been interrelated and understood by the recipient of the message. Information system is very important because it improves the effectiveness and efficiency of administrative duties in an organization.
Therefore, there is the need to evaluate and suggest ways in which these systems can be used in order to improve performance in organizations. Information is also of value because it can transform and capture the various ways in which documents are stored and retrieved. Relating performance to the use of information system is particularly difficult because often times, it is impossible to obtain valid measure of users' performance. The value of information can be derived from the value of the change in decision behavior caused by the information being available minus the cost of producing the information. Better information can be valuable only when it improves resulting decisions.

1.2 Statement of the Problem: With technological advancement documents leaving one organization to another in recent times are expected to be of modern nature. The use of information system in managing work schedules and improving productivity has become the order of the day. According to 0°Brien (2003) [8] the mere existence of an information management system at a particular workplace is however not as important as ensuring that this information system provides some competitive value to the organization. How relevant is the information system in use in a particular workplace? It is important to continually evaluate modern information vis-à-vis the needs of organizations to ensure that existing system information systems are optimally utilized to meet the needs of the organization in question and provide the needed competitive urge.

1.3 Objectives of the study
The main purpose of this study is to examine the extent to which Information Systems can lead to organizational competitiveness in an organization.
The specific objectives of the study are to find out:
1. The extent of information system use in the organization.
2. Identify what organizations are doing to enhance Information System use.
3. The impact of information systems on organizational competitiveness.

1.4 Research Questions
The study aims at finding answers to the following questions
1. To what extent is the organization involved with information system use?
2. How is the organization enhancing the use of information system?
3. To what extent does information system affect organizational competitiveness?

1.5 Limitation of the Study
The study would have liked to cover many organizations and businesses, due to following factors, it is limited to MTN Ghana.
1. Combining the research with other academic works like test, assignments and animations put a lot of constraint on the time that could be devoted to the study.
2. Secondly, due to financial problems, the study could not extend its scope to other units in the country.
3. Finally, time is too limited for the study of material facts and other important documents, which will aid the study to be organized within the shortest possible time.

1.6 Significance of the Study
After the study is completed, it is expected to serve as a useful and valuable material to the individual groups and organizations.

Academia-
The work will serve as a secondary source of information to the students in the tertiary institution who may be carrying out future research on the topic

Policy Makers
It will give them the guidelines to examine the objectives and importance of Information Systems and Organizational Competitiveness so as to formulate the appropriate policies in that area.

General Public
The study will provide them with insight on the topic, and understand why there is the need to get information in an organization and the country as a whole.

Practitioners
It will enable them to know the importance of the topic, and to pursue the appropriate and the most rewarding areas of information Systems.

1.7 Methodology
In order to obtain accurate and the required information, the study used both primary source (i.e. personal interviews and questionnaires) and other secondary sources (i.e. books from renowned management authorities and other relevant documents.
The choice of MTN and as the case study is due to the fact that it is an organization with departments and sections with personnel who need and use information system.

1.8 Organization of the Study
The study is carefully categorized into five (5) chapters.
Chapter one comprises the background (introduction) of the study, the statement of the problem, objectives of the study, research questions, limitation and significance of the study, methodology and organization of the study.
1. Chapter two talks about the review of available and relevant literature on the subject matter.
2. Chapter three covers the overview or profile of the service or the organization.
3. Chapter four looks at the presentation of the data and analysis of data from the survey result.
4. Chapter five marks the end of the work with summary, conclusions, recommendations and references.

Chapter Two
Literature Review
2. Introduction
This chapter primarily deals with the works that authors and theorists have researched about information systems and organization competitiveness. This chapter will look at the following:
1. Definitions
2. Types of information systems
3. Information system and networking
4. Functions of information system
5. Components of information system
6. Benefits of information system
7. Telecommunication and networks
8. The impact of the information system
9. Organizational competitiveness

2.1 Definition s of Information System
According to O 'Brien (2003) [8] defined information system as any organized combination of people, hardware, software, communication network and data resource that collects, transforms and disseminates as information in an organization.
He also termed information system as a scientific field of study that addresses the range of strategic, managerial and operational activities involved in the gathering, processing, storing, distributing and use of information and its associated technologies, in society and organization.
Information systenm has been also defined by Kenneth and Jane (2002) [5] as a technical set of interrelated components that collect, process, store, and control in an organization.
According to Silver *et al*. (2002) [9] information systems are implemented within an organization for the purpose of improving the effectiveness and efficiency of that organization. Capabilities of the organization systems, its people, and its development and implementation methodologies together determines the extent to which that purpose is achieved

2.2 Definitions of Digital technology
French (2004) [3] defines digital technology as information used to carry out transactions, provide information, record

data, make decision and perform a very wide range of tasks. The use of digital technology in modern organization helps to solve internet problems, manage database, increase profit in changing the society. The term digital technology also embraces the use of interactive view of data and data base System.

Lucey (2003) [6] also defines digital technology as something used at so many places to carry out transactions, provide information, records data, and make decisions and perform an ever increasing range of tasks.

Barbara Wilson (2004) [1] defines digital technology as the means by which science is used in the collection, storage, processing and movement of information.

Zorkocry (2003) [13] defines digital technology as the collection, storage, processing, dissemination and use of information. He went on to say that digital technology is not confined to hardware and software, but acknowledges the importance of man and the goals he seeks for his technology.

2.3 Types of Information Systems

According to Kenneth and Jane (2002) [5] the following may be taken into consideration as types of information system:

Business Information Systems

According to Stair and Reynolds (2003) [11] the most common types of information systems used in business organization are transaction management information system. decision supporting system. These systems help employees in organization to accomplish both routine and special task like recording processing payrolls and supporting decision in various department.

Transaction Processing System

Kenneth and Jane (2002) [5] say transaction processing system are the basic systems that serve the operational level of the organization. This system is a computerized system that performs and records the daily routine transaction necessary to conduct the business. Transaction processing systems are often so central to a business that TPS failure for a few hours can spell firms demise and perhaps other firms linked to it.

Managers need TPS to monitor the internal operations and the firms' relations with the external environment. TPS are also major producers of information for the other Types of system

Management Information System

Kenneth and Jane (2002) [5] also says that management information system designate a specific category of information systems serving management level functions. MIS serve the management level of the organization, providing managers with reports or with on line access to the organizations current performance and historical records. Typically, they are oriented almost exclusively to internal, not environmental or external event. MIS primarily serve the functions of planning controlling and decision making at the management level.

Decision Support Systems

Kenneth and Jane (2002) [5] says decision support system serve the management level of the organization. It helps managers make decisions that are unique rapidly changing and not easily specified in advance. It address problems where the procedure for arriving at a solution may not be fully predefined in advance and are built explicitly with a variety of models to analyze data. It condenses large amounts of data into a form where it can be analyzed by decision makers.

Enterprise Resource Planning

Stair and Reynolds (2003) [11] also says that resource planning (ERP) system is an integrated programmes that is capable of managing company's vital business operation for an entire multi-site, global organization. It can take a large number of separate systems developed over a number years by the organization to replace them with one unified set of programmes. The system is very easy to use and it is effective.

Expert Systems

Stair and Reynolds (2003) [11] say decision support system helps make suggestions and act like an expert in a particular field. The unique value of expert systems is that, they allow organization to capture and use e wisdom of experts and specialists.

Therefore years of experience and specific skills are not completely lost when a human expert dies, retires or leaves for another job. Expert system can be applied to almost any field or discipline. Expert systems have been used to monitor complex systems such as nuclear reactors, perform medical diagnoses, and locate possible repair problems design and configuration.

E-Commerce

According to 0' Brein (2005) [7] electronic commerce commonly known as e-commerce consist of buying and selling of product or services over electronic system such as the internet and other computer networks. It is more than just buying and selling products online. It also includes the entire process of developing, marketing, selling, delivering servicing and paying for products and services. The amount of trade conducted electronically has grown extraordinarily with widespread internet usage.

A large percentage of electronic commerce is conducted entirely electronically for virtual items such as access to premium content on a website, but most electronic commerce involves the transportation of physical items in some way online retailers are sometimes known e-tailers and online retail is sometimes known as c-tail almost all big retailers have electronic commerce presence on the world wide web.

Electronic commerce that is connected between businesses is referred to as business to business or B2B. It can open to all interested parties or limited to specific, pre- qualified parties. Electronic commerce that is conducted between businesses and consumers on the other hand is referred to as business to consumer or B2C. Electronic commerce is generally consist to be the sales aspect of e- business. It also consist of the exchange of data to facilitate the financing and payment aspects of the business transactions.

According to O'Brien the benefits of E - Commerce are

According to 0' Brien (2005) [7] E-Commerce allows people to carry out businesses without the barriers of time or distance. One can log on to the internet at any point of time, be it day or night and purchase or sell anything one desires at a single click of the mouse.

The direct cost-of-sale for an order taken from a web site is lower than through traditional means (retail, paper based), as there is no human interaction during the on-line electronic purchase order process. Also, electronic selling virtually eliminates processing errors, as well as being faster and more convenient for the visitor.
Ecommerce is ideal for niche products. Customers for such products are usually few. But in the vast market place i.e. the Internet, even niche products could generate viable volumes.
Another important benefit of Ecommerce is that it is the cheapest means of doing business.

Chapter three
Organizational profile of MTN Ghana
3.0 Introduction
MTN in Ghana is one of the latest additions to MTN plc, one of Africa's leading mobile telecommunication company. Millions of people in every corner of the globe choose MTN to talk, text and connect to data service that help them the most of every day.
MTN is one company, with local root, this is about working as one company across all teams and markets to achieve the best outcome of our shareholders and our customers. It has significant presence in the Middle East and Africa through the company's subsidiary undertakings, joint ventures, associated undertakings and investment.

Chapter four
Methodology, data presentation and analysis
4. Introduction
This chapter presents the methods used in gathering the necessary information. Otherwise known as the methodology of the research work. The responses from the questionnaires are also reviewed in the form of data presentation and analyses

4.1 Methodology
4.1.1 Target Population
In order to carry out the objectives of the study, both management, senior and subordinate were targeted. Since it was not possible to study the whole population of MTN Ghana limited, the study focused on a target of fifty but only thirty responses were received.

4.1.2 Sample and Sampling Techniques.
A random sample was used in selecting the sample, to ensure that views collected accurately reflected both management and staff were given equal number to fill the questionnaires.

4.1.3 Data Collection Methods
In order to gather sufficient information the fulfillment of the objectives of this study, both primary and secondary instrument were used for the collection.

4.1.3.1 Primary Data Collection
This data collection method includes questionnaire and interviews.

4.1.3.2 Secondary Data
The secondary source comprised with both published and unpublished materials such as text books, handouts, information from the internet and books from the library.

4.1.3.3 Questionnaires
The questionnaires used was closed ended questions. This enables respondents to give precise and specific answers to the questions. This type or methods makes analysis easy and simple.

4.2 Presentation of Data
Every data presented in this chapter depicts the findings obtained in relation to the purpose of the study. This is however, followed by explanations, interpretations and summarized data. The interpretation of the findings offer some answers to the research questions and explains in details the data collected. Such findings are presented as follows.

Table 4.1: Distribution of Respondent's Educational Background

Level of Education	Frequency	Percentage (%)
University	20	67
Commercial / Voc / Tech	10	33
Total	30	100

Source: Field Survey, May 2022.

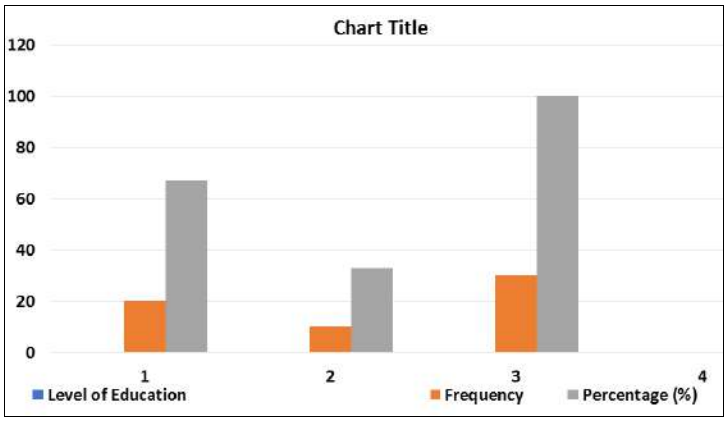

Fig 4.1: Graph showing distribution of Respondent's Educational Background

According to table 4.1 and figure 4.1 the average respondent is relatively well educated. Twenty (20) respondents representing 67% of total respondents holds at least a first degree. The remaining Ten (10) respondents (representing 33% of respondents) were Commercial
Noc/tech school certificate holders.

Table 4.2 Distribution Showing the Number of Years that Respondents Have Worked with the Organization

Respondents	Frequency	Percentage (%)
1-5 years	8	27
6-10 years	10	33
11–15 years	7	23
16 and above	5	17
Total	30	100

Source: Field Survey, May 2022.

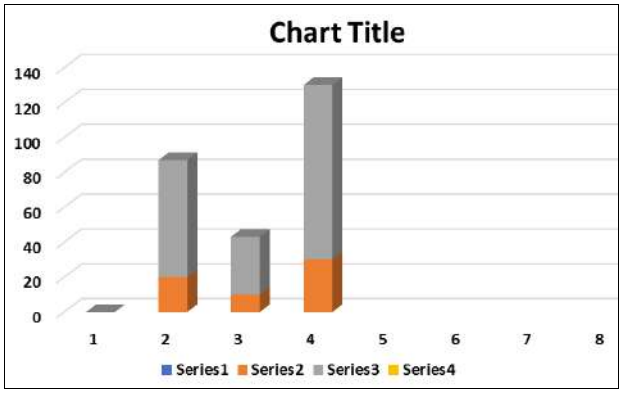

Fig 4.2: Graph showing the Number of Years that Respondents Have Worked with the Organization**.**

From table 4.2 and graph above the respondents were grouped into four (4) categories. This from 1- 5years, 6 - 10years, 11 - 15years and 16 and above. Out of the total respondents, eight (8) fall within the year group1 -5, representing 27%, ten (10) people within the group 6 -10

Table 4.3: Distribution Showing How the Organization Receives information

Respondents	Frequency	Percentage (%)
Through Letters	13	43
Through Report	0	0
By E - mail	17	57
Total	30	100

Source: Field Survey, May 2022

From table 4.3 Thirteen (13) people representing 43% said through letters, Seventeen
(17) People representing 57% said by e- mail whiles with through report no response.

Table 4.4: Distribution Showing the Types of Network Topology the organization use

Respondents	Frequency	Percentage (%)
Local area network	9	30
Wide area network	21	70
Total	30	100

Source: Field Survey, May 2022.

From table 4.4, 9 people representing 20% of the total respondents said local area network and 21 people representing 70% said Wide Area Network.

4.3 Discussion of Findings

The following are some of the findings that can be deducted from the gathering and analysis of data of the research: The study revealed that the organization involved in E-business as about 60%o of them and 40% said E-Commerce. The study found out that the organization enhance information system used by providing service delivery to customers as about 53% of them and 47% said through effective surveying The study discloses that the problem of information system on organization. Competiveness are inadequate maintenance as about 43% of them and 37% said lack of training and education and also 20% said poor operation control.

Chapter five

Summary, conclusion and recommendation

5. Introduction

This seeks to summarize the findings, conclusions and the recommendations of the findings.

5.1 Summary

The study sought out to find answers to the following questions:

1. To what extent is the organization involved with information system use?
2. How is the organization enhancing the use of information system?
3. To what extent does information system affect organizational competitiveness?

The study discloses that the organization involved with E - Business and E-Commerce information system.
The study revealed that the organization enhanced the use of information system by providing good service delivery to customers and through effective surveying.
Finally, the study revealed that inadequate maintenance and lack of training and education were the problems of information system in the organization: thereby posing challenge to the employees

5.2 Conclusion

Based on the above findings the study concluded that:

1. As a result of the information obtained from self-administered questionnaires the study revealed that the organization involved with E -Business and E-Commerce information system.
2. It was however encouraging knowing that the information system has improved the service at delivery by given staff the opportunity to provide good service delivery to customers and through effective survey.
3. Due to in adequate maintenance and lack of training and education the use of information has negative effect on administrative work and organizations so need to be given proper attention.

5.3 Recommendation

The following recommendations are being made based on the conclusion of the findings.

1. Management in MTN should involve with more information system if competitive is to be achieved.
2. The following factors should be considered to improved information system in the organization: more information system facilities should be provided to enhance service delivery and the organization should provide good quality machines for the staff to be well equipped in operating information system and also users of information system should be encouraged to accept change in the organization
3. Management in MTN should train and educate it workers on how to use the modern information system

and. make provision for maintenance of equipment and machines to prevent competitiveness. frequent breakdown of them in order to aid

Management should be abreast with the rapid technological changes and adopt it use in the organization in order to aid competitiveness.

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