

MEASURING E-COMMERCE SUCCESS IN TELECOMMUNICATION ORGANISATIONS IN THE KOFORIDUA MUNICIPALITY

*(Working Topic: Testing of Delone and Mclean Model of e-commerce success on the
operations of the telecommunication organisations in Koforidua Municipality)*

BY

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**COMMONWEALTH EXECUTIVE MASTERS OF BUSINESS
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DECLARATION

I hereby declare that this submission is my own work towards the Executive Masters Of Business Administration and that, to the best to my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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ABSTRACT

The telecommunication networks are getting increasingly popular as a new distribution channel for e-products and e-services. The success in e-commerce goes a long way to enhance the way business is done and its relevance to customers in terms of benefit from e-commerce implementation and satisfaction with the implementation. Both the popular and academic literatures promise many benefits to be derived from e-commerce systems. Many companies have started adopting e-commerce as a secondary arm to their business. The number of successes has been relatively small and the lessons, which can be learnt from these organisations, are outlined in this thesis. Since the project is about assessing how the telecommunication organisations (MTN, VODAPHONE AIRTEL and TIGO) do business electronically and the rate of success, the e-commerce success models by Delone and Mclean comes to play to capture and display the important elements and to offer a handy shorthand way of referring to. In the attempt to test the research model and achieve the research objectives, a structured questionnaire was conducted among Koforidua e-commerce customers in the Eastern Region of Ghana. The questionnaire was designed to collect data related to demographics and possible factors affecting the success of e-commerce from individual customers, institutional customer and the telecoms. All of the scale items were measured using a five-point Likert-type category-scaling format. Judgemental sampling is used to select the population of telecommunication organisations who are good prospects for accurate information on e-commerce activities. Convenience sampling is used to select the easiest population of customers from which to obtain information about the service provided to them by these organisations. The study concludes with relevant findings in assessing the e-commerce success in telecommunication organisations in Koforidua.

DEDICATION

I dedicate this work to the Almighty God for his infinite mercies, grace, and love. I also dedicate this work to my parents, Mr and Mrs Opare-Addo, who have supported my education every step of the way.

KNUST



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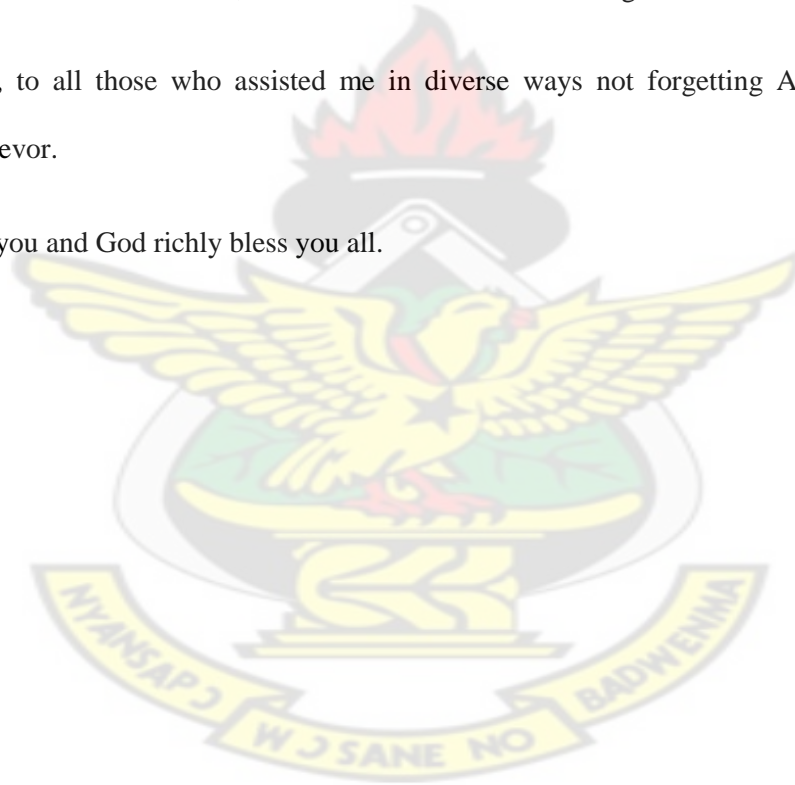
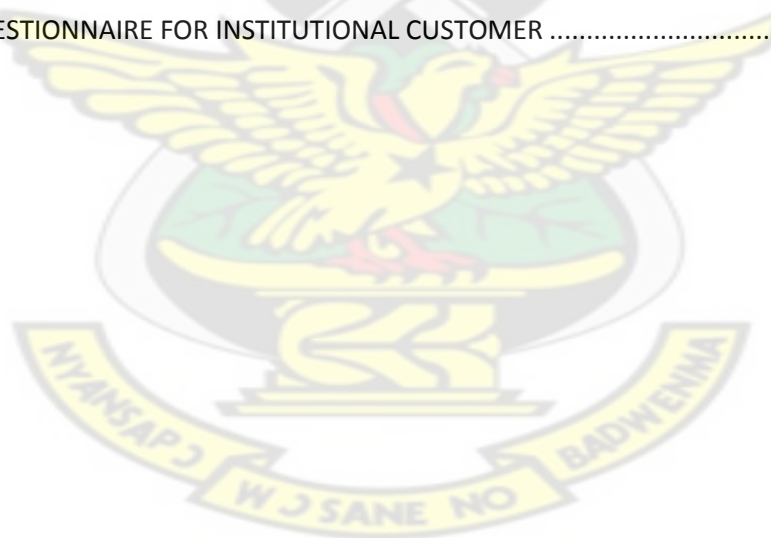


TABLE OF CONTENT

DECLARATION	i
ABSTRACT.....	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
LIST OF TABLES	viii
LIST OF FIGURES	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 BACKGROUND OF THE STUDY.....	1
1.2 STATEMENT OF PROBLEM.....	2
1.3 OBJECTIVES OF THE STUDY	3
1.4 SIGNIFICANCE OR RELEVANCE OF STUDY	4
1.5 SCOPE OF STUDY	5
CHAPTER TWO	6
LITERATURE REVIEW	6
2.1 INTRODUCTION	6
2.2 THE BENEFIT IN E-COMMERCE SUCCESS.....	6
2.3 TANGIBLE AND INTANGIBLE BENEFIT OF E-COMMERCE	8
2.3.1 TANGIBLE BENEFIT OF E-COMMERCE.....	8
2.3.2 INTANGIBLE BENEFIT OF E-COMMERCE	10
2.4 CHALLENGES OF E-COMMERCE SUCCESS	12
2.4.1 TECHNOLOGICAL CHALLENGES OF E-COMMERCE SUCCESS.....	12
2.4.2 MANAGERIAL CHALLENGES OF E-COMMERCE.....	13
2.4.3 BUSINESS CHALLENGES OF E-COMMERCE.....	16
2.5 SUCCESS FACTORS OF E-COMMERCE.....	18
2.6 E-COMMERCE SYSTEM QUALITY	20
2.6.1 CONTENT QUALITY	20
2.6.2 SERVICE QUALITY	22
2.7 SYSTEM USE.....	23
2.8 CUSTOMER E-COMMERCE SATISFACTION	23
2.8.1 TRUST.....	24
2.8.2 SUPPORT AND SERVICE.....	27
2.9 OVERVIEW OF THE TELECOMMUNICATION ORGANISATION	28

2.9.1 MTN E-COMMERCE SERVICES	28
2.9.2 VODAFONE E-COMMERCE SERVICE	29
2.9.3 AIRTEL E-COMMERCE SERVICE	29
CHAPTER THREE	31
RESEARCH METHODOLOGY	31
3.1 INTRODUCTION	31
3.2 RESEARCH DESIGN.....	32
3.3 AREA OF STUDY	33
3.4 POPULATION OF THE STUDY	33
3.5 STATISTICAL INSTRUMENTS FOR DATA COLLECTION	34
3.5.1 DATA COLLECTION PROCEDURE.....	34
3.5.2 DATA PROCESSING AND ANALYSIS.....	35
CHAPTER FOUR.....	36
DATA ANALYSIS AND DISCUSSIONS OF RESULTS	36
4.1 INTRODUCTION	36
4.2 CONTENT / INFORMATION QUALITY OF THE TELECOMS.....	36
4.2.1 CORPORATE / INSTITUTIONAL CUSTOMERS	36
4.2.2 INDIVIDUAL CUSTOMERS.....	46
4.2.3 ORGANISATION	58
4.3 SYSTEM USE OF THE TELECOMS.....	69
4.3.1 Corporate or Institutional customer	69
4.3.2 INDIVIDUAL CUSTOMERS	73
4.3.3 ORGANISATION	79
4.4 SYSTEM QUALITY OF THE TELECOMS.....	84
4.4.1 CORPORATE/ INSTITUTIONAL CUSTOMERS	84
4.4.2 INDIVIDUAL CUSTOMER	88
4.4.3 ORGANISATION	93
4.5 CUSTOMER E-COMMERCE SATISFACTION OF THE TELECOMS.....	99
4.5.1 CORPORATE OR INSTITUTIONAL CUSTOMERS	99
4.5.2 INDIVIDUAL CUSTOMERS.....	103
4.5.3 ORGANISATION	107
4.6 E-COMMERCE SERVICES PROVIDED	111
4.6.1 CORPORATE/ INSTITUTIONAL CUSTOMERS	111
4.6.2 INDIVIDUAL CUSTOMERS	114

4.7 DEMOGRAPHY	117
4.7.1 INDIVIDUAL CUSTOMER’S DEMOGRAPHY	117
4.7.2 INSTITUTIONAL CUSTOMERS	118
CHAPTER FIVE	120
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS	120
5.1 INTRODUCTION	120
5.2 SUMMARY OF FINDINGS	120
5.3 CONCLUSIONS	122
5.4 RECOMMENDATIONS.....	123
5.6 LIMITATIONS	123
REFERENCES	124
APPENDIX A.....	129
QUESTIONNAIRE FOR TELECOMS	129
APPENDIX B	131
QUESTIONNAIRE FOR INDIVIDUAL CUSTOMER	131
APPENDIX C	133
QUESTIONNAIRE FOR INSTITUTIONAL CUSTOMER	133



LIST OF TABLES

Table 1: E-Commerce Benefits.....	11
Table 2: E-Commerce Challenge.....	12
Table 3: E-Commerce Success Factors.....	19
Table 4: Content/Information Quality.....	36
Table 5: Relevancy Cross-tabulation	39
Table 6	39
Table 7: Accuracy Cross-tabulation.....	39
Table 8	40
Table 9: Timely information Cross-tabulation.....	40
Table 10	40
Table 11: Flexible and customised information Cross-tabulation	41
Table 12	41
Table 13: Price information Cross-tabulation.....	42
Table 14	42
Table 15: Complete description of products/services Cross-tabulation.....	42
Table 16	43
Table 17: Information to Support Business Objectives Cross-Tabulation.....	43
Table 18	43
Table 19: Satisfying ethical standards Cross-tabulation	44
Table 20	44
Table 21: Perceived products or services quality Cross-tabulation	45
Table 22	45
Table 23: Content/Information Quality.....	46
Table 24: Relevancy Cross-tabulation	48
Table 25	49
Table 26: Accuracy Cross-tabulation.....	50
Table 27	50
Table 28: Timely information Cross-tabulation.....	51
Table 29	51
Table 30: Flexible and customised information Cross-tabulation	52
Table 31	52
Table 32: Price information Cross-tabulation.....	53
Table 33	53
Table 34: Complete Description of Products/Services	54
Table 35	54
Table 36: Information to support business objectives Cross-tabulation	55
Table 37	55
Table 38: Satisfying ethical standards Cross-tabulation	56
Table 39	56
Table 40: Perceived products or services quality.....	57
Table 41	57
Table 42: Content/Information Quality.....	58
Table 43: Relevancy Cross-tabulation	60
Table 44	60

Table 45: Accuracy Cross-tabulation.....	61
Table 46	61
Table 47: Timely information Cross-tabulation.....	62
Table 48	62
Table 49: Flexible and customized information Cross-tabulation	63
Table 50.....	63
Table 51: Price information Cross-tabulation	64
Table 52	64
Table 53: Complete description of products/services Cross-tabulation.....	65
Table 54	65
Table 55: Information to support business objectives Cross-tabulation	66
Table 56	66
Table 57: Satisfying ethical standards Cross-tabulation	67
Table 58	67
Table 59: Perceived products or services quality Cross-tabulation	68
Table 60	68
Table 61: System Use	69
Table 62: Confidence Cross-tabulation.....	70
Table 63	70
Table 64: Control Cross-tabulation.....	71
Table 65	71
Table 66: Ease of use Cross-tabulation.....	72
Table 67	72
Table 68: Privacy Cross-tabulation.....	73
Table 69	73
Table 70: SYSTEM USE.....	73
Table 71: Confidence Cross-tabulation.....	75
Table 72	75
Table 73: Control Cross-tabulation.....	76
Table 74	76
Table 75: Ease of use Cross-tabulation.....	77
Table 76	77
Table 77: Privacy Cross-tabulation.....	78
Table 78	78
Table 79: System Use	79
Table 80: Confidence Cross-tabulation.....	80
Table 81.....	80
Table 82: Control Cross-tabulation.....	81
Table 83	81
Table 84: Ease of use Cross-tabulation	82
Table 85.....	82
Table 86: Privacy Cross-tabulation.....	83
Table 87.....	83
Table 88: system quality	84
Table 89: Quick responsiveness Cross-tabulation	85

Table 90.....	85
Table 91: Assurance Cross-tabulation.....	86
Table 92.....	86
Table 93: Empathy Cross-tabulation.....	87
Table 94.....	87
Table 95: Following - up - service Cross-tabulation.....	88
Table 96.....	88
Table 97: System Quality	88
Table 98: Quick responsiveness Cross-tabulation	90
Table 99.....	90
Table 100: Assurance Cross-tabulation.....	91
Table 101.....	91
Table 102: Empathy Cross-tabulation.....	92
Table 103.....	92
Table 104: Following - up - service Cross-tabulation.....	93
Table 105.....	93
Table 106: system quality	93
Table 107: Quick responsiveness Cross-tabulation	95
Table 108.....	95
Table 109: Assurance Cross-tabulation.....	96
Table 110.....	96
Table 111: Empathy Cross-tabulation.....	97
Table 112.....	97
Table 113: following - up - service Cross-tabulation.....	98
Table 114.....	98
Table 115: Customer E – Commerce Satisfaction	99
Table 116: Satisfaction with the content Cross-tabulation	100
Table 117.....	101
Table 118: Satisfaction with the design characteristics of the e - commerce system Cross-tabulation.....	101
Table 119.....	101
Table 120: Satisfaction with the service rendered through the e - commerce system Cross-tabulation.....	102
Table 121.....	102
Table 122: Customer E – Commerce Satisfaction	103
Table 123: Satisfaction with the content Cross-tabulation	104
Table 124.....	105
Table 125: Satisfaction with the design characteristics of the e - commerce system Cross-tabulation.....	105
Table 126.....	105
Table 127: Satisfaction with the service rendered through the e - commerce system.....	106
Table 128.....	106
Table 129: customer e – commerce satisfaction	107
Table 130: Satisfaction with the content Cross-tabulation	108
Table 131.....	108

Table 132: Satisfaction with the design characteristics of the e - commerce system.....	109
Table 133.....	109
Table 134: Satisfaction with the service rendered through the e - commerce system Cross-tabulation.....	110
Table 135.....	110
Table 136: Billing, invoicing Cross-tabulation	111
Table 137: Electronic banking Cross-tabulation	112
Table 138: Complaints handling.....	112
Table 139: Mobile money /e-value Cross-tabulation	113
Table 140: Billing, invoicing Cross-tabulation	114
Table 141: Mobile money Cross-tabulation.....	115
Table 142: Electronic banking Cross-tabulation	116



LIST OF FIGURES

Figure 1 INSTITUTIONAL CUSTOMERS INFORMATION QUALITY RANKING	38
Figure 2 INDIVIDUAL CUSTOMERS INFORMATION QUALITY RANKING	48
Figure 3 ORGANISATION CONTENT/INFORMATION QUALITY RANKING	60
Figure 4 INSTITUTIONAL CUSTOMER SYSTEM USE RANKING	70
Figure 5 INDIVIDUAL CUSTOMERS SYSTEM USE RANKING	74
Figure 6 ORGANISATION SYSTEM USE RANKING	80
Figure 7 INSTITUTIONAL CUSTOMERS SYSTEM QUALITY RANKING.....	85
Figure 8 INDIVIDUAL CUSTOMER SYSTEM QUALITY RANKING	90
Figure 9 ORGANISATION SYSTEM QUALITY RANKING.....	94
Figure 10 INSTITUTIONAL CUSTOMER E – COMMERCE SATISFACTION	100
Figure 11 INDIVIDUAL CUSTOMER E – COMMERCE SATISFACTION.....	104
Figure 12 ORGANISATION CUSTOMER E – COMMERCE SATISFACTION	108
Figure 13 INDIVIDUAL CUSTOMER’S AGE	117
Figure 14 INDIVIDUAL CUSTOMER’S GENDER	117
Figure 15 INSTITUTIONAL CUSTOMER’S AGE.....	118
Figure 16 INSTITUTIONAL CUSTOMER’S GENDER.....	118



CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

E-commerce is simply, the buying and selling of products and services over a computer network which also include the transfer and exchange of money for services rendered electronically. The telecommunication networks are getting increasingly popular as a new distribution channel e-products and e-services. The success in e-commerce goes a long way to enhance the way business is done and its relevance to firms in terms of benefit from e-commerce implementation and satisfaction with the implementation. Both the popular and academic literatures promise many benefits to be derived from e-commerce systems. Some of these include expanding firms' "reach" without compromising "richness" (Evans and Wurster, 2000) and reducing market, administrative and operational costs (Chappell and Feindt, 1999; Coppel, 2000). E-commerce systems additionally serve transactional and customer service purposes (Young and Benamati, 2000) and allow the on-line conduct of the three phases of marketing: pre-sale, on-line sale and after-sale (Schubert and Selz, 2001). Since e-commerce became a major issue there have been many attempts to create and operate successful business facilitated by this technology. The establishment of a very large number of Dot.Com businesses during the second half of the 1990s reflects the high hopes which were placed in this technology. The number of successes has been relatively small and the lessons, which can be learnt from these organisations, are not yet well known. Many traditional companies have started adopting e-commerce as a secondary arm to their business. This thesis will focus on business to business (B2B) and business to consumer (B2C) aspect of e-commerce and identifies the success factors that are

crucial to organisations in Koforidua, doing business on the telecom network. Since the project is about assessing how the telecommunication organisations (MTN, VODAPHONE AIRTEL and TIGO) do business electronically and the rate of success, the e-commerce success models by Delone and Mclean comes to play to capture and display the important elements in a simple fashion and to offer a handy shorthand way of referring to, or analysing, a more complicated state of affairs by concentrating on the essentials and ignoring unnecessary complications. There is a general scarcity of models and frame works for evaluating or measuring e-commerce success. The highly accelerated growing of e-commerce in the telecommunication organisation has already become one of the most prominent examples of electronic commerce success. The business models that underlie e-commerce systems determine the nature of the product or service offering, the actors and role players.

In addition to capturing, processing and presenting information to support customer and business decision making, e-commerce systems enable organizations to market their products and services online and provide a range of services that customers themselves can perform without direct human assistance.

1.2 STATEMENT OF PROBLEM

What factors contribute to the success of e-commerce in an organisation which would bring about full utilization of the technology in business in a telecommunication industry? To measure which organisation (VODAFONE, MTN, AIRTEL and TIGO) is more successful in e-commerce, using the Delone and Mclean's Model because '*success*' is a multidimensional concept that can be assessed at different levels such as technical, individual, group, organizational and

using a number of not necessarily complementary criteria such as economic, financial, behavioural and perceptual (Molla, A. & Licker, P.S. 2005).

Even though telecommunication is a vehicle of successful e-commerce, available and majority have access to the various network, e-commerce utilization is still less in Koforidua in these organisations. Since users of e-commerce service often have high expectation for quality service and if those expectations are not met, it affects doing business electronically and this is what happens in Koforidua. A number of performance problems in E-Commerce systems have been observed, mainly due to heavier-than anticipated loads and the consequent inability to satisfy customer requirements. Assessing the use level and the satisfaction of users and customers in interacting with e-commerce systems is low because the benefit, the overall effectiveness of e-commerce systems and its impact on organizational performance have been investigated but not made known.

Businesses depend on their customers. In fact, customers are the very livelihood of business organizations. Customer satisfaction has always been assumed as a necessary condition for the success of organizations, which telecoms underestimate benefits that are derived from a high level of customer satisfaction.

E-commerce in developing countries especially Africa has not been sufficiently researched (Molla & Licker, 2005),

1.3 OBJECTIVES OF THE STUDY

This is to assess the success of e-commerce in the telecommunication organisation at VODAFONE, MTN, AIRTEL and TIGO. The specific objectives are:

- To assess content or information quality
- To assess the system quality

- To assess the system use
- To also assess the e-commerce customer satisfaction rendered through e-commerce system of the telecoms

1.4 SIGNIFICANCE OR RELEVANCE OF STUDY

This thesis is to show that Koforidua is not immune to the e-commerce hype which helps economic activities of doing business electronically. The model used to assess the e-commerce success in Koforidua can be used when implementing e-commerce for the businesses in Ghana since it encapsulate a series of stage or project for which different driving forces may trigger the initiative. It will also find out ways of attaining success in e-commerce of our organisations; where managers understand the magnitude of benefit of doing business successful online or electronically. The study provides a literary and a comprehensive framework as the result for the formation of consumers' usage decisions

Following the growth of electronic devices and Internet, e-commerce use and adoption has been flourishingly developing with, notably the widespread of utilizing the mobile services provided by telecom organisations. It will also make managers of the telecommunication organisations to understand the opportunities available to them and recognise how their companies may be vulnerable if rivals seize those opportunities first. In an area such as e-commerce, customers demand a high quality of the service they receive, since it is easy to move away to another, if they perceive the current one to be unsatisfactory.

Active inertia by Donald N. Sull an assistant professor, which describe managers who tend to follow established patterns of strategies and the path that led them to success in the past, must be avoided by managers to allow them welcome new

strategies. This study provides insights that will improve our understanding of the impact of various factors related to e-commerce success in the context of Koforidua. The study will add value to the literature of e-commerce firstly in terms of improving our understanding of the impact of successful e-commerce on the economy of the region and the country as a whole. Secondly, by comparing the relationships between the telecom service and e-commerce in Koforidua.

1.5 SCOPE OF STUDY

E-commerce activity in Koforidua is steadily growing as a result of vast improvements in telecommunication services. The Telecommunications Industry has experienced exponential growth in the last few years

This research will be conducted and restricted to Koforidua Municipality where these organisations are located. It is intended to be completed within four month, July 2012. The study covers the Delone and Mclean model for assessing success. It will consist of assessing the magnitude of the success between the organisations.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

A review of studies that have so far been attempted, indicates that success in e-commerce have enhance the way business is done and its relevance to firms in terms of benefit from e-commerce implementation and satisfaction with the implementation in the business process of an organisation which contribute to e-commerce success.

Electronic Commerce (e-commerce) applications support the interaction between different parties participating in a commerce transaction via the network, as well as the management of the data involved in the process (Diwakar and Marathe, 2000).

A review of the literature revealed that, to date, no research has been conducted on measuring e-commerce success in the telecommunication organisation in koforidua and this is the first. Understanding the factors that influence e-commerce success assists firm managers with focusing their efforts on key areas in their e-commerce businesses which contribute most to increasing customer retention. This study applies the e-Commerce success metrics identified by DeLone and McLean to the context of commerce in virtual worlds. The DeLone and McLean Information Systems Success Model is an existing success measurement framework that has found wide application since its publication in 1992.

2.2 THE BENEFIT IN E-COMMERCE SUCCESS

Zwass (1996), defines e-commerce as “the sharing of business information, maintaining business relationships and conducting business transactions by means of telecommunications networks” (Applegate, 1999, Fellenstein and Wood, 2000) also

support this view and consider e-commerce to include various processes within and outside the organization in addition to buying and selling activities.

The uptake of e-commerce is influenced by its potential to create business value and by awareness of its participants of the potential benefits (Salnoske, 1997). Until the widespread deployment of Internet-based technologies in the early 1990s, enterprises that conducted e-commerce used almost exclusively a closed and standardized form of computer-to-computer communication known as electronic data interchange (EDI). In fact, the term “electronic commerce” was virtually synonymous with “EDI” (Fellenstein and Wood, 2000; Senn, 2000). One of the most evident benefits of e-commerce is economic efficiency resulting from the reduction in communication cost, low cost technological infrastructure, speedier and more economic electronic transactions with suppliers, lower global information sharing and advertising costs and cheaper customer service alternatives. Also corporations are encouraged to use e-commerce in marketing and promotion to capture international markets, both big and small (en.wikibooks.org). Riggins and Rhee (1996) propose several uses of e-commerce ranging from externally focused e-commerce with the objective of facilitating new or enhancing existing business relationships (such as business to consumer and business to business) to intra-organizational systems with the purpose of improving coordination with internal business. Electronic commerce as a way of doing business has significant advantages; organizations are embracing e-commerce as a means of expanding markets, improving customer service, reducing costs, and enhancing productivity (Wenninger, 1999). Efficiencies are experienced in marketing and advertising; E-commerce makes disintermediation possible, eliminating the middleman (Turban et al. 2004). Other efficiencies include reduced inventory and around the clock access

at no additional cost. E-commerce enables higher customization (Choi & Whinston, 2000) allowing organizations to improve customer service. A vital benefit of E-commerce is access to global markets which enables businesses to expand their reach. The Internet allows for unconstrained awareness, visibility and opportunity for an organization to promote its products and services (Senn, 2000). The traditional human-to-human business interaction has been mediated by human-to-machine interaction (Parasuraman et al. 2000). Prior to my study a lot of literature has been reviewed on the variables of the e-commerce success of the Mclean and Delone. In addition, benefit of e-commerce can be categories in tangible and intangible.

2.3 TANGIBLE AND INTANGIBLE BENEFIT OF E-COMMERCE

2.3.1 TANGIBLE BENEFIT OF E-COMMERCE

E-commerce can enhance the way business is done in an organisation which will give it a competitive advantage over its competitors where process like stock control, picking, packing and delivery, returns, communication and personalised product come to play in e-commerce (Fraser et al. 2000; Lee 2001; Riggins, 1999). Also it improves decision-making, improves productivity, increases sales, cost reductions, improves profits, market efficiency, consumer welfare, creation of jobs, and economic development. From the outset, this growing virtual marketplace has staked its existence on the success of electronic means to accelerate commercial transactions and to improve efficiencies in business organizations and processes. In a way, and perhaps unknowingly, cyberspace companies are taking part in a global economic experiment to increase market efficiency by lowering transaction costs, a reduction that benefits both producers and consumers. The very nature of the Internet as a communications tool also allows it to serve as an accelerating channel between the

customer and supplier, allowing easy feedback and thus streamlining commercial interactions.

E-commerce help in automating processes that contribute to automating merchandising process and enables immediate transactions by respond quickly to incoming on-line transaction by automatically directing information to the right agent or support team, direct savings in costs and time which aims to automate manual processes therefore improving administrative costs and reducing errors. The impact of e-commerce benefits is measured as improved speed of delivery, and market reach (Murkhopadyay et al., 1995; Premkumar et al., 1994). E-commerce benefit a business by making most of it operation and process automated such as categorizing and prioritising information, suggesting relevant response templates, or sending automated replies(Fraser et al. 2000; Dan et al, 2001)

E-commerce has also transformed the traditional way of doing business by giving business a better chance to compete in their market and support them to establish a commercial presence in foreign markets, entry and exist. E-commerce transforms transactions and creates new marketplaces by altering the process by which transactions takes places, putting the supply chain online to improve inventory control and quality management, also innovating new products service by personally tailored product and creating new markets in time, space and information that did not previously exist (Kent and Lee, 1999; Grover and Ramanlal, 2000; Kare-Silver, 1998; Fergusson, 1999).

E-commerce also helps to retained and increase customer base, as e-commerce can be used to trade with customers in all countries across the world, in all currencies. It increases the organisations presence all over the world in that customers can patronise the product and services of the organisation. It helps the organization to

increase its production and provide services to their customers faster and improved customer service which is the quality of tasks that an organization performs to increase sales, retain its customers and improve the quality of services provided.

The costs experienced by organizations in their daily business operations from paperwork, paying bills and making products or delivering services are largely reduced due to the automation processes of e-commerce applications. These include operational costs, administrative costs, and transaction costs.

Operational benefits are realized when the total costs after e-commerce adoption are lower than the costs of operating the business before adopting e-commerce. Past researchers have noted that the Internet is an inexpensive, flexible, and efficient means for businesses to trade and communicate (Hruska, 1995; Nath et al, 1998; Raman, 1996; Riggins and Rhee, 1998; Senn, 2000; Zwass, 1996).

These niche sites save the customer time and assures them that the company they are doing business with is focused on exactly what they need. E-commerce will render an organisation establishing itself as unique in a particular area to focus on a distinct market segments and providing their needs.

2.3.2 INTANGIBLE BENEFIT OF E-COMMERCE

E-commerce enhances the well-being of customers and education of customers (Whinston et al. 1997; Lee 2001) to provide post-sales support to current and past customer which may be cost avoidance for the organisation and generate premium from customer service. It also helps to have intimate knowledge of customer needs through establishing learning relationships. Because of this customer profitability, retention and loyalty will be gained by the organisation.

E-commerce increases revenue by opening up new markets, new products and services and allowing firms to gain advantage over competitors by developing new

customer loyalty. Image building and competitive advantage is a benefit of e-commerce success through good customer service and competitive differentiation (Kalakota et al. 1999; Hoffman et al. 1999; Straub, 2000; Kare-Silver, 1998). It brings the organisation close to the customers a click away and makes the organisations products and service more convenient (Hannon, 1998; Winner, 1997).

. Steinfield, et al describe a large, multinational, electrical appliance and consumer electronics manufacturer that used France Telecom's Teletel system to support EDI-like connections to approximately 10,000 separate retailers and independent service engineers throughout France.

Table 1: E-Commerce Benefits

Benefits	Research/literature
TANGIBLE BENEFITS	
Business efficiency	(Fraser et al. 2000; Lee 2001; Riggins, 1999)
Increased automation of processes	(Fraser et al. 2000; Dan et al, 2001).
Transformation of traditional market chain	(Fraser et al. 2000)
Retained and expanded customer base	(Fraser et al. 2000; Rahul, Biju and Abraham 2001; Turban, et al, 2000).
Reduced operation costs	(Kent and Lee, 1999; Grover and Ramanlal, 2000; Kare-Silver, 1998; Fergusson, 1999).
Acquisition of a niche market	(Riggins, 1999; Rahul et al. 2001)
INTANGIBLE BENEFITS	
Enhancing well-being and education of customers	(Whinston et al. 1997; Lee 2001)
Consumer loyalty	(Lee 2001; Hoffman et al. 1999; Coulson, 1999)
Competitive advantage	(Kalakota et al. 1999; Hoffman et al. 1999; Straub, 2000; Kare-Silver, 1998)
Convenient shopping	(Hannon, 1998; Winner, 1997)

Source: adapted from Jozse Kuzic, Julie Fisher and Angela Scollary (2002, p.1608).

2.4 CHALLENGES OF E-COMMERCE SUCCESS

To have a successful e-commerce and benefit some challenges and inhibitors must be overcome.

Table 2: E-Commerce Challenge

Challenges	Research/literature
Technological challenges	
Security	(Koved et al. 2001; Czerniawska & Potter, 1998; Alexander, 1998)
Web site issues	(Watson et al. 1999; Zhang & von Dran 2000; Lee 2001)
Technology issues including costs, software, infrastructure	(Hoffman et al. 1999; Abeyesekera et al. 1999; Rahul et al. 2001)
Managerial challenges	
People and organisational issues	(Hoffman et al. 1999; Feeny 2000)
Obtaining senior management backing	(Feeny 2000)
Business challenges	
Customer service	(Whinston et al. 1997; Alter, 1999; Lee 2001)
Customers' old habits	(Hoffman et al. 1999; Schwartz, 1999)
Legal issues	(Hoffman et al. 1999; Lawrence et al. 1998; de Souza & von Wiese 2000)

Source: adapted from Joze Kuzic, Julie Fisher and Angela Scollary (2002, p.1608).

2.4.1 TECHNOLOGICAL CHALLENGES OF E-COMMERCE SUCCESS

An organization can gain customer profitability, retention and loyalty when the transaction with that organisation is secure. Real and perceived fears of revealing personal information and customers' feelings of insecurity provide unique challenges to e-commerce operators to find ways in which to initiate e-commerce relationships. Fear of the lack of security is one of the factors that have been identified in most

studies as affecting E-commerce growth and development. The extent to which e-commerce systems ensure that transactions are conducted without any breach of security is an important consideration that might affect e-commerce use and customers' e-commerce satisfaction (Han and Noh, 1999; NNI, 1999). Customers are concerned about the level of security present when providing sensitive information online (Warrington et al, 2000) and will use e-commerce only when they develop a certain level of trust (Ferraro, 1998). Security relates to the protection of information or systems from unsanctioned intrusions or outflows (Lobel, 1999).

Privacy, on the other hand, refers to the ability of an individual to keep his/her identity confidential during the course of a transaction and the protection of various types of data that are collected (with or without the knowledge of customers) during customers' interaction with e-commerce systems. Privacy issues such as the amount of personal information required completing transactions, the privacy policy and rules followed by e-commerce sites and customers' disposition towards the provision and disclosure of personal data – may affect the Use of E-commerce systems and Customer Satisfaction (Han and Noh 2000). Transactions security on the Internet has received considerable attention in theory and practice, both directly in the form of safe and accurate transfers of money or payment-credit information, and indirectly in the form of transaction risks-transaction costs (Liao and Tow, 2001). Customers would not pay for products or services over the network if financial information could not be transmitted securely: secure transactions are critical to the success of E-commerce.

2.4.2 MANAGERIAL CHALLENGES OF E-COMMERCE

E-commerce is a hugely encompassing area for management. Chan and Swatmann, 1999 noted that management involvement is imperative for the success of electronic

commerce implementation. Cragg and King discovered that the strongest inhibiting factors for small firms were lack of information systems knowledge, lack of managerial time, poor support, and limited financial resources. Managers do not require an in-depth knowledge of computers or telecommunications to manage e-commerce effectively. What they need to understand is how e-commerce can contribute effectively to achieving key business objectives such as improving quality, reducing time to market, and improving productivity within the organization. Companies, which have been successful, rate management involvement as the highest factor in the implementation of e-commerce (Daniel et al., 2002). Introducing e-commerce, managers may be faced with ethical issues such as, what to do with the old employees who are difficult to retrain? Implementing organisation transformation by the use of e-commerce may encourage companies to involve unethical or even illegal actions. Companies may also use IT to monitor activities of their employees and customers, leading to an invasion of the privacy of individuals. “Browsing the Internet” is exciting yet time consuming activity. Employees can be tempted to surf during work hours. Control can be achieved by limiting the information that employees have access to and by using special monitoring software, but this may have an adverse effect on morale and lead to employees feeling their company is taking a “big brother” attitude.

Senior managers have the authority to embrace change and recognize the strategic importance of e-commerce to the company’s future. Managers are required to think strategically, creatively and “outside the box” about the opportunities and challenges of e-business. They also need to be prepared to reengineer processes to improve existing processes. Managers have the power and authority to implement industry wide standards and should have a realistic view of significant effort and funding to

make the investment (Nilpa and Ray, 2000). The ordinary aspects of managing a company administrative task, scheduling meetings, supervision of remotely located employees, and so on appear to be the greatest challenge of a virtual company because coordinating such matters most often depends on traditional means of communication. (Whinston et al. 1997; Alter, 1999; Lee 2001).

E-Commerce can result in a fundamental and radical change in the manner in which business is done. Therefore, resistance to change from employees, vendors and customers may develop. Education, training and publicity over an extended time period are possible solutions to the problem. Research has shown that organising training and awareness programs to make staff conversant with what happens has had significant effect in improving understanding of systems and technologies, which in turn has led to greater acceptance of the implementation. A possible difficulty in implementing e-commerce relates to human nature. The technology is new to many IS directors and employees and so may require new sets of skills. Very few people have expertise in e-commerce. There are many implementation issues that require expertise, such as when to offer special promotions on the Internet or mobile, and what kind of customer incentives is appropriate. Because of the complexity and multifaceted nature of e-commerce, the importance of preparing the implementation plan becomes strategically more significant. Such a plan should include goals, budgets, timetables, and contingency plans and should address mainly the legal, financial, technological, organizational and ethical issues that can surface through implementation. Management plays a significant and valuable role in influencing implementation success. They have to be there to provide support, both technical and emotional, to staff in the implementation. It has to be considered whether the

company has the right infrastructure, both in terms of the computer equipment and the trained staff to handle the volume of electronic communication.

The impacts of e-commerce on organisational structure, people, marketing procedures, and profitability may be dramatic. Therefore establishing a committee or organisational unit to develop strategy and to manage electronic commerce is necessary. The success or failure of electronic commerce within an organisation can be summarised as a response to both internal factors driven by critical issues such as managerial responses and organisational culture and by external factors as described by Thong and Yap, 1999 such as the need for competitiveness and adding business value. Communication via networks raises the issues of integrity, confidentiality, and security of the data being transferred. It technical issues that lead to management issues of how well the company and its customers are prepared to trust the communication and how this will then affect their behaviour. Some people believe the increased use of the Internet will eventually lead to overload; therefore companies should develop a contingency plan to be less dependent on the use of the Internet. However this can affect company growth potential. The issue is how far a company can commit itself to rely on electronic trading.

In order to have a successful e-commerce development it is necessary to have board level commitment, and support from all departments, people involved and stakeholders (Hoffman et al. 1999; Feeny 2000). Projects have been known to fail without such commitment.

2.4.3 BUSINESS CHALLENGES OF E-COMMERCE

The challenge of retaining customers is more critical than ever. Online customers are more sophisticated and demanding. A good online customer service must be

supported by other traditional customer services such as call centres and return spots.

In addition,

retailers can leverage customer interaction time and information to make recommendations and suggestions leading to increased sales.

Customer service includes responsiveness, assurance, reliability, tangibility and empathy. Responsiveness concerns how well prepared merchants are to meet the diverse needs of shoppers during the different phases of shopping. Assurance is the degree to which the service provider instils confidence in customers. Reliability is the degree to which the service provider can be counted on to deliver on his or her promises. The concept of tangibility refers to the ability of the vendor to replace the real product with an appealing and information-rich virtual substitute. Finally, empathy is defined as the degree to which the vendor is able to adapt to the individual needs of the consumer. Consumer risk is split into economic, social, performance and personal risks. The economic risk stems from the possibility of monetary loss associated with buying a product. Personal risk has to be understood in terms of the concept of environmental control (Hoffman et al., 1999). Performance risk involves the perception that a product or service may fail to meet expectations. Finally, Social risk is concerned with both the consumer's self-perception, and that of their peers.

Hoffman et al. (1999) describe, from the point of view of consumers' information privacy concerns, some other factors that can greatly influence on-line shopping adoption: Environmental control and secondary use of information control:

Environmental control is defined as the consumer's ability to control the action of other people in the environment during a market transaction. It implies security and economic risk and it is proportional to the level of anonymity.

Secondary use of information control is defined as the consumer's ability to control the dissemination of information related to or provided during such transactions or behaviours to those who were not present.

Many companies spend time and investment at the front end but neglect the importance at the back end, where orders are processed. Fulfilment is such a critical factor of customer retention. Therefore, company needs to emphasis on customer satisfaction all the way through the transaction. Kotler stressed that trustworthy, dependable, and reliable characteristics are important to trigger business transactions. There must be a single mechanism for collecting and storing data, analysing the customer data and executing events bases on such analysis to drive interactions that encourage customer loyalty. This means there must be a single business rule engine that recognise who the customer is, what channel the customer came through, what the value of the customer is, and what the most appropriate action to take, given the customer's value recent interactions. Companies understanding customer decision-making process, by trying to view your services and product through the eyes of your customers to see what is required of them, converting click or access stream to purchases. . Peters and Fletcher, Furthermore, advances in information technology have fundamentally altered the channels through which companies and customers maintain their relationships. The capacity to obtain and apply customer information within processes has become a key strategic issue.

2.5 SUCCESS FACTORS OF E-COMMERCE

Factors critical to success of e-commerce should be identify and evaluate to maximise business values. The e-commerce success factors identified from the literature are also divided into three categories - technological, managerial, and business related.

Table 3: E-Commerce Success Factors

Success factors	Research/literature
Technological success factors	
Secure transactions	(Liao and Tow, 2001; Mahadevan, 2000)
Web site functionality and features such as, catalogues, frequently asked questions, CRM, decision support	(Zhang & von Dran 2000; Riggins, 1999; Baron, et al. 2000; Liu & Arnett, 2000)
Payment issues credit cards & e- payment	(Panurach, 1996; Maxwell et al. 1999; Sauer 2000)
Integration of web site to all business processes	(Sauer 2000; Ruud & Deutz, 1999; McClure, 1998; Zarowin, 1999)
Adequate resources and appropriate E-commerce infrastructure	(Sauer 2000; Mahadevan, 2000)
Managerial Success Factors	
Effective project leadership – company vision	(Wilcocks and Plant 2000)
Forming alliances – with suppliers, technology providers, customers	(Riggins, 1999; Coulston, 1999)
Appropriate organisational structure	(Tetteh and Burn. 1999; El Sawy et al 1999)
Business success factors	
Advertising on and off line	(Zarowin, 1999; Minoli & Minoli, 1997; Mahadevan, 2000)
Rapid delivery	(Rutter and Southerton, 2000; Castelluccio, 2000)
Disintermediation	(Mahadevan, 2000; Riggins 1999)
More personalised customer service	(Mahadevan, 2000; El Sawy, 1999; Baker, 1999)
Market responsiveness	(Mahadevan, 2000; El Sawy, 1999; Baker, 1999)

Source: adapted from Joze Kuzic, Julie Fisher and Angela Scollary (2002, p.1608).

There are opportunities for business in developing countries to gain access to external markets and form linkages with business operating in the markets (Singh, 1999; Wood, 2003). Some evidences of success are also documented (Chaitoo, 2000; Jessop 2003; Wood, 2003).

2.6 E-COMMERCE SYSTEM QUALITY

System quality is the desirable characteristics of an information system. For example: ease of use, system flexibility, system reliability, and ease of learning, as well as system features of intuitiveness, sophistication, flexibility, and response times (Delone P. and Mclean, 2008)

Gummerus, Liljander, Pura and Van Riel [2004] define the user interface as the channel through which consumers are in contact with the e-service provider. Park and Kim [2003] found that the quality of the user interface affects the customer satisfaction directly, since it provides physical evidence of the service provider's competence as well as facilitating effortless use of the service. Srinivansan, Anderson, and Pannavolu [2002] proved that the interactivity aspect of e-commerce applications is strongly related to customer loyalty. Also, Gummerus et al. [2004] suggested that the quality of a user interface is expected to affect trust directly. Similarly, Roy, Dewit, and Aubert [2001] found that ease of navigation, interface design, and user guidance affect consumer establishment of trust. . Anderson and Bezuidenhout stressed that reliability is also needed, especially in consumer electronic markets. A reliable system should have quick error recovery and ensure correct operation.

2.6.1 CONTENT QUALITY

Information / Content quality is the desirable characteristics of the system outputs; that is, management reports and Web pages. For example: relevance, understandability, accuracy, conciseness, completeness, currency, timeliness, and usability (Petter, Delone and Mclean, 2008). Content quality refers to the characteristics and presentation of information in the e-commerce system (Zhang et

al 2000, Von Dran et al, 1999). Content characteristics include attributes of the content that is presented on the e-commerce site. The information systems literature has plainly highlight the importance of information quality as one of the determinants of user satisfaction and their intention to use a particular system and identified a number of attributes such as accuracy, up-to-datedness, comprehensiveness, understandability, completeness, timeliness, reliability, relevancy, currency, preciseness.

Information quality provided by e-commerce telecom service contents can greatly affect the intention to purchase. Also, if the information provided by the telecom service is reliable and accurate, then this will increase online customer satisfaction and trust which will lead the customer to make the initial purchase. Thus customer satisfaction and trust in e-commerce telecom services can affect consumer retention or customer loyalty positively. On the other hand, “content presentation” refers to the organization and presentation of the information content and to what extent a user controls (customizes) the content (Von Dran et al, 1999). The quality of the content and the extent to which that content meets the needs and expectations of customers might affect the success of the organization and determine whether a customer will stay. Findings from Turban and Gehrke (2000) and Zhang et al (2000) indicate that Content Quality is one of the variables that affect the satisfaction of Web site precisely e-commerce users. Chen and Wells (1999) also found that the quality of the content was one of the determinants of positive customer attitudes towards Web sites.

According to Michalak and Jones (2003), the main product of online commerce is information.) On the other hand, Martin and Matlay (2003) found that the main applications of e-commerce are related to marketing activities. Research by

Hoffman, Novak and Chatterjee (1995) found that the basic usage by commercial websites is in the area of marketing communication. It is suggested that common e-commerce applications such as email and websites could be employed as cost-effective marketing tools in terms of information dissemination, advertising, customers support and servicing as well as brand building (Auger & Gallagher, 1996, Korgaonkar & Wolin, 2002). Long-term competitive advantage can only be obtained by constantly updating the content and functionality of the mobile service or Web site and by redesigning business processes to take advantage of the new technology.

2.6.2 SERVICE QUALITY

Service quality is the quality of the support that system users receive from the telecommunication organisations. For example: responsiveness, accuracy, reliability, technical competence, and empathy of the personnel staff. SERVQUAL, adapted from the field of marketing, is a popular instrument for measuring IS service quality (Pitt et al., 1995).

SERVQUAL measures the service quality of IT departments, as opposed to individual IT applications, by measuring and comparing user expectations and their perceptions of the organisations. E-commerce generates efficiency benefits to customers by reducing the time required to complete purchase interaction tasks (Kalakota and Whinston, 1997). Anderson and Bezuïdenhoudt stressed that reliability is also needed, especially in consumer electronic markets. A reliable system should have quick error recovery and ensure correct operation. To make it more challenging, management and Web designers should carefully consider how to arrange and present customer service opportunities. This care is necessary because of the lack of face-to-face contact on the network.

2.7 SYSTEM USE

System use is the degree and manner in which staff and customers utilize the capabilities of an information system. For example: amount of use, frequency of use, nature of use, appropriateness of use, extent of use, and purpose of use (Petter, Delone and Mclean, 2008). The way in which customers use the network for e-commerce is also important. Success of the e-commerce is often employed as a measurement of success of the entire system (Ives, Hamilton and Davis 1980).

Usage of e-commerce could be categorized into the following areas: communication, researching for information, marketing, business with suppliers and business with customers. Telecommunication usage can be categorized into commerce, promotion, content, corporate information and search agents (Hsieh & Lin 1998). Friedman concluded that obtaining consumers' confidence in e-commerce transactions is very important. . Without it, customers will not use on-line sales and payment functions. Customers should be able to trust the system and use its on-line purchase capabilities (Allen 1996). They should feel that the system is both under their control and easy to use.

According to Technology Acceptance Model (TAM) (Davis 1989), the intention to accept or use a new technology is determined by its perceived usefulness and perceived ease of use. Based on this e-commerce is making customers comfortable in their transaction and the ease it comes with it usage. According to Seddon and Kiew's for voluntary systems, use is an appropriate measure; however, if system use is mandatory, usefulness is a better measure of IS success than use.

2.8 CUSTOMER E-COMMERCE SATISFACTION

User satisfaction is users' level of satisfaction with reports, Web sites, and support services. For example, the most widely used multi-attribute instrument for measuring

user information satisfaction can be found in Ives et al. (1983) (Petter, Delone and Mclean, 2008).

The use of Customer E-commerce Satisfaction provides an appropriate proxy for assessing e-commerce success and extending the missing link to organizational performance, which was the subject of much criticism in the user satisfaction literature. In fact, some (see for example McColl-Kennedy and Schneider, 2000; Anderson and Fornell, 2000) argue that satisfied customers could be considered as assets (customer capital) in themselves; should be acknowledged as such on the balance sheet and monitored just like physical assets. In practice, however, CES is a complex attitude and one might need to differentiate various facets of CES such as satisfaction with the content, satisfaction with the design characteristics of the e-commerce system, satisfaction with the service rendered through the e-commerce system and so on. Continuous assessments enable the identification of trends and the comparison of CES results for one point in time with what they were one or two years earlier.

According to Patricia B. Seybold, the real secret of success in e-commerce today revolves around customers. She advises companies to start by focusing on their customers and figuring out what the customers' desires and needs. James Anderson and James Narus said "Gauging and communicating what your product and services are worth to customers has never been more important" Another way to look at customer service is to looking at your products or services through your customer's eyes.

2.8.1 TRUST

Consumers will enter into a trusting and enduring relationship with suppliers on the basis of the exchange of information. They will give their loyalty if their

expectations are fulfilled. Trust-based marketing presents enormous opportunities for gain, but the threat it poses to existing interests (and to all inferior product lines) will be a major deterrent to innovation. The most important element of trust is fulfilment. Quite simply, trust is earned by meeting expectations (Urban et al, 2000).

E-commerce and the substitution of the 'physical' with the 'virtual' has added new importance to the role of trust. On the one hand, there is an imperative need for trust for the conversion of mobile owner to network shoppers, dictated by the reported reluctance of consumers to engage in electronic transactions. Trust is an essential prerequisite for establishing and maintaining customer relationships. This constitutes a new asset category for business online, as the accumulation of relationship capital can determine customer retention and provide a new foundation for marketing and sales revenue (Tapscott et al., 2000). Hence, characterized as the essential of the digital economy and the future currency of the Internet (Urban et al., 2000), trust becomes a necessity for e-commerce, not only as a facilitator of customer acquisition, but also for enabling relationship building and ensuring customer loyalty. Trust is a highly complex, multi-dimensional (Lewis and Weigert, 1985; Butler, 1991; Barber, 1983) and context-specific (Luhmann, 1979) phenomenon.

A survey of the available literature on trust in e-commerce was done and identified five research categories, the online system or application, the vendor, Internet shopping process, people at both intra-organizational and inter-organizational level and firm trust in e-business. Each of the five categories was further analysed with respect to the determinants, approaches and consequences of each trust type. The factors proposed to have an impact on trust are associated with the personality of the online consumer, the system, the information, the vendor, the transaction, the business stakeholders, and the external environment.

Determinant factors represent factors that influence trust in e-commerce. They are related to perceptions regarding the trustworthiness of context-specific conditions, such as the risk inherent in a situation (Kini and Choobineh, 2000; Einwiller et al., 2000), while others are defined with respect to attributes of the trusted entity, which can be impersonal or human-specific. Impersonal attributes include security, privacy (Hoffman et al., 1999), the information provided, the dependability of technological infrastructure as well as the guarantees of the external environment (Tan and Thoen, 2000). Moreover, human-specific attributes, such as the ability, integrity and benevolence of the vendor (Ambrose and Johnson, 1998; Cheung and Lee, 2000) or the person in question and the reliability of the stakeholders have been found as properties of the trustee affecting individual related trust. Moreover, a great deal of work has revealed various types of barriers inhibiting the growth of e-commerce, with respect to consumer attitude online (Hoffman et al., 1999), e-business behaviour towards capitalizing on the opportunities offered by e-commerce and the cooperative behaviour among individuals at interpersonal and organizational level (Friedman et al., 2000).

The approaches proposed, that addresses the problem of lack of trust, are mainly recommendations and suggested guidelines to designers of Information Systems (IS) (Shneiderman, 2000) and Internet companies towards establishing partial dimensions of trust in various contexts and does not include specific methods or processes for the formation of trust.

They involve the design of the e-commerce system interface, the content and the range of information provided, the way it is organized and displayed, security and privacy issues, the provision of services, fulfillment, and the business strategy in general (Urban et al., 2000; Einwiller et al., 2000).

They also comprise proposed measures that should be taken in a larger perspective outside the organizational boundaries from institutions and governments primarily aiming to reduce the risk associated with the conduction of transactions (Schoder and Yin, 2000).

These are presented in terms of mechanisms that can put in place the conditions that can potentially facilitate the institutionalization of trust and the establishment of a trustworthy environment for commercial telecom service interaction.

The consequences of trust depend on the trust type under question. Trust has been considered as a requirement that may result in reducing consumers' perceived risk (Cheung and Lee, 2000; Einwiller et al., 2000), the e-commerce adoption and the expansion of e-business markets and the full exploitation of technological developments (Jones, 2000).

The trust that customers have in the system to conclude their transaction securely and to maintain the privacy of their personal information affect their level of satisfaction and their voluntary use of e-commerce systems (Warrington et al, 2000).

2.8.2 SUPPORT AND SERVICE

Customers value highly the support and service the operator provides during all phases (pre, during and after-sale) of the transaction (Young and Benamati, 2000).

By using Web or mobile service to support transaction or pre-purchase interaction, businesses are able to essentially eliminate information float and thereby improve a decision maker's effectiveness by making information available on a continuous basis. This support and service can take different forms and may include the following: site intelligence (the extent to which the e-commerce system remembers repeat users and aids them in achieving goals), relevant search facilities, feedback, calculators, currency converters, tracking order or shipment status, account

maintenance, payment alternatives, FAQs (Kardaras and Karakostas, 1999; Schubert and Selz, 2001).

2.9 OVERVIEW OF THE TELECOMMUNICATION ORGANISATION

2.9.1 MTN E-COMMERCE SERVICES

MTN Ghana has a service for customers to be able to shop online through three online portals.

A statement from MTN said the service makes a collection of online shopping malls, payment systems and product offerings available to customers.

It said the first of such platforms involved www.ghanabuys.com, which for many years had been providing online product catalogues for consumers who demand the convenience of e-commerce.

“Through the MTN partnership consumers can now place orders via www.ghanabuys.com and pay with MTN Mobile Money.

The statement said the platform also presented SMEs with a unique advantage by allowing them to get their product listed, adding that through the contact details provided on the platform, there is an easy process for making contact with the site administrators, who would facilitate product listings for traders, who wish to extend their market reach through this innovative channels.

MTN has also announced other partnerships with www.ghanamart.com and www.sellphoneghana.com, to enable customers buy consumers goods and cell phones at their convenience.

The statement said MTN was also in partnership with MTECH Ghana Limited, which meant stakeholders in the agricultural sector, could now access customized information on product and input prices via the MTN short code.

The statement quoted Commercial Senior Manager for MTN Mobile Money, Mr. Eli Hini as saying, “MTN will continue to enrich the lives of its valued subscribers with services that will make their mobile phone a one-stop-shop for all forms of transactions from payments of bills to shopping for all kinds of goods and services”.

2.9.2 VODAFONE E-COMMERCE SERVICE

Vodafone offers the widest range of fixed and mobile products and services in Ghana – from basic fixed telephone services to high-bandwidth data services offering national and global connectivity. Vodafone Business Solutions provides a full range of fixed and mobile communication services

2.9.3 AIRTEL E-COMMERCE SERVICE

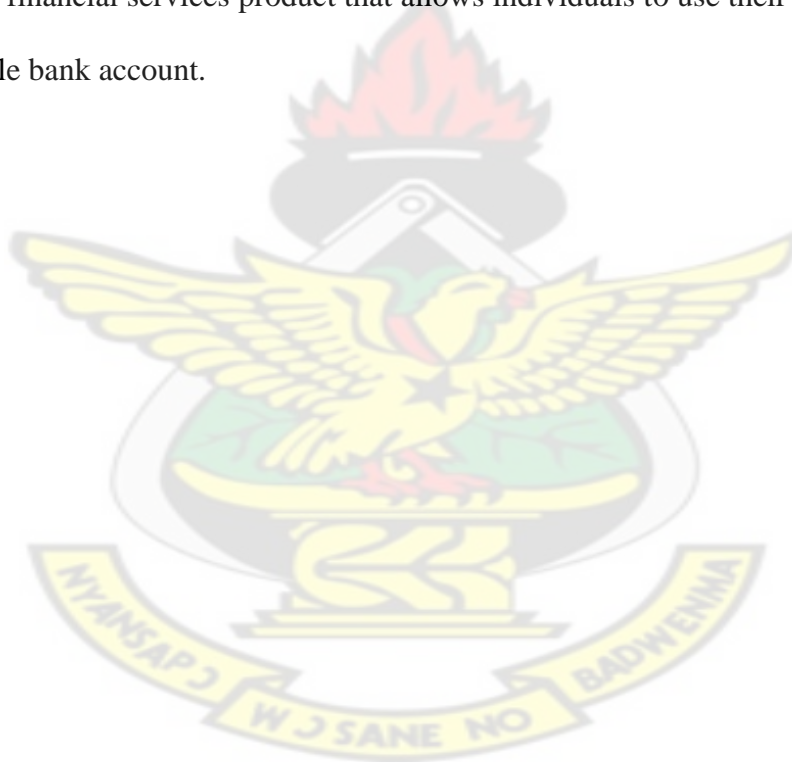
Airtel was launched in Ghana in November 2010 as one of the sixteen (16) operating countries of Airtel International. As telecom operator, Airtel Ghana is driven by the vision of providing services to all. E-commerce services provided include Airtel bill payment, recharges and merchant service.

Airtel bill payment and recharge includes post-paid bill payment, prepaid recharge and fixed line and broadband bill payment. Merchant services includes utility bill payment, insurance premium payment, recharges and donations

Their goal as a telecoms company is to make communications, banking, payments, retail and infotainment affordable and accessible to all in Africa and especially in Ghana through Airtel Money.

TIGO E-COMMERCE SERVICES

Tigo is a Multi-National Telecommunications Company. They have Mobile Telecommunications Operations in 13 countries; 3 in Central America, 3 in South America and 7 in Africa, which Ghana is one. Tigo cash provide a way to send and receive money, buy airtime credit, and pay for goods and services using a mobile phone in Ghana. Customers can deposit and withdraw cash from their mobile phone with any of their authorized Tigo Cash Agents or Customer service centre. Customers are not required to hold a bank account to use the service. Tigo Cash is a mobile financial services product that allows individuals to use their mobile phone as a mobile bank account.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Methodology can be referred to as the theoretical analysis of the method appropriate to the field of study or the body of the methods and principles to the branch of knowledge (Kotler Armstrong, 2006).

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. It is necessary for the researcher to know not only the research methods/techniques but also the methodology. Researchers not only need to know how to develop certain indices or tests, how to calculate the mean, the mode, the median or the standard deviation or chi-square, how to apply particular research techniques, but they also need to know which of these methods or techniques, are relevant and which are not, and what would they mean and indicate and why. Researchers also need to understand the assumptions underlying various techniques and they need to know the criteria by which they can decide that, certain techniques and procedures will be applicable to certain problems and others will not. All this means that it is necessary for the researcher to design his methodology for his problem as the same may differ from problem to problem.

This chapter describes the methodology used in the research and clarifies how the research problem has been solved. It includes research design, the study area, population of the study, data collection procedure, research instruments and data analysis.

3.2 RESEARCH DESIGN

In the attempt to test the research model and achieve the research objectives, a structured questionnaire was conducted among Koforidua e-commerce customers in the Eastern Region of Ghana. The questionnaire was designed to collect data related to demographics and possible factors affecting the success of e-commerce. Judgemental sampling is used to select the population of telecommunication organisations who are good prospects for accurate information on e-commerce activities. Convenience sampling is used to select the easiest population of customers from which to obtain information. Both quantitative and qualitative approaches are employed. Quantitative approach takes care to control the variables studied and to determine which variables are cause, which variables are effect, and which variables are correlative. An important consideration is choosing a sample in which both the e-commerce organisation and their customers are large enough to provide statistically significant results. Also qualitative approach will focus on the wholeness of experience rather than its parts and also focuses on meanings and essences of experience rather than parts of the experience that can be measured more easily.

The research work is designed in such a way that data will be generated from the questionnaires personally administered to the staff of the respective organisation (MTN VODAFONE, AIRTEL and TIGO) and customers of these organisations. All of the scale items were measured using a three to five-point Likert-type category-scaling format.

The choice of a qualitative research method is informed by the fact that they assume a dynamic reality, exploratory and it elicits the perception of respondents.

Due to budgetary and time constraints a convenient sampling methodology was employed.

3.3 AREA OF STUDY

The geographical area of the study is Koforidua, which is the Eastern Region of Ghana and the focus is on three telecommunication organisation to measure e-commerce success. The study will take the perspective of customer, which has significant and practical implications in that it connects to e-commerce success directly. The traditional business-customer interactions usually mediated by salespersons are now mediated by e-commerce technology maintained by service providers (Evanschitzky et al. 2004; Meuter et al. 2000). The study is considering the utilization of the e-commerce services of these telecommunications by customers on their fix and mobile devices, and the effect it has had on their everyday activities.

3.4 POPULATION OF THE STUDY

The study population is that aggregation of element from which the sample is actually selected. It is the aggregation or the totality of all members or units from which information could be obtained (Rubin and Babbie, 2001). Also is generally a large collection of individuals or objects that is the main focus of a scientific query. It is for the benefit of the population that researches are done (Joan Castillo 2009)

The study population is made up of staffs of each telecommunication organisation, customers or clients who transact business with these organisations. The telecommunication organisations were selected using judgemental sampling.

Customers for the e-commerce service are divided into institutional or business and individual customers. Three senior staff and two junior staff of each telecommunication organisation is taken making twenty (20) respondents

The customers were selected using convenience sampling in order to have a representation of the population.

The institutional customers comprises of two (2) Educational institutions, two (2) business institutions and two (2) banks, with five (5) respondents each. The Individual customers are made up of four hundred (400) respondents

In all the sample size is four hundred and fifty (450)

3.5 STATISTICAL INSTRUMENTS FOR DATA COLLECTION

Primary data for the search is collected using a well-designed and structured questionnaire for data collection. The questionnaire is made up of both open ended and close ended questions. An interview guide used to interview the respondents of these organisations

3.5.1 DATA COLLECTION PROCEDURE

The researcher assigned one month for the entire data collection exercise. Before the questionnaires are administered, they were pretested to check whether it will help achieve the objectives of the study and it did so data collection began for the research.

Data was collected by self-administering the research instrument, which is an open-ended and close-ended to the telecommunication organisations (VODAFONE, MTN, AIRTEL and TIGO) and to Individual and Institutional customers of the telecoms.

Five (5) questionnaires each were administered to senior staff of the telecommunication organisations making twenty (20) questionnaires, which sixteen (16) responses were received that is four (4) response from each organisations.

Five (5) questionnaires each were administered to staffs of the institutional customers comprising of two (2) Educational institutions, two (2) business institutions and two (2) banks making thirty (30) questionnaires which twenty (20) responds were received. Five (5) responds were received from the two banks that is Agricultural

Development Bank (3) and Barclays Bank(2), eight (8) responds were received from the two business institutions, four (4) from KAMA Pharmacy and four (4) from Ultimate Majesty Phones Limited. Seven (7) responses were received from two educational institutions, five (5) responds from Koforidua polytechnic and two (2) from All Nations University.

Four hundred (400) questionnaires were administered to individual customers but three hundred and sixty five (365) responses were received. In all four hundred and one (401) responds were received. The analysis was based on this response rates.

3.5.2 DATA PROCESSING AND ANALYSIS

The researcher will employ both quantitative and qualitative data analysis methods to process the data. The quantitative analysis is done using statistical package for social sciences (SPSS version 16) to process the data collected. For qualitative analysis, content analytic approach will be used. Frequency distribution diagrams, graphs and other forms of tables are also used for the data analysis. Weighted average from the scale will be used to find total score for the attitude of the customers toward the element of e-commerce success.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSIONS OF RESULTS

4.1 INTRODUCTION

This chapter deals with the analysis and presentation of findings of the study. The purpose of the research is to meet the research objective of the previous chapter. Basically, assess the success and utilization of e-commerce service of the telecoms in Koforidua Municipality by the element of e-commerce success model by Delone and Mclean which includes Content or Information Quality, System use, system quality and Customer e-commerce Satisfaction. The element are assess in three aspects; individual customers, corporate or institutional customers and the telecoms point of view.

4.2 CONTENT / INFORMATION QUALITY OF THE TELECOMS

4.2.1 CORPORATE / INSTITUTIONAL CUSTOMERS

Table 4: Content/Information Quality

COMPONENT	VODAFONE	MTN	AIRTEL
Relevancy	2	3	1
Accuracy	2	3	1
Timely Information	3	2	1
Flexible And Customised Information	1	1	1
Price Information	2	3	1
Complete Description Of Products/ Service	1	2	1
Information To Support Business Objectives	2	3	1
Satisfying Ethical Standards	2	3	1
Perceived products or services quality	3	2	1
Total of Rankings	18	22	9
Overall Ranking	2ND	3RD	1ST

Source: table 5 –table 22

The table above which shows the rankings of the nine (9) items which were used in measuring the content/information quality to institutional customers and with Relevance, AIRTEL was the best in ranking, followed by Vodafone with the last being MTN. In the area of Accuracy, AIRTEL was the best, followed by Vodafone with the last again being MTN.

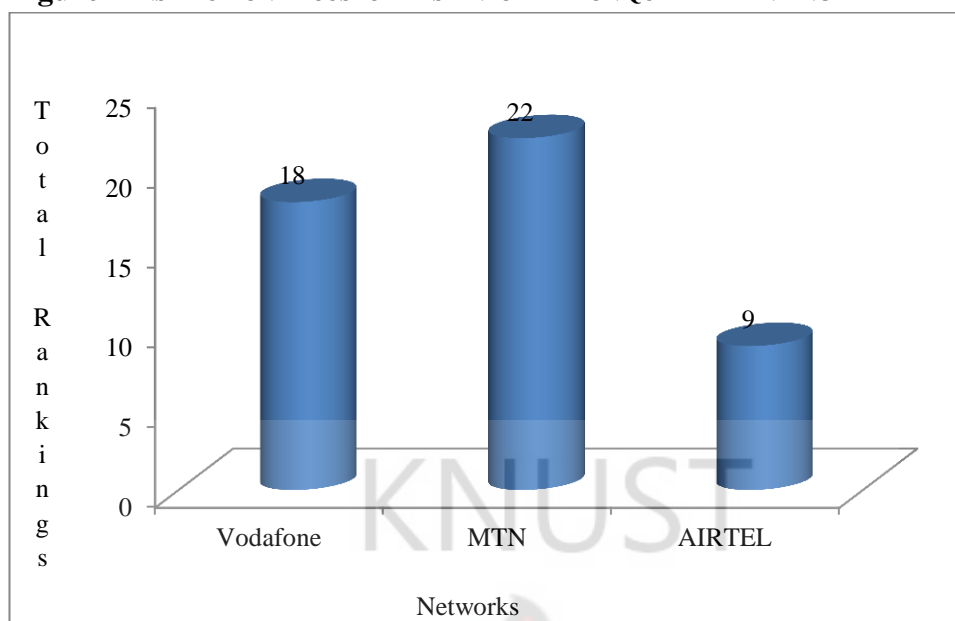
Again from the table it can be seen that when it comes to the Timely Release of Information, once again AIRTEL was the best, MTN became second with Vodafone being last. When it comes to the provision of flexible and customized release of information they all had the same ranking while in the area of providing information with regards to Price, AIRTEL was the best, followed by Vodafone with the last being MTN.

In the rankings on the provision of information on the complete description of products and services, both AIRTEL and Vodafone had the best ranking with MTN being the last. In the area of Information to Support Business Objectives AIRTEL was the best, followed by Vodafone with the last being MTN. On satisfying ethical standards, once again AIRTEL was the best, followed by Vodafone with the last being MTN.

Finally on the rankings of content and quality of information on perceived products or services quality, AIRTEL was the best ranked company, followed by MTN and Vodafone being the last.

Figure1 shows the overall ranking or performance of the companies in the area of content/information quality.

Figure 1 INSTITUTIONAL CUSTOMERS INFORMATION QUALITY RANKING



Source: table 4

It shows that in the overall rankings of the three (3) networks in terms of the content and information quality of the e – commerce services provided, AIRTEL performed very well with the least overall total rankings 9. This was followed by Vodafone in the second position with an overall total ranking of 18. The least performer in this area is MTN in the third position with an overall total ranking of 22. An inference from the above is that AIRTEL Ghana Limited is the best service provider of e – commerce services and products with regards to the content and information quality. No response was received to assess TIGO in the institutions.

Table 5: Relevancy Cross-tabulation

	Relevancy		Total
	Good	Excellent	
Vodafone	9 52.9%	1 33.3%	10 50.0%
MTN	4 23.5%	0 .0%	4 20.0%
AIRTEL	4 23.5%	2 66.7%	6 30.0%
Total	17 100.0%	3 100.0%	20 100.0%

Table 6

	Good	Excellent	Average
Vodafone	9*3=27	1*5=5	3.2
MTN	4*3=12	0*5=0	3.0
AIRTEL	4*3=12	2*5=10	3.7

Table 6 shows that AIRTEL had an overall good rating of 3.7 when it came to the relevancy of the content and information quality of their service provided. Vodafone and MTN also had a good rating of 3.2 and 3.0 respectively. An inference from the above is that, when it comes to the relevancy of the content and information quality of the services provided by the three (3) networks AIRTEL was the best,

Table 7: Accuracy Cross-tabulation

	Accuracy			Total
	Good	Very good	Excellent	
Vodafone	8 50.0%	2 100.0%	0 .0%	10 50.0%
MTN	4 25.0%	0 .0%	0 .0%	4 20.0%
AIRTEL	4 25.0%	0 .0%	2 100.0%	6 30.0%
Total	16 100.0%	2 100.0%	2 100.0%	20 100.0%

Table 8

	Good	Very good	Excellent	Average
Vodafone	8*3=24	2*4=8	0*5=0	3.2
MTN	4*3=12	0*4=0	0*5=0	3.0
AITEL	4*3=12	0*4=0	2*5=10	3.7

The table above which shows the rating of the accuracy of the content and information quality provided by the various telecommunication networks reports that AIRTEL had a good rating of 3.7. Vodafone and MTN also had a good rating of 3.2 and 3.0 respectively. A conclusion from the above is that when it comes to the accuracy of the content and information quality provided by the telecommunication networks to institutions, AIRTEL is the best.

Table 9: Timely information Cross-tabulation

	Timely information			Total
	Fairly	Good	Very good	
Vodafone	2 100.0%	6 60.0%	2 25.0%	10 50.0%
MTN	0 .0%	2 20.0%	2 25.0%	4 20.0%
AIRTEL	0 .0%	2 20.0%	4 50.0%	6 30.0%
Total	2 100.0%	10 100.0%	8 100.0%	20 100.0%

Table 10

	Fairly	Good	Very good	Average
Vodafone	2*2=4	6*3=18	2*4=8	3.0
MTN	0*2=0	2*3=6	2*4=8	3.5
AITEL	0*2=0	2*3=6	4*4=16	3.7

Table 10 shows that in terms of the timely release of information by the various networks, Vodafone and MTN respectively had a good rating of 3.0 and 3.5. The highest good rating of 3.7 went to AIRTEL. This shows that when it comes timely release of information AIRTEL is above all of them.

Table 11: Flexible and customised information Cross-tabulation

	Flexible and customised information			Total
	Fairly	Good	Very good	
Vodafone	1 100.0%	8 44.4%	1 100.0%	10 50.0%
MTN	0 .0%	4 22.2%	0 .0%	4 20.0%
AIRTEL	0 .0%	6 33.3%	0 .0%	6 30.0%
Total	1 100.0%	18 100.0%	1 100.0%	20 100.0%

Table 12

	Fairly	Good	Very good	Average rating
Vodafone	1*2=2	8*3=24	1*4=4	3.0
MTN	0*2=0	4*3=12	0*4=0	3.0
AITEL	0*2=0	6*3=18	0*4=0	3.0

The table above which shows the rating on the provision of flexible and customized information provided by the service providers indicates that all three (3) networks had an overall rating of good. An inference from the above is that all three (3) telecommunication networks are at a level picking.

Table 13: Price information Cross-tabulation

	Price information			Total
	Good	Very good	Excellent	
Vodafone	7 53.8%	2 100.0%	1 33.3%	10 55.6%
MTN	4 30.8%	0 .0%	0 .0%	4 22.2%
AIRTEL	2 15.4%	0 .0%	2 66.7%	4 22.2%
Total	13 100.0%	2 100.0%	3 100.0%	18 100.0%

Table 14

	Good	Very good	Excellent	Average rating
Vodafone	7*3=21	2*4=8	1*5=5	3.4
MTN	4*3=12	0*4=0	0*5=0	3.0
AIRTEL	2*3=6	0*4=0	2*5=10	4.0

Table 14 indicates that in the release of price information by the various networks, AIRTEL had a very good rating of 4.0. The remaining two (2) networks namely Vodafone and MTN had a respective good rating of 3.4 and 3.0. A conclusion from the above is that in the provision of price information AIRTEL is the best.

Table 15: Complete description of products/services Cross-tabulation

	Complete description of products/services				Total
	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	7 53.8%	3 100.0%	0 .0%	10 50.0%
MTN	0 .0%	4 30.8%	0 .0%	0 .0%	4 20.0%
AIRTEL	2 100.0%	2 15.4%	0 .0%	2 100.0%	6 30.0%
Total	2 100.0%	13 100.0%	3 100.0%	2 100.0%	20 100.0%

Table 16

	Fairly	Good	Very good	Excellent	Average score
Vodafone	0*2=0	7*3=21	3*4=12	0*5=0	3.3
MTN	0*2=0	4*3=12	0*4=0	0*5=0	3.0
AIRTEL	2*2=4	2*3=6	0*4=0	2*5=10	3.3

When it came to the rating of the provision of complete description of products and or services, Vodafone and AIRTEL had a good rating of 3.3 respectively. MTN also had a good rating of 3.0. An inference from the above is that Vodafone and AIRTEL do give a complete description of their products and or services.

Table 17: Information to Support Business Objectives Cross-Tabulation

	Information to support business objectives			Total
	Good	Very good	Excellent	
Vodafone	6 50.0%	3 100.0%	1 33.3%	10 55.6%
MTN	4 33.3%	0 .0%	0 .0%	4 22.2%
AIRTEL	2 16.7%	0 .0%	2 66.7%	4 22.2%
Total	12 100.0%	3 100.0%	3 100.0%	18 100.0%

Table 18

	Good	Very good	Excellent	Average score
Vodafone	6*3=18	3*4=12	1*5=5	3.5
MTN	4*3=12	0*4=0	0*5=0	3.0
AIRTEL	2*3=6	0*4=0	2*5=10	4.0

The table above reports that AIRTEL had a very good rating of 4.0 when it comes to the provision of information to support business objectives. The remaining two (2) telecommunication networks namely Vodafone and MTN recorded a good rating of

3.5 and 3.0 respectively. Once again it can be concluded from the above that in the area of the provision of information to support business objectives AIRTEL tops all of them.

Table 19: Satisfying ethical standards Cross-tabulation

	Satisfying ethical standards			Total
	Fairly	Good	Very good	
Vodafone	1 100.0%	6 42.9%	3 60.0%	10 50.0%
MTN	0 .0%	4 28.6%	0 .0%	4 20.0%
AIRTEL	0 .0%	4 28.6%	2 40.0%	6 30.0%
Total	1 100.0%	14 100.0%	5 100.0%	20 100.0%

Table 20

	Fairly	Good	Very good	Average score
Vodafone	1*2=2	6*3=18	3*4=12	3.2
MTN	0*2=0	4*3=12	0*4=0	3.0
AIRTEL	0*2=0	4*3=12	2*4=8	3.3

Table 20 which shows the rating of the organizations on the provision of information on satisfying ethical standards indicate that AIRTEL had a rating of 3.3. Vodafone and MTN respectively had a very good rating of 3.2 and 3.0 respectively. From the above it can be inferred that AIRTEL provide information to the organizations as compared to the other networks.

Table 21: Perceived products or services quality Cross-tabulation

	Perceived products or services quality				Total
	Poor	Fairly	Good	Very good	
Vodafone	2 100.0%	1 100.0%	5 38.5%	2 50.0%	10 50.0%
MTN	0 .0%	0 .0%	4 30.8%	0 .0%	4 20.0%
AIRTEL	0 .0%	0 .0%	4 30.8%	2 50.0%	6 30.0%
Total	2 100.0%	1 100.0%	13 100.0%	4 100.0%	20 100.0%

Table 22

	Poor	Fairly	Good	Very good	Average Score
Vodafone	2*1=2	1*2=2	5*3=15	2*4=8	2.7
MTN	0*1=0	0*2=0	4*3=12	0*4=0	3.0
AIRTEL	0*1=0	0*2=0	4*3=12	2*4=8	3.3

It can be seen from the table above that shows that AIRTEL and MTN respectively had a good rating of 3.3 and 3.0 on perceived products or services quality of the networks. Vodafone had a fair rating of 2.7.

4.2.2 INDIVIDUAL CUSTOMERS

Table 23: Content/Information Quality

COMPONENT	VODAFONE	MTN	AIRTEL	TIGO
Relevancy	1	3	2	4
Accuracy	1	2	3	4
Timely Information	1	2	4	3
Flexible And Customised Information	1	3	2	4
Price Information	1	4	2	3
Complete Description Of Products/ Service	2	1	4	3
Information To Support Business Objectives	1	3	4	2
Satisfying Ethical Standards	1	2	4	3
Perceived products or services quality	2	4	1	3
Total of Rankings	11	24	26	29
Overall Ranking	1ST	2ND	3RD	4TH

Source: table 24-table 41

The table above which shows the rankings of the nine (9) items which were used in measuring the content/information quality indicates when it comes to relevance, Vodafone was the best, followed by AIRTEL in the second position. MTN took the third position with the last being TIGO. In the area of accuracy, once again Vodafone took the first position; MTN took the second position followed by AIRTEL. TIGO was the last.

Again from the table it can be seen that when it comes to the timely release of information, Vodafone was the best with MTN becoming second. TIGO took the

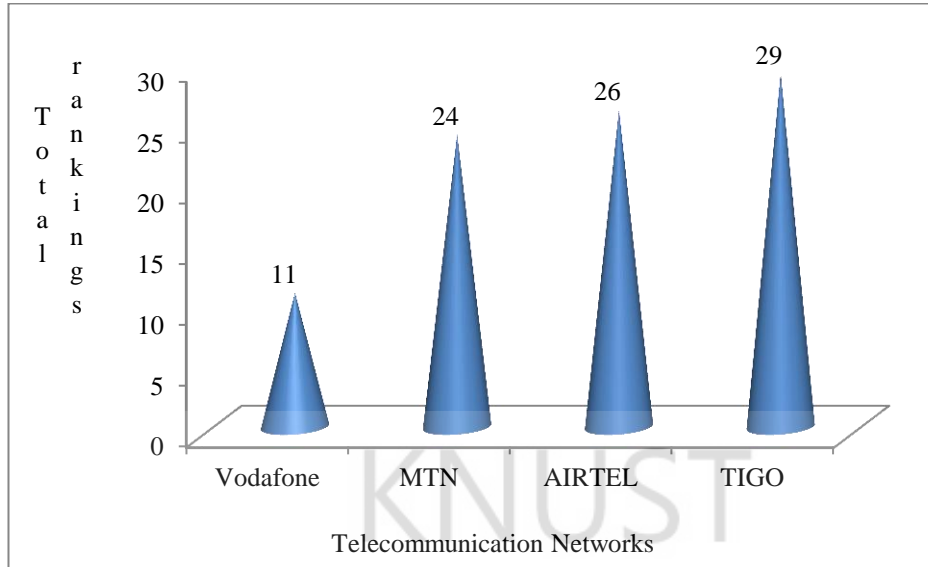
third position with AIRTEL taking the last slot. When it comes to the provision of flexible and customized release of information Vodafone once again took the first slot, AIRTEL became second, MTN was third with the last being TIGO. In the area of providing information with regards to price, Vodafone outperformed all of them, AIRTEL became second. This was followed by TIGO with the last being MTN.

In the rankings on the provision of information on the complete description of products and services, MTN was the best among the rest followed by Vodafone then TIGO and AIRTEL in that order. In the area of information to support business objectives Vodafone once again stood tall followed by TIGO. MTN took the third position with AIRTEL being last. On satisfying ethical standards, Vodafone was the best followed by MTN, TIGO and AIRTEL in that order.

Finally on the rankings of content and quality of information on perceived products or services quality, AIRTEL was the best ranked company, followed by MTN. The third ranked company was TIGO with the last being MTN.

Figure 2 shows the overall performance of the companies in the area of content/information quality from the perspective of the customers

Figure 2 INDIVIDUAL CUSTOMERS INFORMATION QUALITY RANKING



Source: table 23

It can be seen from figure 2 that the telecommunication company with the least value of eleven (11) is Vodafone. This shows that it is the best network when it comes to content and quality of information released. This is followed by MTN, AIRTEL and TIGO in that order. It is worth noting that in as much TIGO was the last ranked company it performed well in the provision of information to support business objectives.

Table 24: Relevancy Cross-tabulation

	Relevancy					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	4 20.0%	8 11.8%	44 22.2%	20 31.2%	8 66.7%	84 23.2%
MTN	8 40.0%	40 58.8%	94 47.5%	24 37.5%	4 33.3%	170 47.0%
AIRTEL	4 20.0%	16 23.5%	28 14.1%	20 31.2%	0 .0%	68 18.8%
TIGO	4 20.0%	4 5.9%	32 16.2%	0 .0%	0 .0%	40 11.0%
Total	20 100.0%	68 100.0%	198 100.0%	64 100.0%	12 100.0%	362 100.0%

Table 25

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	4*1 = 4	8*2 = 16	44* 3 = 132	20* 4 = 80	8*5 = 40	3.23
MTN	8*1 = 8	40*2 = 80	94*3 = 282	24*4 = 96	4*5 = 20	2.86
AIRTEL	4*1 = 4	16*2 = 32	28*3 = 84	20*4 = 80	0*5 = 0	2.94
TIGO	4*1 = 4	4*2 = 8	32*3 = 96	0*4 = 0	0*5 = 0	2.70

The table above which shows the distribution on the relevancy on the content of the quality of the e – commerce services currently being provided them reports that out of a total of twenty (20) people who gave a rating of poor, 4 (20.0%) persons each were respectively from Vodafone, AIRTEL, TOGO with the remaining 8 (40.0%) from MTN. 40 (58.8%) of the sixty eight (68) respondents who gave a rating of fair were from MTN, 16 (23.5%) were from AIRTEL, 8 (11.8%) were from Vodafone with the remaining 4 (5.9%) from TIGO. When it came to those who gave a rating of good, 94 (47.5%) were from MTN.

An inference from the above table is that the telecom company whose content/ information quality in relation to the relevance of the e – commerce services it provides is Vodafone, followed by AIRTEL then MTN. The least amongst them is TIGO.

Table 26: Accuracy Cross-tabulation

	Accuracy					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	12 16.7%	44 22.3%	28 36.8%	0 .0%	84 23.0%
MTN	0 .0%	36 50.0%	105 53.3%	24 31.6%	8 66.7%	173 47.4%
AIRTEL	4 50.0%	20 27.8%	20 10.2%	20 26.3%	4 33.3%	68 18.6%
TIGO	4 50.0%	4 5.6%	28 14.2%	4 5.3%	0 .0%	40 11.0%
Total	8 100.0%	72 100.0%	197 100.0%	76 100.0%	12 100.0%	365 100.0%

Table 27

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	12*2=24	44*3=132	28*4=112	0*5=0	3.19
MTN	0*1=0	36*2=72	105*3=315	24*4=96	8*5=40	3.02
AIRTEL	4*1=4	20*2=40	20*3=60	20*4=80	4*5=20	3.00
TIGO	4*1=4	4*2=8	28*3=84	4*4=16	0*5=0	2.80

The table 27 shows the rating of the various telecommunication companies in terms of the accuracy of the content and information quality of the e – commerce service that they provide reports that Vodafone had the highest score. It was followed by MTN then AIRTEL. The company that scored the least is TIGO. A conclusion from the above is that of the four companies, Vodafone has the most accurate e – commerce service in terms of content and or quality of service provided.

Table 28: Timely information Cross-tabulation

	Timely information					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	8 14.3%	36 23.4%	28 28.3%	8 28.6%	80 22.2%
MTN	8 33.3%	28 50.0%	86 55.8%	39 39.4%	12 42.9%	173 47.9%
AIRTEL	12 50.0%	12 21.4%	20 13.0%	20 20.2%	4 14.3%	68 18.8%
TIGO	4 16.7%	8 14.3%	12 7.8%	12 12.1%	4 14.3%	40 11.1%
Total	24 100.0%	56 100.0%	154 100.0%	99 100.0%	28 100.0%	361 100.0%

Table 29

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	8*2=16	36*3=108	28*4=112	8*5=40	3.45
MTN	8*1=8	28*2=56	86*3=258	39*4=156	12*5=60	3.11
AIRTEL	12*1=12	12*2=24	20*3=60	20*4=80	4*5=20	2.88
TIGO	4*1=4	8*2=16	12*3=36	12*4=48	4*5=20	3.10

Table 29 shows that Vodafone and MTN respectively had a score of 3.45 and 3.11 when it comes to the timely release of information. The company that scored the least is AIRTEL. An inference from the above is that Vodafone is the best when it comes to the timely release of information on their electronic platform. This is followed closely by TIGO and MTN who are almost at par.

Table 30: Flexible and customised information Cross-tabulation

	Flexible and customised information					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	16 14.3%	32 27.1%	16 22.5%	12 37.5%	76 22.0%
MTN	0 .0%	68 60.7%	62 52.5%	23 32.4%	12 37.5%	165 47.8%
AIRTEL	8 66.7%	20 17.9%	8 6.8%	20 28.2%	8 25.0%	64 18.6%
TIGO	4 33.3%	8 7.1%	16 13.6%	12 16.9%	0 .0%	40 11.6%
Total	12 100.0%	112 100.0%	118 100.0%	71 100.0%	32 100.0%	345 100.0%

Table 31

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	16*2=32	32*3=96	16*4=64	12*5=60	3.31
MTN	0*1=0	68*2=136	62*3=186	23*4=92	12*5=60	2.87
AIRTEL	8*1=8	20*2=40	8*3=24	20*4=80	8*5=40	3.00
TIGO	4*1=4	8*2=16	16*3=48	12*4=48	0*5=0	2.90

It can be seen from the table above that, when it comes to the flexible and customized services provided by the companies, Vodafone and AIRTEL respectively scored 3.31 and 3.00. TIGO scored 2.90 which the least score recorded went to MTN. From the above it can be implied Vodafone provides more flexible and customized products electronically to its customers whiles MTN provided the least of the four companies.

Table 32: Price information Cross-tabulation

	Price information					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	28 21.5%	36 25.2%	16 44.4%	4 20.0%	84 23.3%
MTN	16 50.0%	74 56.9%	67 46.9%	4 11.1%	12 60.0%	173 47.9%
AIRTEL	8 25.0%	20 15.4%	24 16.8%	12 33.3%	0 .0%	64 17.7%
TIGO	8 25.0%	8 6.2%	16 11.2%	4 11.1%	4 20.0%	40 11.1%
Total	32 100.0%	130 100.0%	143 100.0%	36 100.0%	20 100.0%	361 100.0%

Table 33

	Poor	Fair	Good	Very good	Excellent	Average score
VODAFONE	0*1=0	28*2=56	36*3=108	16*4=64	4*5=20	2.95
MTN	16*1=16	74*2=148	67*3=201	4*4=16	12*5=60	2.55
AIRTEL	8*1=8	20*2=40	24*3=72	12*4=48	0*5=0	2.63
TIGO	8*1=8	8*2=16	16*3=48	4*4=16	4*4=16	2.60

The table above which shows the distribution of the rating of respondents on the content and quality of information they received from their service providers on price reports that although the general performance of all four companies is lies within the fair rating, Vodafone and AIRTEL respectively scored 2.95 and 2.63. The least score went to MTN. An inference from the above is that Vodafone give information on the prices of their products than the other companies.

Table 34: Complete Description of Products/Services

	Complete description of products/services					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	32 33.7%	32 22.5%	8 11.8%	8 33.3%	80 23.2%
MTN	0 .0%	39 41.1%	78 54.9%	36 52.9%	12 50.0%	165 47.8%
AIRTEL	8 50.0%	20 21.1%	16 11.3%	20 29.4%	0 .0%	64 18.6%
TIGO	8 50.0%	4 4.2%	16 11.3%	4 5.9%	4 16.7%	36 10.4%
Total	16 100.0%	95 100.0%	142 100.0%	68 100.0%	24 100.0%	345 100.0%

Table 35

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	32*2=64	32*3=96	8*4=32	8*5=40	2.90
MTN	0*1=0	39*2=78	78*3=234	36*4=144	12*5=60	3.13
AIRTEL	8*1=8	20*2=40	16*3=48	20*4=80	0*5=0	2.75
TIGO	8*1=8	4*2=8	16*3=48	4*4=16	4*5=20	2.78

Table 35 indicates that MTN and Vodafone had a rating of 3.13 and 2.90 respectively when it comes to the provision of information on the complete description of their products and services. This is followed by TIGO which scored 2.78 with the least going to AIRTEL. It can be concluded from the above that MTN provides more detailed information on the description of their products and services.

Table 36: Information to support business objectives Cross-tabulation

	Information to support business objectives					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	24 21.6%	24 18.3%	20 31.7%	8 18.2%	76 21.5%
MTN	4 100.0%	55 49.5%	59 45.0%	31 49.2%	24 54.5%	173 49.0%
AIRTEL	0 .0%	28 25.2%	20 15.3%	8 12.7%	8 18.2%	64 18.1%
TIGO	0 .0%	4 3.6%	28 21.4%	4 6.3%	4 9.1%	40 11.3%
Total	4 100.0%	111 100.0%	131 100.0%	63 100.0%	44 100.0%	353 100.0%

Table 37

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	24*2=48	24*3=72	20*4=80	8*5=40	3.16
MTN	4*1=4	55*2=110	59*3=177	31*4=124	24*5=120	3.09
AIRTEL	0*1=0	28*2=56	20*3=60	8*4=32	4*5=20	2.63
TIGO	0*1=0	4*2=8	28*3=84	4*4=16	4*5=20	3.20

Table 37 above indicates that TIGO and Vodafone respectively had a score of 3.20 and 3.16 respectively when it came to the support of business objectives. The least amongst the four companies went to AIRTEL. An inference from the above is that of the four (4) companies TIGO provides more information in the support of business objectives.

Table 38: Satisfying ethical standards Cross-tabulation

	Satisfying ethical standards					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	4 12.5%	20 18.5%	36 26.9%	12 25.0%	8 25.0%	80 22.6%
MTN	12 37.5%	60 55.6%	58 43.3%	20 41.7%	20 62.5%	170 48.0%
AIRTEL	8 25.0%	20 18.5%	28 20.9%	8 16.7%	0 .0%	64 18.1%
TIGO	8 25.0%	8 7.4%	12 9.0%	8 16.7%	4 12.5%	40 11.3%
Total	32 100.0%	108 100.0%	134 100.0%	48 100.0%	32 100.0%	354 100.0%

Table 39

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	4*1=4	20*2=40	36*3=108	12*4=48	8*5=40	3.00
MTN	12*1=12	60*2=120	58*3=174	20*4=80	20*5=100	2.86
AIRTEL	8*1=8	20*2=40	28*3=84	8*4=32	0*5=0	2.56
TIGO	8*1=8	8*2=16	12*3=36	8*4=32	4*5=20	2.80

It can be seen from the table above that Vodafone and MTN respectively had a score of 3.00 and 2.86 when it comes to satisfying ethical standards. The least score of 2.56 was recorded by AIRTEL. An inference from the above is that Vodafone ensures that they satisfy the standards that have been set in terms of ethics.

Table 40: Perceived products or services quality

	Perceived products or services quality					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	4 25.0%	12 12.8%	48 31.0%	12 21.4%	8 18.2%	84 23.0%
MTN	8 50.0%	62 66.0%	59 38.1%	28 50.0%	16 36.4%	173 47.4%
AIRTEL	0 .0%	12 12.8%	28 18.1%	16 28.6%	12 27.3%	68 18.6%
TIGO	4 25.0%	8 8.5%	20 12.9%	0 .0%	8 18.2%	40 11.0%
Total	16 100.0%	94 100.0%	155 100.0%	56 100.0%	44 100.0%	365 100.0%

Table 41

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	4*1=4	12*2=24	48*3=144	12*4=48	8*5=40	3.10
MTN	8*1=8	62*2=124	59*3=177	28*4=112	16*5=80	2.90
AIRTEL	0*1=0	12*2=24	28*3=84	16*4=64	12*5=60	3.41
TIGO	4*1=4	8*2=16	20*3=60	0*4=0	8*5=40	3.00

When it comes to the rating of the content and quality of information on perceived products and services quality, AIRTEL and Vodafone respectively recorded scores of 3.41 and 3.10. The least score went to MTN. It can be implied from the above that when it comes to service quality AIRTEL tops all of them.

4.2.3 ORGANISATION

Table 42: Content/Information Quality

COMPONENT	VODAFONE	MTN	AIRTEL	TIGO
Relevancy	2	1	2	4
Accuracy	1	4	2	3
Timely Information	3	3	1	2
Flexible And Customised Information	1	4	3	2
Price Information	3	2	1	3
Complete Description Of Products/ Service	4	2	2	1
Information To Support Business Objectives	2	4	2	1
Satisfying Ethical Standards	1	2	2	4
Perceived products or services quality	2	4	1	2
Total of Rankings	19	26	16	22
Overall Ranking	2ND	4TH	1ST	3RD

Source: table 43-table 60

The table above which shows the rankings of the nine (9) items which were used in measuring the content/information quality indicates when it comes to relevance, MTN was the best, followed by AIRTEL and Vodafone in the second positions respectively. TIGO took the last position. In the area of accuracy, Vodafone took the first position; AIRTEL took the second position followed by TIGO. The last position went to MTN.

It can be seen from the table above that when it comes to the timely release of information, AIRTEL was the best with TIGO becoming second. MTN and Vodafone respectively took the third position. When it comes to the provision of

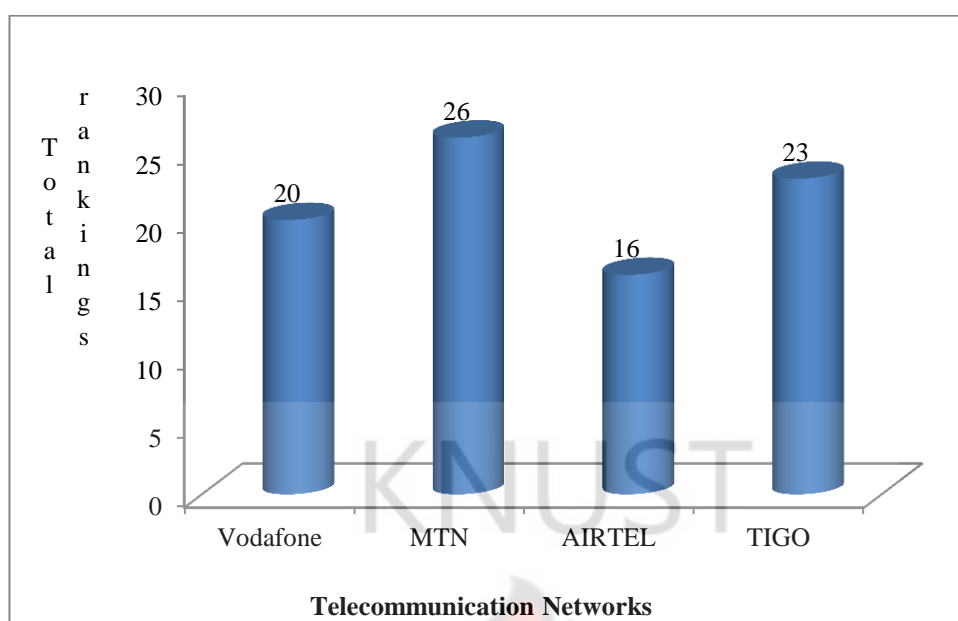
flexible and customized release of information Vodafone took the first slot, TIGO became second, AIRTEL was third with the last being MTN. In the area of providing information with regards to price, AIRTEL outperformed all of them, MTN became second. This was followed by TIGO and Vodafone at the third positions respectively.

In the rankings on the provision of information on the complete description of products and services, TIGO was the best among the rest followed by MTN and AIRTEL at the second positions respectively. The fourth position which is last position went Vodafone. In the area of information to support business objectives TIGO stood tall followed by Vodafone and AIRTEL at the second positions respectively. MTN took the last position. On satisfying ethical standards, Vodafone was the best followed by MTN and AIRTEL all at the second position with TIGO at the last position.

Finally on the rankings of content and quality of information on perceived products or services quality, AIRTEL was the best ranked company, followed by TIGO and Vodafone together at the second. The last ranked was MTN.

Figure 3 shows the overall performance of the companies in the area of content/information quality from the perspective of the customers

Figure 3 ORGANISATION CONTENT/INFORMATION QUALITY RANKING



Source: table 6

Table 43: Relevancy Cross-tabulation

	Relevancy			Total
	Good	Very good	Excellent	
Vodafone	0 .0%	4 40.0%	0 .0%	4 25.0%
MTN	0 .0%	2 20.0%	2 66.7%	4 25.0%
AIRTEL	0 .0%	4 40.0%	0 .0%	4 25.0%
TIGO	3 100.0%	0 .0%	1 33.3%	4 25.0%
Total	3 100.0%	10 100.0%	3 100.0%	16 100.0%

Table 44

	Good	Very good	Excellent	Average score
Vodafone	0*3=0	4*4=16	0*5=0	4
MTN	0*3=0	2*4=8	2*5=10	4.5
AIRTEL	0*3=0	4*4=16	0*5=0	4
TIGO	3*3=9	0*4=0	1*5=5	3.5

The table above reports that when it comes to the relevance of the content and information quality of services provided to the customers three (3) of the networks had an overall very good ratings. It was only TIGO that had a good rating 3.5. From the above it can be implied that the content and quality of services rendered to the customers of MTN is relevant to their needs, in their point of view.

Table 45: Accuracy Cross-tabulation

	Accuracy			Total
	Good	Very good	Excellent	
Vodafone	0 .0%	2 33.3%	2 66.7%	4 25.0%
MTN	4 57.1%	0 .0%	0 .0%	4 25.0%
AIRTEL	0 .0%	4 66.7%	0 .0%	4 25.0%
TIGO	3 42.9%	0 .0%	1 33.3%	4 25.0%
Total	7 100.0%	6 100.0%	3 100.0%	16 100.0%

Table 46

	Good	Very good	Excellent	Average score
Vodafone	0*3=0	2*4=8	2*5=10	4.5
MTN	4*3=12	0*4=0	0*5=0	3.0
AIRTEL	0*3=0	4*4=16	0*5=0	4.0
TIGO	3*3=9	0*4=0	1*5=5	3.5

The table above shows that on how accurate the content and quality of the e-commerce services rendered by the four (4) companies, Vodafone had a very good rating of 4.5 which is the highest. This is followed by AIRTEL also with a very good

rating of 4.0. The remaining two (2) companies namely MTN and TIGO respectively had good ratings of 3.0 and 3.5 respectively.

Table 47: Timely information Cross-tabulation

	Timely information			Total
	Good	Very good	Excellent	
Vodafone	2 25.0%	2 40.0%	0 .0%	4 25.0%
MTN	2 25.0%	2 40.0%	0 .0%	4 25.0%
AIRTEL	2 25.0%	0 .0%	2 66.7%	4 25.0%
TIGO	2 25.0%	1 20.0%	1 33.3%	4 25.0%
Total	8 100.0%	5 100.0%	3 100.0%	16 100.0%

Table 48

	Good	Very good	Excellent	Average score
Vodafone	2*3=6	2*4=8	0*5=0	3.5
MTN	2*3=6	2*4=8	0*5=0	3.5
AIRTEL	2*3=6	0*4=0	2*5=10	4.0
TIGO	2*3=6	1*4=4	1*5=5	3.8

It can be seen from the table above that when it comes to the timely release of information on any e – commerce service, AIRTEL had the highest rating of very good. The remaining three (3) networks namely Vodafone, MTN and TIGO had strong good ratings of 3.5, 3.5 and 3.8 respectively. From the above it implies that among the four (4) networks, AIRTEL is the company that provides the necessary e – commerce services that their customers want.

Table 49: Flexible and customized information Cross-tabulation

	Flexible and customized information			Total
	Good	Very good	Excellent	
Vodafone	0 .0%	2 40.0%	2 33.3%	4 25.0%
MTN	2 40.0%	2 40.0%	0 .0%	4 25.0%
AIRTEL	2 40.0%	0 .0%	2 33.3%	4 25.0%
TIGO	1 20.0%	1 20.0%	2 33.3%	4 25.0%
Total	5 100.0%	5 100.0%	6 100.0%	16 100.0%

Table 50

	Good	Very good	Excellent	Average score
Vodafone	0*3=0	2*4=8	2*5=10	4.5
MTN	2*3=6	2*4=8	0*5=0	3.5
AIRTEL	2*3=6	0*4=0	2*5=10	4.0
TIGO	1*3=3	1*4=4	2*5=10	4.3

Table 50 shows that in terms of providing flexible and customized information to their customers Vodafone and TIGO had overall very good ratings of 4.5 and 4.3 respectively. AIRTEL also had a very good rating of 4.0 with the remaining network MTN having an overall good rating of 3.5. This outcome shows that Vodafone provides flexible and customized information to its customers compared to the other networks.

Table 51: Price information Cross-tabulation

	Price information				Total
	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	2 100.0%	2 22.2%	0 .0%	4 25.0%
MTN	0 .0%	0 .0%	4 44.4%	0 .0%	4 25.0%
AIRTEL	0 .0%	0 .0%	2 22.2%	2 50.0%	4 25.0%
TIGO	1 100.0%	0 .0%	1 11.1%	2 50.0%	4 25.0%
Total	1 100.0%	2 100.0%	9 100.0%	4 100.0%	16 100.0%

Table 52

	Fairly	Good	Very good	Excellent	Average score
Vodafone	0*2=0	2*3=6	2*4=8	0*5=0	3.5
MTN	0*2=0	0*3=0	4*4=16	0*5=0	4.0
AIRTEL	0*2=0	0*3=0	2*4=8	2*5=10	4.5
TIGO	1*2=2	0*3=0	1*3=3	2*5=10	3.8

The table above which shows the rating of respondents on the price information indicates that MTN and AIRTEL had a very good rating of 4.0 and 4.5 respectively. The remaining two (2) networks namely TIGO and Vodafone had an overall good rating with regards to the content and quality of information provided to their customers.

Table 53: Complete description of products/services Cross-tabulation

	Complete description of products/services			Total
	Good	Very good	Excellent	
Vodafone	4 44.4%	0 .0%	0 .0%	4 25.0%
MTN	2 22.2%	0 .0%	2 33.3%	4 25.0%
AIRTEL	2 22.2%	0 .0%	2 33.3%	4 25.0%
TIGO	1 11.1%	1 100.0%	2 33.3%	4 25.0%
Total	9 100.0%	1 100.0%	6 100.0%	16 100.0%

Table 54

	Good	Very good	Excellent	Average score
Vodafone	4*3=12	0*4=0	0*5=0	3.0
MTN	2*3=6	0*4=0	2*5=10	4.0
AIRTEL	2*3=6	0*4=0	2*5=10	4.0
TIGO	1*3=3	1*4=4	2*5=10	4.3

Table 54 above shows that when it comes to the provision of complete description of services and products to their customers, TIGO had the highest very good rating of 4.3 followed by MTN and AIRTEL with also a very good ratings 4.0 each respectively. It was only Vodafone that had an overall good rating

Table 55: Information to support business objectives Cross-tabulation

	Information to support business objectives				Total
	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	2 25.0%	2 40.0%	0 .0%	4 25.0%
MTN	2 100.0%	2 25.0%	0 .0%	0 .0%	4 25.0%
AIRTEL	0 .0%	2 25.0%	2 40.0%	0 .0%	4 25.0%
TIGO	0 .0%	2 25.0%	1 20.0%	1 100.0%	4 25.0%
Total	2 100.0%	8 100.0%	5 100.0%	1 100.0%	16 100.0%

Table 56

	Fairly	Good	Very good	Excellent	Average score
Vodafone	0*2=0	2*3=6	2*4=8	0*5=0	3.5
MTN	2*2=4	2*3=6	0*4=0	0*5=0	2.5
AIRTEL	0*2=0	2*3=6	2*4=8	0*5=0	3.5
TIGO	0*2=0	2*3=6	1*4=4	1*5=5	3.8

The table above shows that Vodafone, AIRTEL and TIGO scored a good rating of 3.5, 3.5 and 3.8 respectively in terms of the provision of information pertaining to the support of business objectives. It was only MTN that had a fair rating. An inference from the above is that MTN does not attach much importance to the provision of information pertaining to the support of businesses.

Table 57: Satisfying ethical standards Cross-tabulation

	Satisfying ethical standards				Total
	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	0 .0%	4 57.1%	0 .0%	4 25.0%
MTN	2 100.0%	0 .0%	2 28.6%	0 .0%	4 25.0%
AIRTEL	0 .0%	4 66.7%	0 .0%	0 .0%	4 25.0%
TIGO	0 .0%	2 33.3%	1 14.3%	1 100.0%	4 25.0%
Total	2 100.0%	6 100.0%	7 100.0%	1 100.0%	16 100.0%

Table 58

	Fairly	Good	Very good	Excellent	Average score
Vodafone	0*2=0	0*3=0	4*4=16	0*5=0	4.0
MTN	2*2=4	0*3=0	2*4=8	0*5=0	3.0
AIRTEL	0*2=0	4*3=12	0*4=0	0*5=0	3.0
TIGO	0*2=0	2*3=6	1*4=4	1*5=5	3.8

It can be seen from the table above that when it comes to the content and quality of information provision in relation to satisfying ethical standards, Vodafone performed creditably well with a very good rating. The remaining three (3) service providers had a good rating, with AIRTEL being ahead of all of them.

Table 59: Perceived products or services quality Cross-tabulation

	Perceived products or services quality			Total
	Good	Very good	Excellent	
Vodafone	0 .0%	4 66.7%	0 .0%	4 25.0%
MTN	2 50.0%	2 33.3%	0 .0%	4 25.0%
AIRTEL	0 .0%	0 .0%	4 66.7%	4 25.0%
TIGO	2 50.0%	0 .0%	2 33.3%	4 25.0%
Total	4 100.0%	6 100.0%	6 100.0%	16 100.0%

Table 60

	Good	Very good	Excellent	Average score
Vodafone	0*3=0	4*4=16	0*5=0	4.0
MTN	2*3=6	2*4=8	0*5=0	3.5
AIRTEL	0*3=0	0*4=0	4*5=20	5.0
TIGO	2*3=6	0*4=0	2*5=10	4.0

Table 60 above which shows the ratings of respondents on the content and the quality of services that they provide reports that AIRTEL had an excellent score. Vodafone and TIGO also had a very good score of 4.0 respectively with MTN having a good score of 3.5. From the above it can be concluded that all the four (4) are performing well in the quality of service that they provide to their respective customers, but the most outstanding is AIRTEL.

4.3 SYSTEM USE OF THE TELECOMS

4.3.1 CORPORATE OR INSTITUTIONAL CUSTOMER

Table 61: System Use

COMPONENT	Vodafone	MTN	AIRTEL
Confidence	3	2	1
Control	2	2	1
Ease of use	2	3	1
Privacy	2	1	1
Total of Rankings	9	8	4
Overall rankings	3	2	1

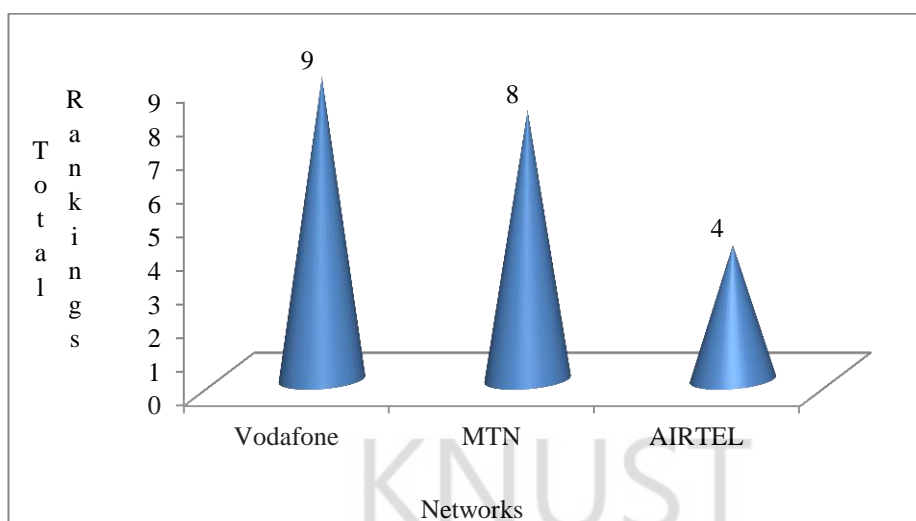
Source: table 62- table 69

The table above shows that on the confidence that can be placed on the e – commerce system currently in place AIRTEL had the first position, followed by MTN with the last being Vodafone. On the control once again AIRTEL was the best. The remaining two (2) networks namely MTN and Vodafone had the same rankings.

The ease at which any product is used will somehow convince people to subscribe to that product. From the table7, it can be seen that on how easy the e – commerce service or product being offered can be used AIRTEL had the first position. The second position went to Vodafone with the last position going to MTN. This clearly shows that of the three (3) networks, it is the products and services of AIRTEL that can easily be used. When it comes to the privacy component of the product or service, MTN and AIRTEL took the first position with the last position going Vodafone.

Figure 4 shows the total rankings of the three (3) networks

Figure 4 INSTITUTIONAL CUSTOMER SYSTEM USE RANKING



Source: table 7

Table 62: Confidence Cross-tabulation

	Confidence			Total
	Good	Very good	Excellent	
Vodafone	7 53.8%	3 60.0%	0 .0%	10 50.0%
MTN	2 15.4%	2 40.0%	0 .0%	4 20.0%
AIRTEL	4 30.8%	0 .0%	2 100.0%	6 30.0%
Total	13 100.0%	5 100.0%	2 100.0%	20 100.0%

Table 63

	Good	Very good	Excellent	Average score
Vodafone	$7*3=21$	$3*4=12$	$0*5=0$	3.3
MTN	$2*3=6$	$2*4=8$	$0*5=0$	3.5
AIRTEL	$4*3=12$	$0*4=0$	$2*5=10$	3.7

The table above shows that all the three (3) networks had an overall rating of good. From the above it shows that all the organizations used in the study have confidence in the services and products of the various networks.

Table 64: Control Cross-tabulation

	Control			Total
	Good	Very good	Excellent	
Vodafone	7 63.6%	1 20.0%	2 50.0%	10 50.0%
MTN	2 18.2%	2 40.0%	0 .0%	4 20.0%
AIRTEL	2 18.2%	2 40.0%	2 50.0%	6 30.0%
Total	11 100.0%	5 100.0%	4 100.0%	20 100.0%

Table 65

	Good	Very good	Excellent	Average score
Vodafone	7*3=21	1*4=4	2*5=10	3.5
MTN	2*3=6	2*4=8	0*5=0	3.5
AIRTEL	2*3=6	2*4=8	2*5=10	4.0

The table above has Vodafone and MTN had a good rating of 3.5 from the organizations to whom they provide their products and services on the control of system they have. AIRTEL had a very good rating.

Table 66: Ease of use Cross-tabulation

	Ease of use			Total
	Fairly	Good	Very good	
Vodafone	2 50.0%	6 50.0%	2 50.0%	10 50.0%
MTN	2 50.0%	2 16.7%	0 .0%	4 20.0%
AIRTEL	0 .0%	4 33.3%	2 50.0%	6 30.0%
Total	4 100.0%	12 100.0%	4 100.0%	20 100.0%

Table 67

	Fairly	Good	Very good	Average score
Vodafone	$2*2=4$	$6*3=18$	$2*4=8$	3.0
MTN	$2*2=4$	$2*3=6$	$0*4=0$	2.5
AIRTEL	$0*2=0$	$4*3=12$	$2*4=8$	3.3

The table above reports that AIRTEL and Vodafone had a good rating of 3.3 and 3.0 when it came to how easily the products and services they provide can be used. MTN had a fair rating of 2.5. From the above it can be inferred that the products and services offered by AIRTEL can easily be used. Respondents were then asked the privacy components concerning the use of those products and services. Their responses are below.

Table 68: Privacy Cross-tabulation

	Privacy			Total
	Good	Very good	Excellent	
Vodafone	7 63.6%	2 50.0%	1 20.0%	10 50.0%
MTN	2 18.2%	0 .0%	2 40.0%	4 20.0%
AIRTEL	2 18.2%	2 50.0%	2 40.0%	6 30.0%
Total	11 100.0%	4 100.0%	5 100.0%	20 100.0%

Table 69

	Good	Very good	Excellent	Average score
Vodafone	7*3=21	2*4=8	1*5=5	3.4
MTN	2*3=6	0*4=0	2*5=10	4.0
AIRTEL	2*3=6	2*4=8	2*5=10	4.0

The table above reports that AIRTEL and MTN had a very good rating of 4.0 and 4.0 when it came to how easily the products and services they provide can be used. Vodafone had a good rating of 3.4. From the above it can be inferred that the privacy offered is very good by using AIRTEL and MTN system.

4.3.2 INDIVIDUAL CUSTOMERS

Table 70: SYSTEM USE

COMPONENT	Vodafone	MTN	AIRTEL	TIGO
Confidence	1	2	3	4
Control	1	2	3	4
Ease of use	2	1	4	3
Privacy	1	3	2	4
Total of Rankings	5	8	12	15
Overall rankings	1ST	2ND	3RD	4TH

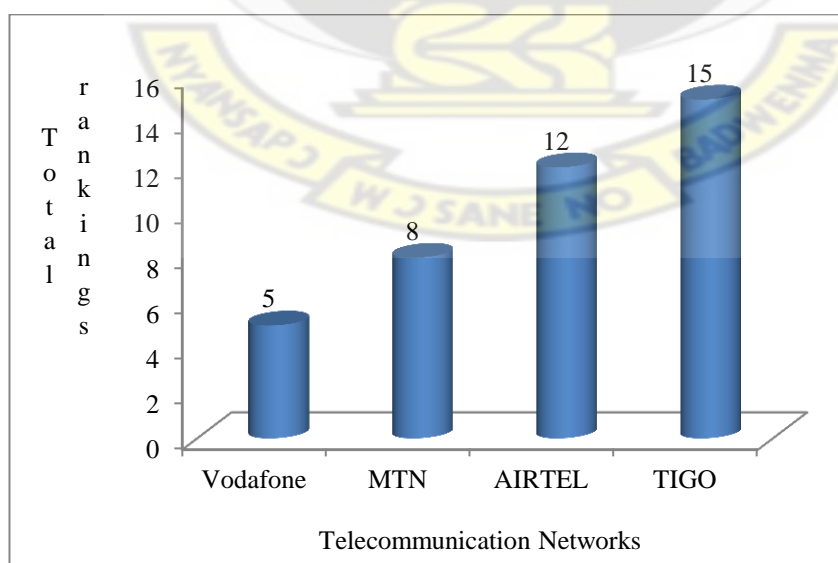
Source: table 71-table 78

The table above shows that on the confidence that can be placed on the e – commerce system currently in place Vodafone took the second position, followed by MTN then AIRTEL with the last position being occupied by TIGO. On the control once again Vodafone outperformed all of them. The next best performed company was MTN then TIGO and TIGO in that order.

The ease at which any product is used will in a way persuade people to subscribe to that product. From the table 7.5 it can be seen that on how easy the e – commerce service or product being offered by the various can be used MTN took the first the first position, followed by Vodafone. TIGO took the third position with AIRTEL being last. This clearly shows that of the four (4) networks, it is the products and services of MTN that can easily be used. When it comes to the privacy component of the product or service, Vodafone was the best. This was followed by AIRTEL then MTN. The last company was TIGO.

Figure 5 shows the total rankings of the four (4) companies.

Figure 5 INDIVIDUAL CUSTOMERS SYSTEM USE RANKING



Source: table 7.5

It shows that with overall total rankings of five (5), Vodafone came up as the best company in terms of use of the current system. The second overall position went to MTN followed by AIRTEL with TIGO being the last. A deduction from the above is that in the view of the customers of the four (4) networks the company with the best system in place is Vodafone.

Table 71: Confidence Cross-tabulation

	Confidence					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	8 13.6%	48 26.8%	12 15.2%	16 50.0%	84 23.0%
MTN	4 25.0%	27 45.8%	91 50.8%	47 59.5%	4 12.5%	173 47.4%
AIRTEL	8 50.0%	12 20.3%	24 13.4%	16 20.3%	8 25.0%	68 18.6%
TIGO	4 25.0%	12 20.3%	16 8.9%	4 5.1%	4 12.5%	40 11.0%
Total	16 100.0%	59 100.0%	179 100.0%	79 100.0%	32 100.0%	365 100.0%

Table 72

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	8*2=16	48*3=144	12*4=48	16*5=80	3.43
MTN	4*1=4	27*2=54	91*3=273	47*4=188	4*5=20	3.12
AIRTEL	8*1=8	12*2=24	24*3=72	16*4=64	8*5=40	3.06
TIGO	4*1=4	12*2=24	16*3=48	4*4=16	4*5=20	2.80

The table above which shows distribution of the rating on the confidence that respondent can place on the e – commerce services provided them by the telecommunication company's report that Vodafone and MTN respectively scored 3.43 and 3.12. The least score went to TIGO. An inference from the above is that

there is much confidence in the e – commerce services Vodafone as compared to the other companies.

Table 73: Control Cross-tabulation

	Control					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	4 25.0%	20 29.4%	20 11.8%	24 30.4%	16 50.0%	84 23.0%
MTN	0 .0%	28 41.2%	94 55.3%	39 49.4%	12 37.5%	173 47.4%
AIRTEL	4 25.0%	12 17.6%	36 21.2%	12 15.2%	4 12.5%	68 18.6%
TIGO	8 50.0%	8 11.8%	20 11.8%	4 5.1%	0 .0%	40 11.0%
Total	16 100.0%	68 100.0%	170 100.0%	79 100.0%	32 100.0%	365 100.0%

Table 74

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	4*1=4	20*2=40	20*3=60	24*4=96	16*5=80	3.33
MTN	0*1=0	28*2=56	94*3=282	39*4=156	12*5=60	3.20
AIRTEL	4*1=4	12*2=24	36*3=108	12*4=48	4*5=20	3.00
TIGO	8*1=8	8*2=16	20*3=60	4*4=16	0*5=0	2.50

Table 74 above shows that Vodafone and MTN had a respective score of 3.33 and 3.20 which falls in the good rating bracket. AIRTEL recorded a score of 3.00 while TIGO recorded a score of 2.50. An inference from the above is that although Vodafone, MTN and AIRTEL all fell in the rating of good Vodafone topped all of them with TIGO having a fair rating.

Table 75: Ease of use Cross-tabulation

	Ease of use					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	24 46.2%	20 14.3%	28 23.9%	12 30.0%	84 23.0%
MTN	4 25.0%	16 30.8%	84 60.0%	49 41.9%	20 50.0%	173 47.4%
AIRTEL	8 50.0%	8 15.4%	24 17.1%	24 20.5%	4 10.0%	68 18.6%
TIGO	4 25.0%	4 7.7%	12 8.6%	16 13.7%	4 10.0%	40 11.0%
Total	16 100.0%	52 100.0%	140 100.0%	117 100.0%	40 100.0%	365 100.0%

Table 76

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	24*2=48	20*3=60	28*4=112	12*5=60	3.33
MTN	4*1=4	16*2=32	84*3=252	49*4=196	20*5=100	3.38
AIRTEL	8*1=8	8*2=16	24*3=72	16*4=64	4*5=20	2.64
TIGO	4*1=4	4*2=8	12*3=36	16*4=64	4*5=20	3.30

The table above which shows the rating of how easily respondents can use or have access to the e – commerce services indicates that MTN, Vodafone and AIRTEL that respectively scored 3.38, 3.33 and 3.30 fell in the good rating. It was only AIRTEL that had a fair rating of 2.64. From the above it can be concluded that the telecommunication network whose e – commerce platform can easily be used is MTN.

Table 77: Privacy Cross-tabulation

	Privacy					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	20 29.4%	16 13.1%	24 24.2%	24 40.0%	84 23.0%
MTN	8 50.0%	36 52.9%	62 50.8%	51 51.5%	16 26.7%	173 47.4%
AIRTEL	4 25.0%	8 11.8%	20 16.4%	16 16.2%	20 33.3%	68 18.6%
TIGO	4 25.0%	4 5.9%	24 19.7%	8 8.1%	0 .0%	40 11.0%
Total	16 100.0%	68 100.0%	122 100.0%	99 100.0%	60 100.0%	365 100.0%

Table 78

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	20*2=40	16*3=48	24*4=96	24*5=120	3.62
MTN	8*1=8	36*2=72	62*3=186	51*4=204	16*5=80	3.18
AIRTEL	4*1=4	8*2=16	20*3=60	16*4=64	20*5=100	3.59
TIGO	4*1=4	4*2=8	24*3=72	8*4=32	0*5=0	2.90

The table above which shows the rating on how the privacy of the customers of the various telecommunication companies involved in any e – commerce product are protected indicates that Vodafone, AIRTEL and MTN had the following respective good ratings of 3.62, 3.59 and 3.18. It was only TIGO that had a fair rating of 2.90. An inference from the table is that, three (3) of the companies namely Vodafone, AIRTEL and MTN are performing quite well when it comes to privacy of their clients or customers.

4.3.3 ORGANISATION

Table 79: System Use

COMPONENT	Vodafone	MTN	AIRTEL	TIGO
Confidence	3	3	1	2
Control	2	4	1	2
Ease of use	1	4	3	1
Privacy	3	1	2	4
Total of Rankings	9	12	7	9
Overall rankings	2 ND	4 TH	1 ST	2 ND

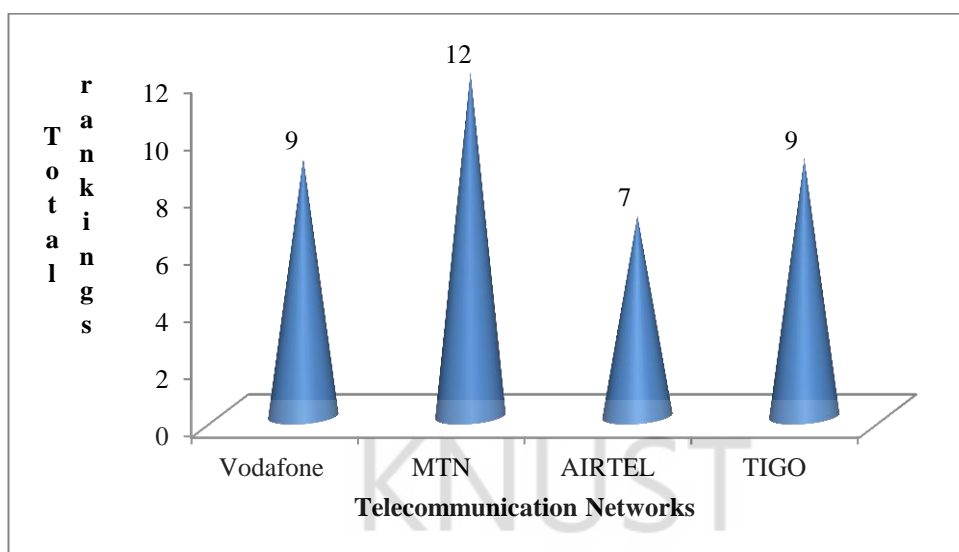
Source: table 80 – table 87

The table above shows that on the confidence that can be placed on the e – commerce system currently in place AIRTEL was the best, TIGO took the second position with MTN and Vodafone having a tie at the third position. On the control once again AIRTEL outperformed all of them. Vodafone and TIGO were tied at the second position with the last position.

From the table.....it can be seen that on how easy the e – commerce service or product being offered by the various can be used Vodafone and TIGO were tied at the first position. The third position was taken by AIRTEL with the last being MTN. This clearly shows that of the four (4) networks, it is the products and services of Vodafone and TIGO that can easily be used. When it comes to the privacy component of the product or service, MTN was the best. This was followed by AIRTEL then Vodafone. The last company was TIGO.

Figure 6 shows the total rankings of the four (4) companies.

Figure 6 ORGANISATION SYSTEM USE RANKING



Source: Table 79

It can be seen from figure 6 that the best performed network in system use AIRTEL.

Table 80: Confidence Cross-tabulation

	Confidence				Total
	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	4 57.1%	0 .0%	0 .0%	4 25.0%
MTN	2 100.0%	0 .0%	2 66.7%	0 .0%	4 25.0%
AIRTEL	0 .0%	0 .0%	0 .0%	4 100.0%	4 25.0%
TIGO	0 .0%	3 42.9%	1 33.3%	0 .0%	4 25.0%
Total	2 100.0%	7 100.0%	3 100.0%	4 100.0%	16 100.0%

Table 81

	Fairly	Good	Very good	Excellent	Average
Vodafone	0*2=0	4*3=12	0*4=0	0*5=0	3.0
MTN	2*2=4	0*3=0	2*4=8	0*5=0	3.0
AIRTEL	0*2=0	0*3=0	0*4=0	4*5=20	5.0
TIGO	0*2=0	3*3=9	1*4=4	0*5=0	3.3

It can be seen from the table above that apart from respondents of AIRTEL who claimed they have an excellent confidence in the current system that they use in the provision of their e – commerce services. The remaining three (3) networks namely TIGO, Vodafone and MTN had had good ratings of 3.3, 3.0 and 3.0 respectively. An inference from the above is that it is only AIRTEL that has a complete confidence in the current system that they use in providing their current e – commerce services.

Respondents were then asked to rate the amount of control that they have over the current system that they use in providing their e – commerce. Their response is presented in the table below.

Table 82: Control Cross-tabulation

	Control			Total
	Good	Very good	Excellent	
Vodafone	2 20.0%	2 50.0%	0 .0%	4 25.0%
MTN	4 40.0%	0 .0%	0 .0%	4 25.0%
AIRTEL	2 20.0%	0 .0%	2 100.0%	4 25.0%
TIGO	2 20.0%	2 50.0%	0 .0%	4 25.0%
Total	10 100.0%	4 100.0%	2 100.0%	16 100.0%

Table 83

	Good	Very good	Excellent	Average score
Vodafone	2*3=6	2*4=8	0*5=0	3.5
MTN	4*3=12	0*4=0	0*5=0	3.0
AIRTEL	2*3=6	0*4=0	2*5=10	4.0
TIGO	2*3=6	2*4=8	0*5=0	3.5

It can be seen from the table above that AIRTEL had a very good rating of 4.0 with the remaining three (3) networks namely Vodafone, MTN and TIGO having good ratings of 3.5, 3.0 and 3.5 respectively.

Respondents were then asked how they can rate the ease at which the current system that they use in the provision of their e – commerce services can be put. Their response is presented below.

Table 84: Ease of use Cross-tabulation

	Ease of use			Total
	Good	Very good	Excellent	
Vodafone	0 .0%	2 25.0%	2 40.0%	4 25.0%
MTN	2 66.7%	2 25.0%	0 .0%	4 25.0%
AIRTEL	0 .0%	4 50.0%	0 .0%	4 25.0%
TIGO	1 33.3%	0 .0%	3 60.0%	4 25.0%
Total	3 100.0%	8 100.0%	5 100.0%	16 100.0%

Table 85

	Good	Very good	Excellent	Average score
Vodafone	0*3=0	2*4=8	2*5=10	4.5
MTN	2*3=6	2*4=8	0*5=0	3.5
AIRTEL	0*3=0	4*4=16	0*5=0	4.0
TIGO	1*3=3	0*4=0	3*5=15	4.5

Table 85 shows that the respondents from TIGO, AIRTEL and Vodafone claimed they can give a very good rating to the ease at which they can use current system that they use in providing their e – commerce services. It was MTN they gave a good rating of 3.5. From the above it can be concluded that there is not much difficulty in the use of the system being used in the provision of e – commerce services for all the four (4) companies.

Table 86: Privacy Cross-tabulation

	Privacy			Total
	Good	Very good	Excellent	
Vodafone	2 28.6%	2 40.0%	0 .0%	4 25.0%
MTN	0 .0%	2 40.0%	2 50.0%	4 25.0%
AIRTEL	2 28.6%	0 .0%	2 50.0%	4 25.0%
TIGO	3 42.9%	1 20.0%	0 .0%	4 25.0%
Total	7 100.0%	5 100.0%	4 100.0%	16 100.0%

Table 87

	Good	Very good	Excellent	Average score
Vodafone	2*3=6	2*4=8	0*5=0	3.5
MTN	0*3=0	2*4=8	2*5=10	4.5
AIRTEL	2*3=6	0*4=0	2*5=10	4.0
TIGO	3*3=9	1*4=4	0*5=0	3.3

Table 87 shows that when it comes to the rating of the privacy component of the current system used by the four (4) networks in the provision of their e – commerce services that they render, respondents from MTN and AIRTEL respectively gave a very good rating of 4.5 and 4.0. The remaining two (2) networks namely TIGO and Vodafone gave a good rating of 3.3 and 3.5 respectively.

4.4 SYSTEM QUALITY OF THE TELECOMS

4.4.1 CORPORATE/ INSTITUTIONAL CUSTOMERS

Table 88: system quality

Component	Vodafone	MTN	AIRTEL
Quick responsiveness	1	1	3
Assurance	3	2	1
Empathy	3	2	1
Following-up service	2	2	1
Total of Rankings	9	7	5
Overall rankings	3rd	2nd	1st

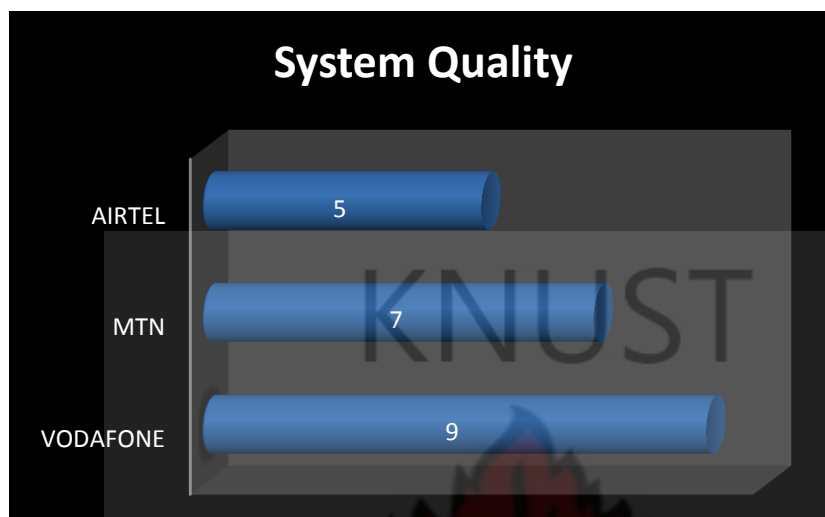
Source: table 89 – table 96

Table 88 shows that in terms of how quick the current system respond to questions or queries both Vodafone and MTN took the first position. The last network was AIRTEL. This means the current e – commerce system being used by Vodafone and MTN respond faster to queries than that of AIRTEL. On the assurance that the respondents can place on the current e – commerce system in place AIRTEL outperformed MTN and Vodafone. MTN took the second position with Vodafone taking the last position. When it comes to the understanding of how the current system operates by the respondents AIRTEL took the first position, followed by MTN with Vodafone being last. A deduction from the above is that the respondents from AIRTEL understand how the current system operates than those from MTN and Vodafone.

In the area of the system providing follow – up services, AIRTEL took the first position again with MTN and Vodafone settling for the second position together. A deduction from the above is that all the system in place at all three (3) networks currently grants follow – up services to its users.

Finally table 88 reports that AIRTEL took the overall first position when it comes to system quality. This was followed by MTN then Vodafone.

Figure 7 INSTITUTIONAL CUSTOMERS SYSTEM QUALITY RANKING



Source: table 88

Table 89: Quick responsiveness Cross-tabulation

	Quick responsiveness				Total
	Fairly	Good	Very good	Excellent	
Vodafone	3 100.0%	4 33.3%	3 100.0%	0 .0%	10 50.0%
MTN	0 .0%	4 33.3%	0 .0%	0 .0%	4 20.0%
AIRTEL	0 .0%	4 33.3%	0 .0%	2 100.0%	6 30.0%
Total	3 100.0%	12 100.0%	3 100.0%	2 100.0%	20 100.0%

Table 90

	Fairly	Good	Very good	Excellent	Average score
Vodafone	3*2=6	4*3=12	3*4=12	0*5=0	3.0
MTN	0*2=0	4*3=12	0*4=0	0*5=0	3.0
AIRTEL	0*2=0	4*3=12	0*5=0	2*5=10	3.7

The table above which shows the ratings of the organizations on the on how quick the various networks respond to them when they are called indicates that AIRTEL had a good rating of 3.7. The remaining two (2) networks had a good rating of 3.0. An inference from the above is that AIRTEL response to the complaints of the organizations that use their services and products is rapid as compared to the other networks although they are all performing well.

Table 91: Assurance Cross-tabulation

	Assurance				Total
	Fairly	Good	Very good	Excellent	
Vodafone	4 100.0%	3 42.9%	3 42.9%	0 .0%	10 50.0%
MTN	0 .0%	4 57.1%	0 .0%	0 .0%	4 20.0%
AIRTEL	0 .0%	0 .0%	4 57.1%	2 100.0%	6 30.0%
Total	4 100.0%	7 100.0%	7 100.0%	2 100.0%	20 100.0%

Table 92

	Fairly	Good	Very good	Excellent	Average score
Vodafone	4*2=8	3*3=9	3*4=12	0*5=0	2.9
MTN	0*2=0	4*3=12	0*4=0	0*5=0	3.0
AIRTEL	0*2=0	0*3=0	4*4=16	2*5=10	4.3

In finding out the ratings of how assured the organizations that used the services and products of the telecommunications companies, the table above reports that Vodafone had a fair rating of 2.9, MTN had a good rating of 3.0 with AIRTEL finally having a very good rating of 4.3. A conclusion from the above outcome is that the products and services of AIRTEL are trustworthy.

Table 93: Empathy Cross-tabulation

		Empathy					Total
		Poor	Fairly	Good	Very good	Excellent	
Type of network	Vodafone	2 100.0%	2 100.0%	1 20.0%	4 50.0%	1 33.3%	10 50.0%
	MTN	0 .0%	0 .0%	2 40.0%	2 25.0%	0 .0%	4 20.0%
	AIRTEL	0 .0%	0 .0%	2 40.0%	2 25.0%	2 66.7%	6 30.0%
Total		2 100.0%	2 100.0%	5 100.0%	8 100.0%	3 100.0%	20 100.0%

Table 94

	Poor	Fairly	Good	Very good	Excellent	Average score
Vodafone	2*1=2	2*2=4	1*3=3	4*4=16	1*5=5	3.0
MTN	0*1=0	0*2=0	2*3=6	2*4=8	0*5=0	3.5
AIRTEL	0*1=0	0*2=0	2*3=6	2*4=8	2*5=10	4.0

The table above shows the rating of the understanding of the organizations on their understanding on the various services provided by the respective networks. It indicates that AIRTEL had a very good rating of 4.0. MTN had a good rating of 3.5 with Vodafone also having a rate of 3.0. An inference from the above is that AIRTEL ensures that it explains its services and how their products work to the organizations that they render their services to as compared to the other networks.

Table 95: Following - up - service Cross-tabulation

	Following - up - service					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	4 100.0%	1 33.3%	1 20.0%	4 66.7%	0 .0%	10 50.0%
MTN	0 .0%	2 66.7%	2 40.0%	0 .0%	0 .0%	4 20.0%
AIRTEL	0 .0%	0 .0%	2 40.0%	2 33.3%	2 100.0%	6 30.0%
Total	4 100.0%	3 100.0%	5 100.0%	6 100.0%	2 100.0%	20 100.0%

Table 96

	Poor	Fairly	Good	Very good	Excellent	Average score
Vodafone	4*1=4	1*2=2	1*3=3	4*4=16	0*5=0	2.5
MTN	0*1=0	2*2=4	2*3=6	0*4=0	0*5=0	2.5
AIRTEL	0*1=0	0*2=0	2*3=6	2*4=8	2*5=10	4.0

Table 96 shows that AIRTEL had a very good rating of 4.0 when it came to the provision of follow – up services. The remaining two (2) networks, Vodafone and MTN respectively had a fair rating of 2.5. An inference from the above is that the current system in place at AIRTEL that allows the organizations to make follow – up on their services is the best as compared to the other two (2) companies.

4.4.2 INDIVIDUAL CUSTOMER

Table 97: System Quality

Component	Vodafone	MTN	AIRTEL	TIGO
Quick responsiveness	1	1	2	1
Assurance	1	2	3	4
Empathy	1	3	2	4
Following-up service	2	3	1	4
Total of Rankings	5	9	8	13
Overall rankings	1 ST	3 RD	2 ND	4 TH

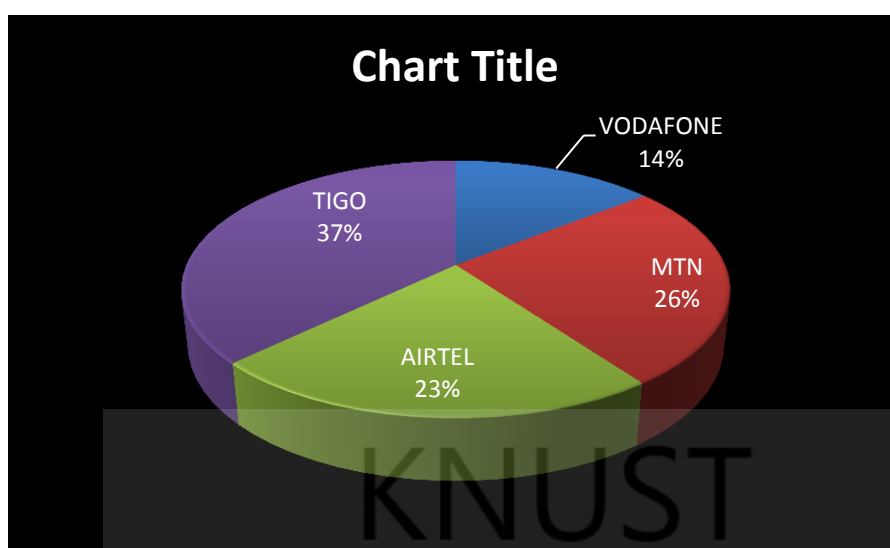
Source: table 98 -table 105

Table 97 shows that in terms of how quick the current system respond to questions or queries Vodafone, TIGO and MTN all had the same value and therefore took the first position. The last network was AIRTEL. This means the current e – commerce system being used by Vodafone, TIGO and MTN respond faster to queries than that of AIRTEL. On the assurance that the customers can place on the current e – commerce system in place Vodafone outperformed all the other three (3) networks. MTN became second, AIRTEL third with the last being TIGO. When it comes to the understanding of how the current system operates, customers from Vodafone gave it the best rankings and so became the best ranked company. AIRTEL took the second position, followed by MTN with TIGO being last. A deduction from the above is that the respondents from Vodafone understand how the current system operates than those from MTN, TIGO and AIRTEL.

In the area of the system providing follow – up services, AIRTEL took the first position again with Vodafone and MTN settling for the second and third positions respectively. The least performed company in this regard is TIGO.

Finally table 8.8 reports that Vodafone took the overall first position when it comes to system quality.

Figure 8 INDIVIDUAL CUSTOMER SYSTEM QUALITY RANKING



Source: table 97

Table 98: Quick responsiveness Cross-tabulation

	Quick responsiveness					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	12 30.0%	16 20.5%	32 19.6%	16 26.7%	8 33.3%	84 23.0%
MTN	12 30.0%	34 43.6%	95 58.3%	24 40.0%	8 33.3%	173 47.4%
AIRTEL	12 30.0%	20 25.6%	16 9.8%	16 26.7%	4 16.7%	68 18.6%
TIGO	4 10.0%	8 10.3%	20 12.3%	4 6.7%	4 16.7%	40 11.0%
Total	40 100.0%	78 100.0%	163 100.0%	60 100.0%	24 100.0%	365 100.0%

Table 99

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	12*1=12	16*2=32	32*3=96	16*4=64	8*5=40	2.90
MTN	12*1=12	34*2=68	95*3=285	24*4=96	8*5=40	2.90
AIRTEL	12*1=12	20*2=40	16*3=48	16*4=64	4*5=20	2.71
TIGO	4*1=4	8*2=16	20*3=60	4*4=16	4*5=20	2.90

Table 99 which reports the rating of the quick responsiveness of the e – commerce services provided by the telecommunication companies indicates that Vodafone, MTN and TIGO had a higher fair rating of 2.90 respectively. The least fair rating among the four companies was recorded by AIRTEL. It can be implied from the above that all the four companies are not performing all that well on how quick they provide their e – commerce services.

Table 100: Assurance Cross-tabulation

	Assurance					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	4 14.3%	20 22.0%	36 24.0%	16 21.1%	8 50.0%	84 23.3%
MTN	12 42.9%	39 42.9%	78 52.0%	36 47.4%	4 25.0%	169 46.8%
AIRTEL	8 28.6%	20 22.0%	20 13.3%	16 21.1%	4 25.0%	68 18.8%
TIGO	4 14.3%	12 13.2%	16 10.7%	8 10.5%	0 .0%	40 11.1%
Total	28 100.0%	91 100.0%	150 100.0%	76 100.0%	16 100.0%	361 100.0%

Table 101

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	4*1=4	20*2=40	36*3=108	16*4=64	8*5=40	3.05
MTN	12*1=12	39*2=78	78*3=234	36*4=144	4*5=20	2.89
AIRTEL	8*1=8	20*2=40	20*3=60	16*4=64	4*5=20	2.82
TIGO	4*1=4	12*2=24	16*3=48	8*4=32	0*5=0	2.70

The table above which shows how assured respondents are on the use of the e – commerce service products reports that Vodafone and MTN had a good and fair rating of 3.05 and 2.89 respectively. AIRTEL and TIGO recorded a fair rating of 2.82 and 2.70 respectively. An inference from the above is that customers Vodafone has much assurance in the e – commerce service they provide.

Table 102: Empathy Cross-tabulation

	Empathy					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	4 16.7%	24 17.8%	36 24.7%	12 33.3%	8 50.0%	84 23.5%
MTN	12 50.0%	63 46.7%	70 47.9%	20 55.6%	4 25.0%	169 47.3%
AIRTEL	4 16.7%	24 17.8%	28 19.2%	4 11.1%	4 25.0%	64 17.9%
TIGO	4 16.7%	24 17.8%	12 8.2%	0 .0%	0 .0%	40 11.2%
Total	24 100.0%	135 100.0%	146 100.0%	36 100.0%	16 100.0%	357 100.0%

Table 103

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	4*1=4	24*2=48	36*3=108	12*4=48	8*5=40	2.95
MTN	12*1=12	63*2=126	70*3=210	20*4=80	4*5=20	2.65
AIRTEL	4*1=4	24*2=48	28*3=84	4*4=16	4*5=20	2.69
TIGO	4*1=4	24*2=48	12*3=36	0*4=0	0*5=0	2.20

Table 103 shows that all four (4) companies had a fair rating when it comes to the understanding the customer of the various products and services channelled electronically. From the above it can be concluded that although they all had a fair rating Vodafone had a higher score. This means that the understanding of the various components of the e – commerce services provided is minimal.

Table 104: Following - up - service Cross-tabulation

	Following - up - service					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	12 27.3%	28 26.4%	24 17.3%	8 18.2%	12 50.0%	84 23.5%
MTN	12 27.3%	54 50.9%	71 51.1%	28 63.6%	0 .0%	165 46.2%
AIRTEL	12 27.3%	12 11.3%	24 17.3%	8 18.2%	12 50.0%	68 19.0%
TIGO	8 18.2%	12 11.3%	20 14.4%	0 .0%	0 .0%	40 11.2%
Total	44 100.0%	106 100.0%	139 100.0%	44 100.0%	24 100.0%	357 100.0%

Table 105

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	12*1=12	28*2=56	24*3=72	8*4=32	12*5=60	2.76
MTN	12*1=12	54*2=108	71*3=213	28*4=112	0*5=0	2.70
AIRTEL	12*1=12	12*2=24	24*3=72	8*4=32	12*5=60	2.94
TIGO	8*1=8	12*2=24	20*3=60	0*4=0	0*5=0	2.30

The table above which shows all four companies had a fair rating when it comes to making follow – up services. It can be inferred that all the four (4) companies do not have a properly designed that allows customers to make up follow ups.

4.4.3 ORGANISATION

Table 106: system quality

Component	Vodafone	MTN	AIRTEL	TIGO
Quick responsiveness	2	3	1	3
Assurance	3	2	1	3
Empathy	2	2	1	2
Following-up service	2	1	2	3
Total of Rankings	9	8	5	11
Overall rankings	3RD	2ND	1ST	4TH

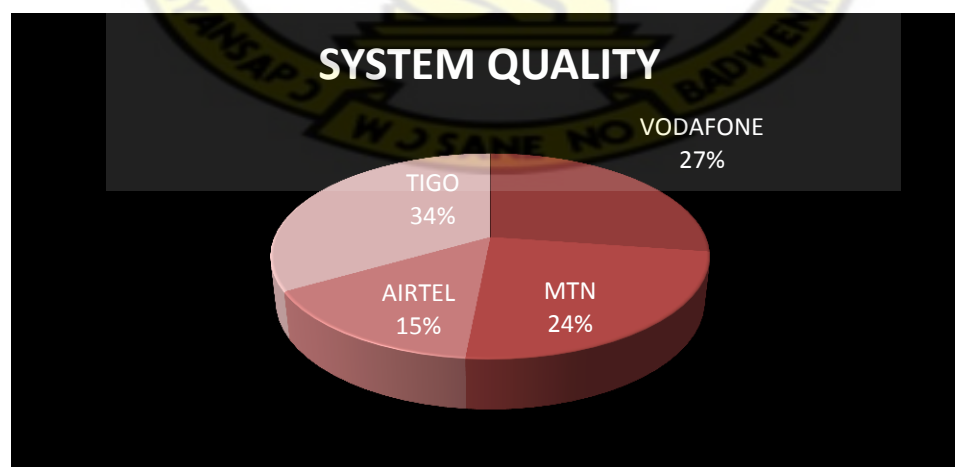
Source: table 107- table 114

Table 106 shows that in terms of how quick the current system respond to questions or queries AIRTEL took the first position with the second position going to Vodafone. The third position where a tie occurred was taken respectively by MTN and TIGO. On the assurance that the customers can place on the current e – commerce system in place AIRTEL outperformed all the other three (3) networks. MTN became second with a tie at the third position by TIGO and Vodafone. When it comes to the understanding of how the current system operates, customers from AIRTEL gave it the best rankings and so became the best ranked company. AIRTEL, MTN and Vodafone respectively tie up at the second position. A deduction from the above is that the respondents from all the networks understand how the current system operates.

In the area of the system providing follow – up services, MNT took the first position with a tie at the second position by Vodafone and AIRTEL. The least performed company in this regard is TIGO.

Table 106; report that AIRTEL took the overall best position in system quality.

Figure 9 ORGANISATION SYSTEM QUALITY RANKING



Source: table 106

Table 107: Quick responsiveness Cross-tabulation

	Quick responsiveness			Total
	Good	Very good	Excellent	
Vodafone	0 .0%	2 50.0%	2 22.2%	4 25.0%
MTN	2 66.7%	0 .0%	2 22.2%	4 25.0%
AIRTEL	0 .0%	0 .0%	4 44.4%	4 25.0%
TIGO	1 33.3%	2 50.0%	1 11.1%	4 25.0%
Total	3 100.0%	4 100.0%	9 100.0%	16 100.0%

Table 108

	Good	Very good	Excellent	Average score
Vodafone	0*3=0	2*4=8	2*5=10	4.5
MTN	2*3=6	0*4=0	2*5=10	4.0
AIRTEL	0*3=0	0*4=0	4*5=20	5.0
TIGO	1*3=3	2*4=8	1*5=5	4.0

The table above reports that when it comes to how quick the current systems being used by the various networks in executing their e – commerce services respond to queries or questions, respondents from three (3) of networks namely MTN, Vodafone and TIGO had very good ratings of 4.0, 4.5 and 4.0 respectively. The remaining network, AIRTEL had an excellent rating of 5.0. An inference from the above is that of the four (4) AIRTEL is the one with the with the fast response rate.

Table 109: Assurance Cross-tabulation

	Assurance			Total
	Good	Very good	Excellent	
Vodafone	2 28.6%	2 50.0%	0 .0%	4 25.0%
MTN	2 28.6%	0 .0%	2 40.0%	4 25.0%
AIRTEL	0 .0%	2 50.0%	2 40.0%	4 25.0%
TIGO	3 42.9%	0 .0%	1 20.0%	4 25.0%
Total	7 100.0%	4 100.0%	5 100.0%	16 100.0%

Table 110

	Good	Very good	Excellent	Average score
Vodafone	2*3=6	2*4=8	0*5=0	3.5
MTN	2*3=6	0*4=0	2*5=10	4.0
AIRTEL	0*3=0	2*4=8	2*5=10	4.5
TIGO	3*3=9	0*4=0	1*5=5	3.5

Table 8.9.2 shows that with regards to how assured the respondents are on their current e – commerce system, respondents from Vodafone and TIGO gave a good rating of 3.5 each respectively. The respondents from the remaining two (2) networks namely MTN and AIRTEL gave very good ratings of 4.0 and 4.5 respectively.

Table 111: Empathy Cross-tabulation

	Empathy			Total
	Good	Very good	Excellent	
Vodafone	2 28.6%	2 25.0%	0 .0%	4 25.0%
MTN	2 28.6%	2 25.0%	0 .0%	4 25.0%
AIRTEL	0 .0%	4 50.0%	0 .0%	4 25.0%
TIGO	3 42.9%	0 .0%	1 100.0%	4 25.0%
Total	7 100.0%	8 100.0%	1 100.0%	16 100.0%

Table 112

	Good	Very good	Excellent	Average score
Vodafone	2*3=6	2*4=8	0*5=0	3.5
MTN	2*3=6	2*4=8	0*5=0	3.5
AIRTEL	0*3=0	4*4=16	0*5=0	4.0
TIGO	3*3=9	0*4=0	1*5=5	3.5

The table above which shows the ratings of the respondents from the four (4) networks on their understanding of how their current e – commerce service system works reports that it was only the respondents from AIRTEL who gave a very good rating of 4.0. The respondents from the remaining three (3) networks namely MTN, Vodafone and TIGO respectively gave good ratings of 3.5 each. From the above it can be concluded that respondents from AIRTEL have a better understanding how their current e – commerce service system operates than the respondents from the other networks.

Table 113: following - up - service Cross-tabulation

	Following - up - service			Total
	Good	Very good	Excellent	
Vodafone	0 .0%	4 30.8%	0 .0%	4 25.0%
MTN	0 .0%	2 15.4%	2 100.0%	4 25.0%
AIRTEL	0 .0%	4 30.8%	0 .0%	4 25.0%
TIGO	1 100.0%	3 23.1%	0 .0%	4 25.0%
Total	1 100.0%	13 100.0%	2 100.0%	16 100.0%

Table 114

	Good	Very good	Excellent	Average score
Vodafone	0*3=0	4*4=16	0*5=0	4.0
MTN	0*3=0	2*4=8	2*5=10	4.5
AIRTEL	0*3=0	4*4=16	0*5=0	4.0
TIGO	1*3=3	3*4=12	0*5=0	3.8

It can be seen from the table above that when it comes to the ratings on how the systems from the various networks allows for the makings of follow ups, respondents from all the three (3) networks namely Vodafone, MTN and AIRTEL with the exception of TIGO respectively gave very good ratings of 4.0, 4.5 and 4.0. From the above an inference is that when it comes to the system being used by all the networks in rendering follow – up services, they are all performing well.

4.5 CUSTOMER E-COMMERCE SATISFACTION OF THE TELECOMS

4.5.1 CORPORATE OR INSTITUTIONAL CUSTOMERS

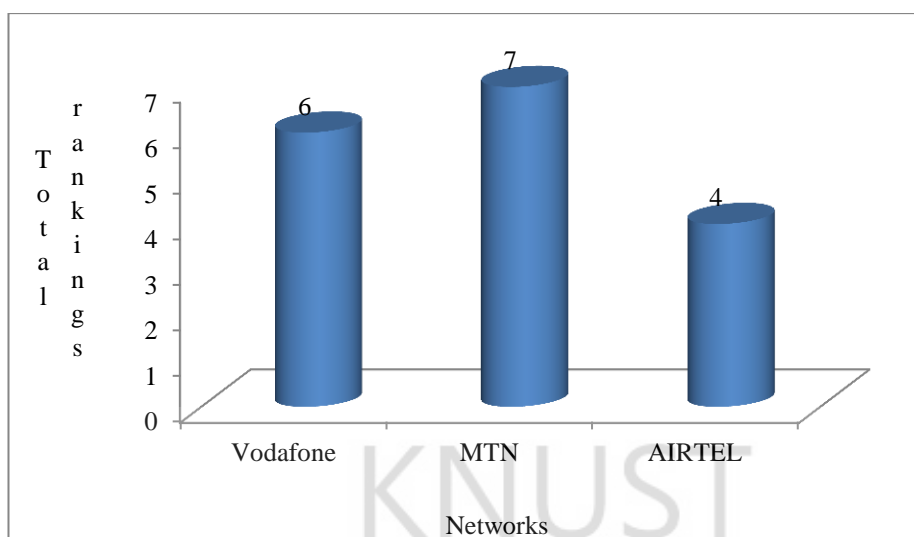
Table 115: Customer E – Commerce Satisfaction

COMPONENT	VODAFONE	MTN	AIRTEL
Satisfaction with the content	3	1	2
Satisfaction with the design characteristics of the e – commerce system	1	3	1
Satisfaction with the service rendered through the e – commerce system	2	3	1
Total of rankings	6	7	4
Overall rankings	2 nd	3 rd	1 st

Source: table 116 -table 121

It can be seen from the table above that when it comes to the rankings of the level of satisfaction with the content of the services rendered by, MTN took the first position. This was followed by AIRTEL in the second position with the last being Vodafone. When it came to the satisfaction with the design characteristics of the e – commerce system, both Vodafone and AIRTEL took the first position with the last being MTN. Finally on the satisfaction with the services rendered through the e – commerce system, AIRTEL took the first position, followed by Vodafone then MTN. A deduction from the above is that the satisfaction level with the services rendered through the e – commerce system is higher at AIRTEL compared to the rest. Figure 9 shows the overall rankings of the networks.

Figure 10 INSTITUTIONAL CUSTOMER E – COMMERCE SATISFACTION



Source: table 115

It can be seen from figure 10 with total ranking of four (4) AIRTEL took the overall first position. This is followed by Vodafone at the second position with a total ranking of six (6) with the last being MTN with a total ranking of 7. A deduction from the above is that with the overall customer satisfaction with the e – commerce system in place AIRTEL outperformed the rest.

Table 116: Satisfaction with the content Cross-tabulation

	Satisfaction with the content			Total
	Fairly	Good	Very good	
Vodafone	2 50.0%	7 77.8%	1 14.3%	10 50.0%
MTN	0 .0%	2 22.2%	2 28.6%	4 20.0%
AIRTEL	2 50.0%	0 .0%	4 57.1%	6 30.0%
Total	4 100.0%	9 100.0%	7 100.0%	20 100.0%

Table 117

	Fairly	Good	Very good	Average score
Vodafone	2*2=4	7*3=21	1*4=4	2.9
MTN	0*2=0	2*3=6	2*4=8	3.5
AIRTEL	2*2=4	0*4=0	4*4=16	3.3

The table above that shows the rating of the level of satisfaction with the content of the services provided by the networks shows that AIRTEL and MTN had a good rating of 3.3 and 3.5 respectively. Vodafone had a fair rating of 2.9. From the above it can be inferred that the content of the services and products offered by MTN is the best among the three (3) networks.

Table 118: Satisfaction with the design characteristics of the e - commerce system Cross-tabulation

	Satisfaction with the design characteristics of the e - commerce system				Total
	Poor	Good	Very good	Excellent	
Vodafone	2 100.0%	6 50.0%	2 50.0%	0 .0%	10 50.0%
MTN	0 .0%	2 16.7%	2 50.0%	0 .0%	4 20.0%
AIRTEL	0 .0%	4 33.3%	0 .0%	2 100.0%	6 30.0%
Total	2 100.0%	12 100.0%	4 100.0%	2 100.0%	20 100.0%

Table 119

	Poor	Good	Very good	Excellent	Average score
Vodafone	2*1=2	6*3=18	2*4=8	0*5=0	2.8
MTN	0*1=0	2*3=6	2*4=8	0*5=0	3.5
AIRTEL	0*1=0	4*3=12	0*4=0	2*5=10	3.7

On the rating of the satisfaction with the design characteristics of the e – commerce systems currently being used by the networks indicates that AIRTEL and MTN

respectively had a good rating of 3.7 and 3.5. A fair rating of 2.8 went to Vodafone. From the above it can be implied that the organizations are not satisfied with the design characteristics of the e – commerce systems currently being used by Vodafone.

Table 120: Satisfaction with the service rendered through the e - commerce system Cross-tabulation

	Satisfaction with the service rendered through the e - commerce system				Total
	Poor	Good	Very good	Excellent	
Vodafone	4 66.7%	5 45.5%	1 100.0%	0 .0%	10 50.0%
MTN	2 33.3%	2 18.2%	0 .0%	0 .0%	4 20.0%
AIRTEL	0 .0%	4 36.4%	0 .0%	2 100.0%	6 30.0%
Total	6 100.0%	11 100.0%	1 100.0%	2 100.0%	20 100.0%

Table 121

	Poor	Good	Very good	Excellent	Average score
Vodafone	4*1=4	5*3=15	1*4=4	0*5=0	2.3
MTN	2*1=2	2*3=6	0*4=0	0*5=0	2.0
AIRTEL	0*1=0	4*3=12	0*4=0	2*5=10	3.7

Table 121 shows that on the rating of the satisfaction of the organizations with the e – commerce services rendered by the networks, AIRTEL had a good rating of 3.7. The remaining two (2) networks namely Vodafone and MTN had a fair rating of 2.3 and 2.0 respectively. An inference from the above is that the organizations were more satisfied with the e – commerce services being rendered by AIRTEL and hence had the best rating among the other networks.

4.5.2 INDIVIDUAL CUSTOMERS

Table 122: Customer E – Commerce Satisfaction

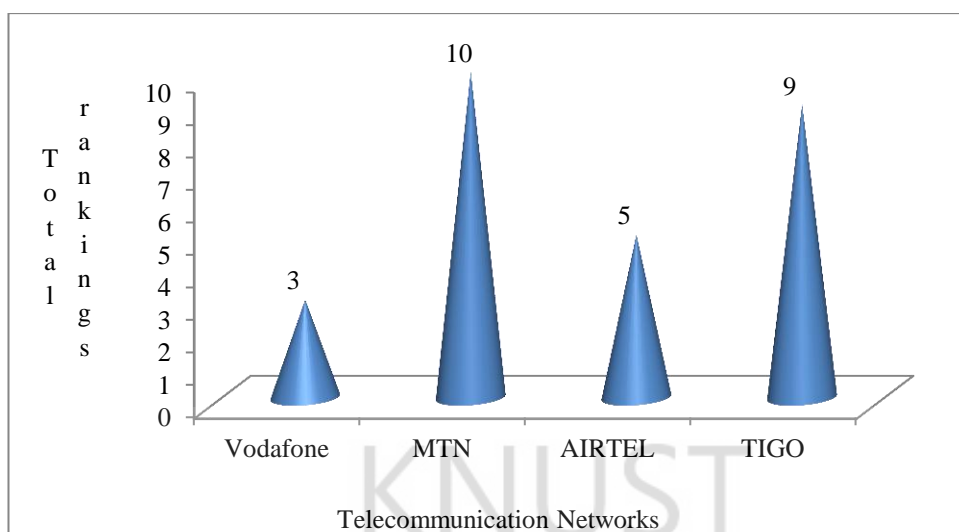
COMPONENT	VODAFONE	MTN	AIRTEL	TIGO
Satisfaction with the content	1	4	1	3
Satisfaction with the design characteristics of the e – commerce system	1	3	2	4
Satisfaction with the service rendered through the e – commerce system	1	4	2	3
Total of rankings	3	11	5	10
Overall rankings	1ST	4TH	2ND	3RD

Source: table 123- table 128

It can be seen from the table above that when it comes to the rankings of the level of satisfaction with the content of the services rendered by, Vodafone and AIRTEL took the first positions. This was followed by TIGO in the third position with the last being MTN. When it came to the satisfaction with the design characteristics of the e – commerce system, Vodafone once again took the first slot. The second position was taken by AIRTEL with the third position going MTN. The last position went to TIGO.

Finally on the satisfaction with the services rendered through the e – commerce system, Vodafone took the first position, AIRTEL the second position, followed by TIGO in the third position with the last being MTN. A deduction from the above is that the satisfaction level with the services rendered through the e – commerce system is higher at Vodafone compared to the remaining networks. Figure 11 shows the overall rankings of the networks.

Figure 11 INDIVIDUAL CUSTOMER E – COMMERCE SATISFACTION



Source: table 122

It can be seen from figure 11 that the best ranked company with regards to customer satisfaction is Vodafone. A deduction from the above is that in the Vodafone has the best customer satisfaction system in place.

Table 123: Satisfaction with the content Cross-tabulation

	Satisfaction with the content					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	16 21.3%	56 25.2%	8 25.0%	4 25.0%	84 23.3%
MTN	8 50.0%	39 52.0%	110 49.5%	8 25.0%	4 25.0%	169 46.8%
AIRTEL	4 25.0%	16 21.3%	32 14.4%	8 25.0%	8 50.0%	68 18.8%
TIGO	4 25.0%	4 5.3%	24 10.8%	8 25.0%	0 .0%	40 11.1%
Total	16 100.0%	75 100.0%	222 100.0%	32 100.0%	16 100.0%	361 100.0%

Table 124

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	16*2=32	56*3=168	8*4=32	4*5=20	3.00
MTN	8*1=8	39*2=78	110*3=330	8*4=32	4*5=20	2.77
AIRTEL	4*1=4	16*2=32	32*3=96	8*4=32	8*5=40	3.00
TIGO	4*1=4	4*2=8	24*3=72	8*4=32	0*5=0	2.90

Table 124 shows that Vodafone and AIRTEL respectively had a good rating of 3.00 when they were asked to rate their satisfaction level on the content of the e – commerce customer services that they are provided by their telecommunications networks. AIRTEL and MTN respectively had a fair rating of 2.90 and 2.77. From the above it can be concluded that the content provided by Vodafone is the best.

Table 125: Satisfaction with the design characteristics of the e - commerce system Cross-tabulation

	Satisfaction with the design characteristics of the e - commerce system					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	4 33.3%	24 26.4%	24 12.9%	20 45.5%	12 42.9%	84 23.3%
MTN	4 33.3%	43 47.3%	102 54.8%	8 18.2%	12 42.9%	169 46.8%
AIRTEL	0 .0%	16 17.6%	36 19.4%	12 27.3%	4 14.3%	68 18.8%
TIGO	4 33.3%	8 8.8%	24 12.9%	4 9.1%	0 .0%	40 11.1%
Total	12 100.0%	91 100.0%	186 100.0%	44 100.0%	28 100.0%	361 100.0%

Table 126

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	4*1=4	24*2=48	24*3=72	20*4=80	12*5=60	3.14
MTN	4*1=4	43*2=86	102*3=306	8*4=32	12*5=60	2.89
AIRTEL	0*1=0	16*2=32	36*3=108	12*4=48	4*5=20	3.06
TIGO	4*1=4	8*2=16	24*3=72	4*4=16	0*5=0	2.70

The table above which shows the distribution of the rating of the level of satisfaction of the design characteristics of the e – commerce system currently in place by the various companies shows that Vodafone and AIRTEL had a good rating. MTN and TIGO respectively had a fair rating. Once again from the above it can be concluded that of the four (4) companies Vodafone had the best design characteristics in terms of the current e – commerce system in place.

Table 127: Satisfaction with the service rendered through the e - commerce system

	Satisfaction with the service rendered through the e - commerce system					Total
	Poor	Fairly	Good	Very good	Excellent	
Vodafone	0 .0%	20 29.4%	32 16.9%	20 31.2%	12 60.0%	84 23.0%
MTN	16 66.7%	28 41.2%	101 53.4%	24 37.5%	4 20.0%	173 47.4%
AIRTEL	4 16.7%	16 23.5%	32 16.9%	12 18.8%	4 20.0%	68 18.6%
TIGO	4 16.7%	4 5.9%	24 12.7%	8 12.5%	0 .0%	40 11.0%
Total	24 100.0%	68 100.0%	189 100.0%	64 100.0%	20 100.0%	365 100.0%

Table 128

	Poor	Fair	Good	Very good	Excellent	Average
VODAFONE	0*1=0	20*2=40	32*3=96	20*4=80	12*5=60	3.29
MTN	16*1=16	28*2=56	101*3=303	24*4=96	4*5=20	2.84
AIRTEL	4*1=4	16*2=32	32*3=96	12*4=48	4*5=20	2.94
TIGO	4*1=4	4*2=8	24*3=72	8*4=32	0*5=0	2.90

Table 128 shows that when it comes to the level of satisfaction with the services rendered through the e – commerce system, Vodafone had a rating of goo. The remaining three (3) companies had a fair rating. An inference from the above is that of the four (4) telecommunication companies, Vodafone is the best.

4.5.3 ORGANISATION

Table 129: customer e – commerce satisfaction

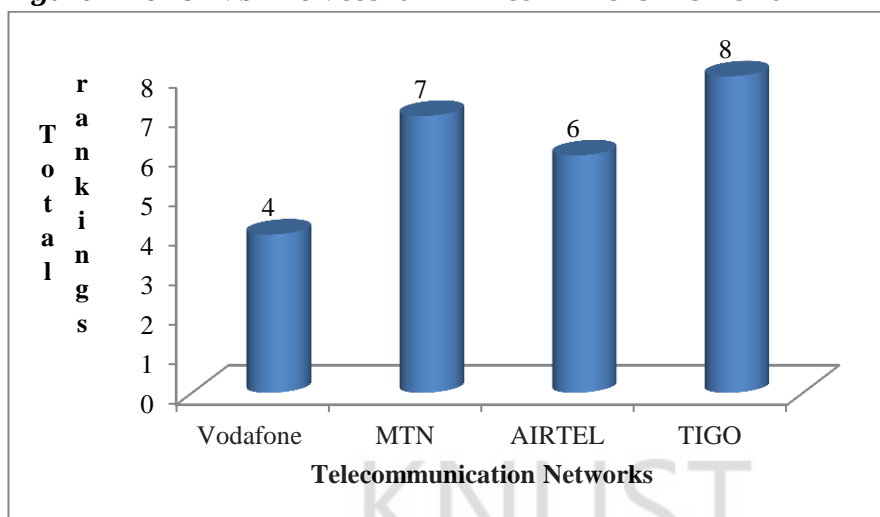
COMPONENT	VODAFONE	MTN	AIRTEL	TIGO
Satisfaction with the content	2	2	1	4
Satisfaction with the design characteristics of the e – commerce system	1	2	2	2
Satisfaction with the service rendered through the e – commerce system	1	3	3	2
Total of rankings	4	7	6	8
Overall rankings	1ST	3RD	2ND	4TH

Source: table 130 –table 135

It can be seen from the table above that when it comes to the rankings of the level of satisfaction with the content of the services rendered by, AIRTEL took the first positions with a tie at the second position by Vodafone and MTN. The last position was taken by TIGO. When it came to the satisfaction with the design characteristics of the e – commerce system, Vodafone took the first slot. The tie at the second position was taken by the remaining three (3) networks AIRTEL, MTN and TIGO. This clearly shows that the respondents were satisfied with the design characteristics of the e – commerce system in place.

Finally on the satisfaction with the services rendered through the e – commerce system, Vodafone took the first position, TIGO the second position, followed by a tie at the third position by AIRTEL and MTN respectively. Figure 11 shows the overall rankings of the networks.

Figure 12 ORGANISATION CUSTOMER E – COMMERCE SATISFACTION



Source: table 129

It can be seen from the figure above that with regards to customers' satisfaction with the e – commerce services and products the best company is Vodafone.

Table 130: Satisfaction with the content Cross-tabulation

	Satisfaction with the content			Total
	Fairly	Good	Very good	
Vodafone	0 .0%	2 33.3%	2 22.2%	4 25.0%
MTN	0 .0%	2 33.3%	2 22.2%	4 25.0%
AIRTEL	0 .0%	0 .0%	4 44.4%	4 25.0%
TIGO	1 100.0%	2 33.3%	1 11.1%	4 25.0%
Total	1 100.0%	6 100.0%	9 100.0%	16 100.0%

Table 131

	Fairly	Good	Very good	Average score
Vodafone	0*2=0	2*3=6	2*4=8	3.5
MTN	0*2=0	2*3=6	2*4=8	3.5
AIRTEL	0*2=2	0*3=0	4*4=16	4.0
TIGO	1*2=2	2*3=6	1*4=4	3.0

Table 131 shows that with the exception of respondents from AIRTEL who gave a very good rating to their satisfaction with the content of the e – commerce services and products that they provide their customers, the respondents from the remaining three (3) networks namely Vodafone, MTN and TIGO gave good ratings 3.5, 3.5 and 3.0 respectively.

Table 132: Satisfaction with the design characteristics of the e - commerce system

	Satisfaction with the design characteristics of the e - commerce system		Total
	Good	Very good	
Vodafone	0 .0%	4 100.0%	4 25.0%
MTN	4 33.3%	0 .0%	4 25.0%
AIRTEL	4 33.3%	0 .0%	4 25.0%
TIGO	4 33.3%	0 .0%	4 25.0%
Total	12 100.0%	4 100.0%	16 100.0%

Table 133

	Good	Very good	Average score
Vodafone	0*3=0	4*4=16	4.0
MTN	4*3=12	0*4=0	3.0
AIRTEL	4*3=12	0*4=0	3.0
TIGO	4*3=12	0*4=0	3.0

The table above which reports the ratings of respondents on their satisfaction with the design characteristics of their current e – commerce service system reports that with the exception of the respondents from Vodafone who gave a very good rating of 4.0 the remaining gave a good rating. This shows that the respondents from Vodafone are more satisfied with the design characteristics of their current

e – commerce service system as compared to those from the other networks.

Table 134: Satisfaction with the service rendered through the e - commerce system Cross-tabulation

	Satisfaction with the service rendered through the e - commerce system			Total
	Good	Very good	Excellent	
Vodafone	0 .0%	2 28.6%	2 100.0%	4 25.0%
MTN	4 57.1%	0 .0%	0 .0%	4 25.0%
AIRTEL	0 .0%	4 57.1%	0 .0%	4 25.0%
TIGO	3 42.9%	1 14.3%	0 .0%	4 25.0%
Total	7 100.0%	7 100.0%	2 100.0%	16 100.0%

Source: Field survey, 2012

Table 135

	Good	Very good	Excellent	Average score
Vodafone	0*3=0	2*4=8	2*5=10	4.5
MTN	4*3=12	0*4=0	0*5=0	3.0
AIRTEL	0*3=0	4*3=12	0*4=0	3.0
TIGO	3*3=9	1*4=4	0*5=0	3.3

Source: Field survey, 2012

It can be seen from the table above that, with the ratings of respondents on their satisfaction with the services being rendered through the e – commerce system, it was only respondents from Vodafone who gave a very good rating of 4.5. Respondents from TIGO gave a good rating 3.3 while respondents from MTN and AIRTEL respectively gave good ratings of 3.0 each. An inference from the above is that maybe Vodafone is rendering more services than the other networks. Another conclusion might be that the respondents from the other networks were of the belief that there are more other services and products that their companies are not rendering.

4.6 E-COMMERCE SERVICES PROVIDED

4.6.1 CORPORATE/ INSTITUTIONAL CUSTOMERS

Table 136: Billing, invoicing Cross-tabulation

	Billing, invoicing		Total
	Yes	No	
Vodafone	6 75.0%	4 33.3%	10 50.0%
MTN	0 .0%	4 33.3%	4 20.0%
AIRTEL	2 25.0%	4 33.3%	6 30.0%
Total	8 100.0%	12 100.0%	20 100.0%

Source: Field survey, 2012

Table 136 shows that six (6) out of the ten (10) corporate bodies that uses the Vodafone network said they use the billing and invoicing product. None of the respondents that use MTN said they use the billing and invoicing product while two (2) of the six (6) people who use the AIRTEL network claimed they use the billing and invoicing product.

Table 137: Electronic banking Cross-tabulation

	Electronic banking		Total
	Yes	No	
Vodafone	5 33.3%	5 100.0%	10 50.0%
MTN	4 26.7%	0 .0%	4 20.0%
AIRTEL	6 40.0%	0 .0%	6 30.0%
Total	15 100.0%	5 100.0%	20 100.0%

Source: Field survey, 2012

The table above which shows whether the corporate bodies use the electronic banking facility indicates that, all six (6) and four (4) corporate bodies respectively that uses the facility provided by AIRTEL and MTN said they are able to use it for electronic banking. It was five (5) out of the ten (10) corporate bodies that use the services from Vodafone claimed they are able to use it for electronic banking.

Table 138: Complaints handling

	Complaints handling		Total
	Yes	No	
Vodafone	4 50.0%	6 50.0%	10 50.0%
MTN	0 .0%	4 33.3%	4 20.0%
AIRTEL	4 50.0%	2 16.7%	6 30.0%
Total	8 100.0%	12 100.0%	20 100.0%

Source: Field survey, 2012

It can be seen from the table above that both Vodafone and AIRTEL have a system in place that the corporate bodies used in the handling of complaints. All the four (4) corporate bodies who use MTN claimed MTN does not provide them with a facility that handles their complaints.

Table 139: Mobile money /e-value Cross-tabulation

	Mobile money		Total
	Yes	No	
Vodafone	0 0.0%	10 71.4%	10 50.0%
MTN	2 33.3%	2 14.3%	4 20.0%
AIRTEL	4 66.7%	2 14.3%	6 30.0%
Total	6 100.0%	14 100.0%	20 100.0%

Source: Field survey, 2012

The table above shows that of the three (3) it is AIRTEL's mobile money that is well known among the corporations that use the mobile money facility. None of the corporate bodies uses the mobile money product of Vodafone.

4.6.2 INDIVIDUAL CUSTOMERS

Table 140: Billing, invoicing Cross-tabulation

	Billing, invoicing		Total
	Yes	No	
Vodafone	44 52.4%	40 47.6%	84 100.0%
MTN	35 20.7%	134 79.3%	169 100.0%
AIRTEL	12 18.8%	52 81.2%	64 100.0%
TIGO	24 60.0%	16 40.0%	40 100.0%
Total	115 32.2%	242 67.8%	357 100.0%

Source: Field survey, 2012

The table above shows that 44 (52.4%) of the respondents of Vodafone says their network currently provides them with the billing and invoicing services, 35 (20.7%) of the customers of MTN claimed they are also enjoying the same products. 12 (18.8%) and 24 (60.0%) of the customers of AIRTEL and TIGO respectively also said their telecommunication network is providing them with the billing and invoicing products. From the above it can be implied that greater proportion of the customers of TIGO and Vodafone who are currently aware of the e – commerce service of billing and invoicing that is being provided by their respective networks.

Table 141: Mobile money Cross-tabulation

	Mobile money		Total
	Yes	No	
Vodafone	56 70.0%	24 30.0%	80 100.0%
MTN	137 79.2%	36 20.8%	173 100.0%
AIRTEL	64 94.1%	4 5.9%	68 100.0%
TIGO	40 100.0%	0 .0%	40 100.0%
Total	297 82.3%	64 17.7%	361 100.0%

Source: Field survey, 2012

The table above which shows the distribution of whether the respondents of the four (4) networks are aware of the mobile money product being provided by their respective network reports that 56 (70.0%) and 137 (79.2%) of the customers of Vodafone and MTN respectively said they were aware. 64 (94.1%) of the customers of AIRTEL were also aware of the mobile money product being provided by their network. All the 40 (100.0%) customers used in the study confirmed that they were aware of the product called mobile money by their network. An inference from the above is that majority of the customers of the various networks are aware of the mobile money product. Another conclusion is that the mobile money product has really gone down well with the customers of TIGO.

Table 142: Electronic banking Cross-tabulation

	Electronic banking		Total
	Yes	No	
Vodafone	5 33.3%	5 100.0%	10 50.0%
MTN	4 26.7%	0 .0%	4 20.0%
AIRTEL	6 40.0%	0 .0%	6 30.0%
Total	15 100.0%	5 100.0%	20 100.0%

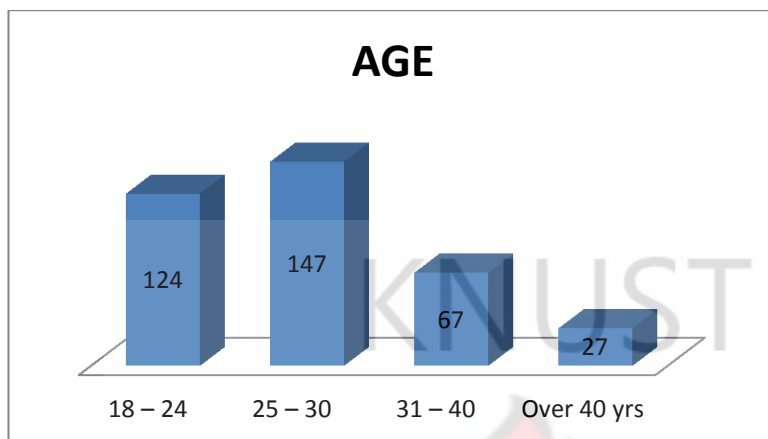
Source: Field survey, 2012

The table above which shows whether the corporate bodies use the electronic banking facility indicates that, all six (6) and four (4) corporate bodies respectively that uses the facility provided by AIRTEL and MTN said they are able to use it for electronic banking. It was five (5) out of the ten (10) corporate bodies that use the services from Vodafone claimed they are able to use it for electronic banking.

4.7 DEMOGRAPHY

4.7.1 INDIVIDUAL CUSTOMER'S DEMOGRAPHY

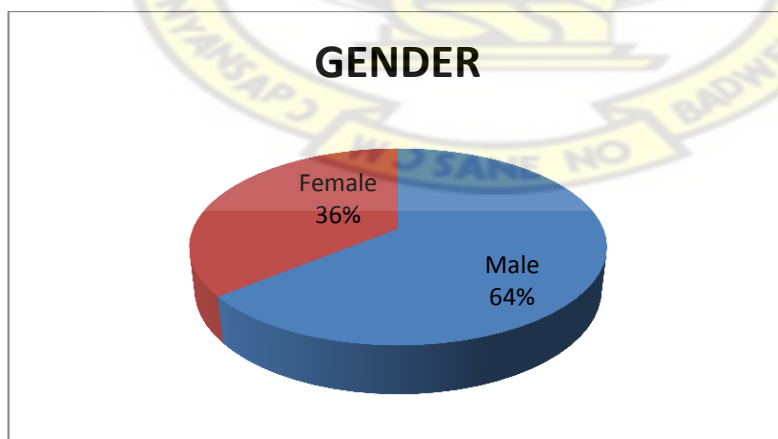
Figure 13 INDIVIDUAL CUSTOMER'S AGE



Source: Field survey, 2012

The figure shows the age distribution of the respondents shows that 124 (34%) and 147 (40.2%) respectively fell in the 18 – 24 and 25 – 30 age brackets. 67 (18.4%) fell in the 31 – 40 age bracket with the remaining 27 (7.4%) falling in the over forty (40) years age bracket.

Figure 14 INDIVIDUAL CUSTOMER'S GENDER

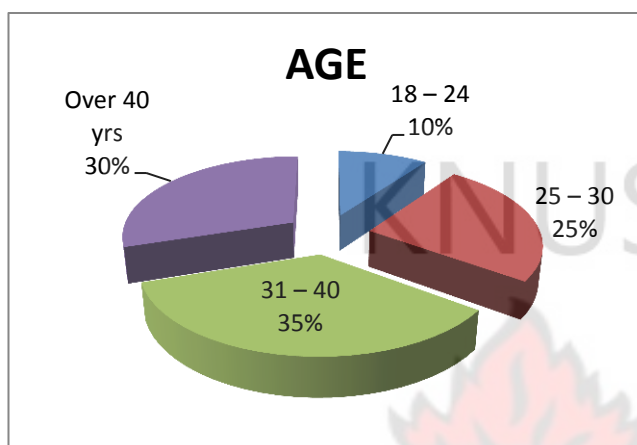


Source: Field survey, 2012

Figure above indicates that 234 (64.1%) of the respondents were males with the remaining 131 (35.9%) being females

4.7.2 INSTITUTIONAL CUSTOMER'S DEMOGRAPHY

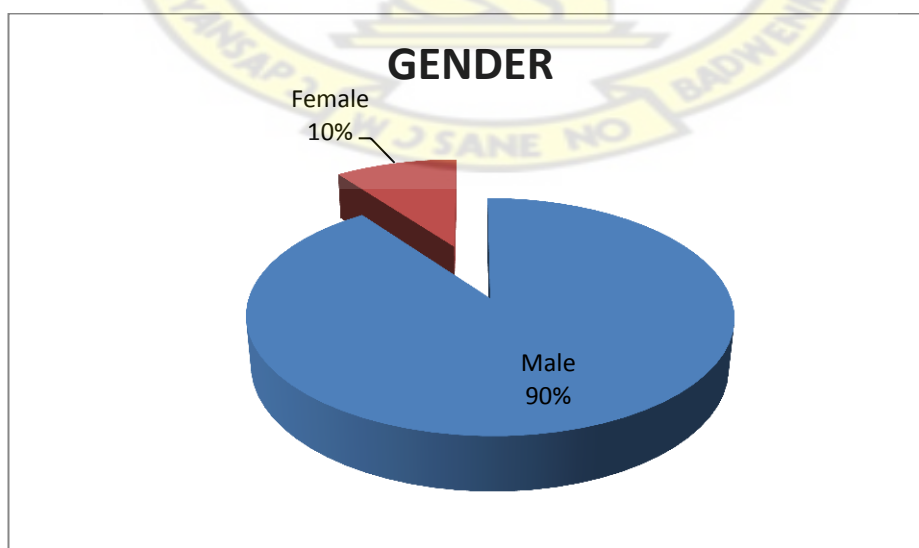
Figure 15 INSTITUTIONAL CUSTOMER'S AGE



Source: Field survey, 2012

The figure above shows that, ages of the respondents indicates that 2 (10%) persons fell in the 18 – 24 and 5 (25 %) in 25 – 30 age. Seven (35%) persons fell in the 31 – 40 and six (30%) persons are over forty (40) years age.

Figure 16 INSTITUTIONAL CUSTOMER'S GENDER



source: Field survey, 2012

The table above shows that as many as 18 (90.0) of the respondents were males with the remaining 2 (10.0%) being females.

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CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter deals with summary of findings based on the preceding chapter, the conclusions that have been drawn, the recommendation thereof, limitations encountered and directions for future research. Conclusions for the study are drawn in this chapter based on the findings. Recommendations are provided in the latter part of the chapter.

5.2 SUMMARY OF FINDINGS

The following summaries are presented based on the objective and findings presented in chapter four of this study:

- In assessing the content or information quality of the e-commerce service of the telecoms, the rating by the individual customers, institutional customers and organization revealed that, relevancy of telecoms content or information provided to customers is more successful in Airtel with a score of 70.9%(10.64 out of 15). Accuracy of the telecoms content or information was more successful in Vodafone with a score of 72.6% (10.89 out of 15). Timely information provided is more successful in Airtel with a score of 70.5% (10.58 out of 15). The flexibility and customized information provided to customers is more successful in Vodafone with a score of 72.1% (10.81 out of 15). Price information provided was more successful in Airtel with a score of 74.2% (11.13 out of 15). Complete description of product or service provided is more successful in MTN with a score of 67.5% (10.13 out of 15).

Information to support business objective provided to customers is more successful in Vodafone with a score of 67.7% (10.16 out of 15). Satisfying ethical standards is more successful in Vodafone 68% (10.2 out of 15). Perceived product or service quality by customers is more successful in Airtel with a score of 72.45% (10.86 out of 15).

The overall assessment of Content or information quality reveals that Airtel is more successful in content or information quality with a total score of 69.4% (93.79 out of 135) followed by Vodafone with a score of 67.6% (91.29 out of 135) then MTN 63.2% (85.39 out of 135).

- In assessing the system use of the e-commerce service of the telecoms, the rating by the individual customers, institutional customers and organizations revealed that, confidence of telecoms system use by customers was more successful in Airtel with a score of 78.4% (11.76 out of 15). Control on the system by customers is more successful in Airtel with a score of 73.3% (11 out of 15). The ease of use of the system by the customer is more successful in Vodafone with a score of 72% (10.8 out of 15). The privacy of customers is more successful in MTN with a score of 77.8% (11.68 out of 15).

The overall assessment of System use reveals that Airtel is more successful in system use by customers with a score of 73.8 % (44.29 out of 60) followed by Vodafone with 69.1 % (41.48 out of 60) and MTN with 67.3% (40.38 out of 60).

- In assessing the system quality of the e-commerce service of the telecoms, the rating by the individual customers, institutional customers and organizations revealed that, quick responsiveness provided to customers is more successful in Airtel with a score of 76.1% (11.41 out of 15). Assurance of the service to

customers is more successful in Airtel with a score of 77.5% (11.62 out of 15). Empathy by the telecoms is more successful in Airtel with a score of 71.3% (10.69 out of 15). Following-up service to customers is more successful in Airtel with a score of 72.9% (10.94 out of 15).

The overall assessment of system quality reveals that, Airtel is more successful in System Quality with total score of 74.4% (44.66 out of 60) followed by MTN with total score of 39.14 out of 60 then Vodafone with 64.3% (38.56 out of 60).

- In assessing the Customer e-commerce satisfaction of the e-commerce service of the telecoms, the rating by the individual customers, institutional customers and organizations revealed that, the satisfaction with the content of the telecoms e-commerce service is more successful in Airtel with a score of 68.7% (10.3 out of 15). The satisfaction with the design characteristics of the e-commerce service is more successful in Vodafone with a score of 66.3% (9.94 out of 15). The satisfaction with the service rendered through the e-commerce system is successful in Vodafone with a score of 67.3% (10.09 out of 15).

The overall assessment of the Customer e-commerce satisfaction reveals that, Airtel is more successful with a total score of 66% (29.7 out of 45) followed by Vodafone with a total score of 65.4% (29.43 out of 45) then MTN scored 60% (27 out of 45).

5.3 CONCLUSIONS

The following conclusions are drawn based on the research findings:

The most successful telecommunication organization in e-commerce service in

Koforidua is Airtel with a total score of 70.6 %(212 out of 300) followed by Vodafone 66.9 % (200.76 out of 300) then MTN with 64 %(191.91 out of 300).

The study has also revealed that Koforidua is not immune to the e-commerce hype which helps economic activities, doing business electronically.

The model used to assess the e-commerce success in Koforidua can be used when implementing e-commerce for the businesses in Ghana since it has the component to come about the success

5.4 RECOMMENDATIONS

The results of this study have identified services that telecommunication organizations should consider seriously to rise to the international level of e-commerce success which includes traveling booking, purchasing, ordering on-line database services and comparing prices of different suppliers.

Also e-commerce service provided by telecoms to institutional customers should have a lot attention in the quality of content or information especially information to support business objectives of the customer.

The customer e-commerce satisfaction is an important area which the telecoms should see their products or services through their customer's eyes in order to satisfy them.

Finally, similar research can be conducted in other municipality, to compare the results with those obtained for Koforidua municipality

5.6 LIMITATIONS

Time factor is a limit to the study in terms of collecting data and analysis. Observation of individual who actually use electronic means of transacting business on their network is impossible.

The wording of a number of questions in the questionnaire may have been too technical for some of the respondents, particularly those not well versed in information technology terminology.

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APPENDIX A

QUESTIONNAIRE FOR TELECOMS KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

Dear sir/Madam, this questionnaire is to obtain information as part of a study, measuring the success of e-commerce in the telecommunication organisations in Koforidua, Eastern Region of Ghana. You are, therefore, kindly requested to provide frank responses to the items in the questionnaire. You are assured that the information provided will be used purely for academic purposes and will be treated with the utmost confidentiality. Thank You.

1) Name of telecommunication network.....

2) What e-commerce services do you provide to customers? Tick all that apply

Billing, invoicing	<input type="checkbox"/>	Travel bookings	<input type="checkbox"/>
Mobile money/ e-value	<input type="checkbox"/>	Electronic banking	<input type="checkbox"/>
Marketing/advertising	<input type="checkbox"/>	On-line database services	<input type="checkbox"/>
Generating direct sales	<input type="checkbox"/>	Purchasing, ordering	<input type="checkbox"/>
Providing customer service/support	<input type="checkbox"/>	Comparing prices of different suppliers	<input type="checkbox"/>
Complaint handling	<input type="checkbox"/>		<input type="checkbox"/>

Others(please specify)

3) How will you rate the CONTENT/INFORMATION QUALITY of your e-commerce service?

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Relevancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timely Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flexible And Customised Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Price Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complete Description Of Products/ Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information To Support Business Objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Satisfying Ethical Standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perceived products or services quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4) How will you rate the SYSTEM USE of your e-commerce service?

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Track on-line order status	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Privacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

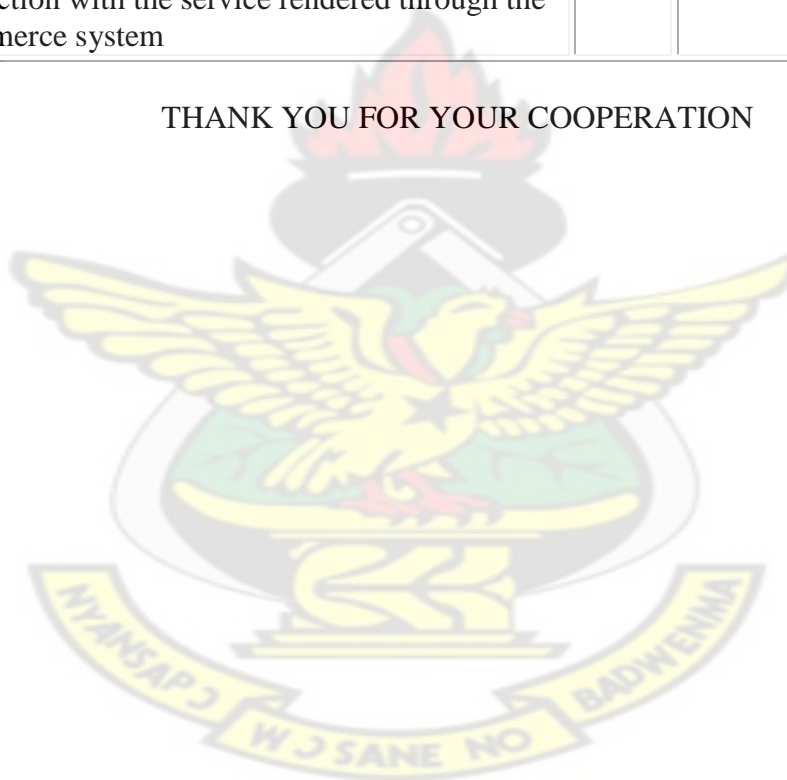
5) How will you rate the SYSTEM QUALITY of your e-commerce service?

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Quick responsiveness					
Assurance					
Empathy					
Following-up service					

6) How will you rate the Customer E-Commerce Satisfaction of your e-commerce service?

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Satisfaction with the content					
Satisfaction with the design characteristics of the e-commerce system					
Satisfaction with the service rendered through the e-commerce system					

THANK YOU FOR YOUR COOPERATION



APPENDIX B

QUESTIONNAIRE FOR INDIVIDUAL CUSTOMER KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

Dear Sir/Madam, this questionnaire is to obtain information as part of a study, measuring the success of e-commerce in the telecommunication organisations in Koforidua, Eastern Region of Ghana. You are, therefore, kindly requested to provide frank responses to the items in the questionnaire. You are assured that the information provided will be used purely for academic purposes and will be treated with the utmost confidentiality. Thank You

- 1) Which of the following applies to you in relation to telecommunication and e-commerce services?

VODAFONE as internet and e-commerce service provider	<input type="checkbox"/>
MTN as internet and e-commerce service provider	<input type="checkbox"/>
AIRTEL as internet and e-commerce service provider	<input type="checkbox"/>
TIGO as internet and e-commerce service provider	<input type="checkbox"/>

- 2) Which of the following are e-commerce services provided by your telecommunication network? tick all that apply

Billing, invoicing	<input type="checkbox"/>	Travel bookings	<input type="checkbox"/>
Mobile money/ e-value	<input type="checkbox"/>	Electronic banking	<input type="checkbox"/>
Marketing/advertising	<input type="checkbox"/>	On-line database services	<input type="checkbox"/>
Generating direct sales	<input type="checkbox"/>	Purchasing, ordering	<input type="checkbox"/>
Providing customer service/support	<input type="checkbox"/>	Comparing prices of different suppliers	<input type="checkbox"/>
Complaint handling	<input type="checkbox"/>		<input type="checkbox"/>

Others(please specify)

- 3) How will you rate the CONTENT/INFORMATION QUALITY of your e-commerce service provider?

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Relevancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timely Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flexible And Customised Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Price Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complete Description Of Products/ Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information To Support Business Objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Satisfying Ethical Standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perceived products or services quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 4) How will you rate the **SYSTEM USE** of your e-commerce service provider? Please tick all that apply

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Confidence					
Control					
Ease of use					
Track on-line order status					
Privacy					

- 5) How will you rate the **SYSTEM QUALITY** of your e-commerce service provider? Please tick all that apply

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Quick responsiveness					
Assurance					
Empathy					
Following-up service					

- 6) How will you rate the **CUSTOMER E-COMMERCE SATISFACTION** of your e-commerce service provider

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Satisfaction with the content					
Satisfaction with the design characteristics of the e-commerce system					
Satisfaction with the service rendered through the e-commerce system					

PERSONAL DETAILS

- 7) AGE

- ☐ Under 18
☐ 18-24
☐ 25-30
☐ 31-40
☐ Over 40

- 8) GENDER

- ☐ Female
☐ Male

- 9) OCCUPATION

Please Specify _____

THANK YOU FOR YOUR COOPERATION

APPENDIX C

QUESTIONNAIRE FOR INSTITUTIONAL CUSTOMER

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

Dear sir/Madam, this questionnaire is to obtain information as part of a study, measuring the success of e-commerce in the telecommunication organisations in Koforidua, Eastern Region of Ghana. You are, therefore, kindly requested to provide frank responses to the items in the questionnaire. You are assured that the information provided will be used purely for academic purposes and will be treated with the utmost confidentiality. Thank You.

1) How many people are currently employed by your company?

1-5	<input type="checkbox"/>
6-10	<input type="checkbox"/>
11-20	<input type="checkbox"/>
21-35	<input type="checkbox"/>
36-50	<input type="checkbox"/>
Over 50	<input type="checkbox"/>

2) Which of the following applies to you in relation to telecommunication and E-commerce services?

VODAPHONE as internet and e-commerce service provider	<input type="checkbox"/>
MTN as internet and e-commerce service provider	<input type="checkbox"/>
AIRTEL as internet and e-commerce service provider	<input type="checkbox"/>
TIGO as internet and e-commerce service provider	<input type="checkbox"/>

3) Which of the following, are e-commerce services provided by your telecommunication network?
tick all that apply

Mobile money/ e-value	<input type="checkbox"/>	Travel bookings	<input type="checkbox"/>
Working from home / teleworking	<input type="checkbox"/>	Electronic banking	<input type="checkbox"/>
Marketing/advertising	<input type="checkbox"/>	On-line database services	<input type="checkbox"/>
Generating direct sales	<input type="checkbox"/>	Purchasing, ordering	<input type="checkbox"/>
Providing customer service/support	<input type="checkbox"/>	Comparing prices of different suppliers	<input type="checkbox"/>
Complaint handling	<input type="checkbox"/>	Billing, invoicing	<input type="checkbox"/>
Other(please specify)			

4) How will you rate the CONTENT/ INFORMATION QUALITY of your network service provider?

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Relevancy					
Accuracy					
Timely Information					
Flexible And Customised Information					
Price Information					
Complete Description Of Products/ Service					
Information To Support Business Objectives					
Satisfying Ethical Standards					
Perceived products or services quality					

5) How will you rate the SYSTEM USE of your network service provider?

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Confidence					
Control					
Ease of use					
Track on-line order status					
Privacy					

6) How will you rate the SYSTEM QUALITY of your network service provider?

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Quick responsiveness					
Assurance					
understanding					
Following-up service					

7) How will you rate the Customer E-Commerce Satisfaction of your network service provider?

COMPONENT	Poor	Fairly	Good	Very good	Excellent
Satisfaction with the content					
Satisfaction with the design characteristics of the e-commerce system					
Satisfaction with the service rendered through the e-commerce system					

PERSONAL DETAILS

8) AGE

- ☐ Under 18
- ☐ 18-24
- ☐ 25-30
- ☐ 31-40
- ☐ Over 40

9) GENDER

- ☐ Female
- ☐ Male

10) OCCUPATION

Please Specify

KNUST

THANK YOU FOR YOUR COOPERATION

