

VALUE CREATION IN KENYAN E-BUSINESSES



BY

MADIGU GODFREY ACHONO

HF
5548
.32
.M34
2008

UNITED STATES INTERNATIONAL UNIVERSITY



SPRING 2008



VALUE CREATION IN KENYAN E-BUSINESSES

Strathmore University
50084
*Value creation in kenyan
businesses*

BY

MADIGU GODFREY ACHONO

A Project Report submitted to the School of Business in
Partial Fulfilment of the Requirement for the Degree of
Masters in Business Administration

UNITED STATES INTERNATIONAL UNIVERSITY

SPRING 2008

STUDENT'S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

Signed:  Date: 27/06/08

Godfrey Achono Madigu (ID 617096)

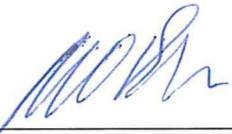
This project has been presented for examination with my approval as the appointed supervisor.

Signed:  Date: 3.7.2008

Prof. Meoli Kashorda

Signed:  Date: 17/07/08

Dean, School of Business

Signed:  Date: 22/07/08

Deputy Vice Chancellor, Academic Affairs

COPYRIGHT

All rights reserved. No part of this report may be photocopied, recorded or otherwise reproduced, stored in retrieval system or transmitted in any form or by any electronic or mechanical means without prior permission of the copyright owner.

Madigu Achono Godfrey. Copyright © 2008

ABSTRACT

E-businesses promise new avenues for creation of wealth. According to Amit and Zott (2001), this value creation potential arises from the combination and exchange of resources. While research on value creation in e-businesses has been carried out elsewhere, the author is not aware of any such research on Kenyan e-businesses. Therefore, the study sought to examine sources of value creation for Kenyan e-businesses based on Amit and Zott's (2001) model. Amit and Zott claim that organisations can create value in e-businesses by leveraging on complementarities, novelty, efficiency and lock-in. The study was guided by two research questions. What are the sources of value creation for Kenyan e-businesses? Secondly, are the measures of value creation formulated by Amit and Zott, relevant to Kenya?

The research methodology adopted was case study. This is a research strategy that attempts to examine contemporary phenomenon in real-life contexts. Listed companies with e-business implementations from the Nairobi Stock Exchange (NSE) formed the population. Companies examined include; Kenya Airways, TPS Serena and Nation Media Group chosen due to the richness of their e-business implementations. Data was collected from company annual reports, investor communiqués, questionnaires, organisation websites and company management interviews. Two techniques were used for data analysis; the within case analysis technique which involved generating detailed case study write-ups based on questionnaires. The cross case analysis technique involved looking at the data in many divergent ways.

The study findings showed that complementarities, lock-in, novelty and efficiency as identified by Amit and Zott (2001) were sources of value creation for all three Kenyan companies above. However, there were differences in the way the companies leveraged on these sources. Kenya Airways leveraged on efficiency, TPS Serena on complementarities, Nation Media Group leveraged on all the four sources; complementarities, novelty, efficiency and lock-in. The study also revealed that Amit and Zott's' (2001) model was relevant in the Kenyan context. The Kenyan companies studied created value in their business implementations by focussing on the different sources of value creation in their e-business. Kenya Airways in its e-business deployments was driven by the need to make its processes more efficient. Similarly, TPS Serena was driven

by complementarities. Nation Media Group was the only company to have focussed on all four sources of value creation complementarities, novelty, efficiency and lock-in in its e-business implementations.

The study findings revealed that the three Kenyan companies studied created value by leveraging on complementarities, efficiency, novelty and lock-in their business implementations. Kenyan companies should therefore make use of Amit and Zott's (2001) model in the design and implementation of e-businesses. The findings also showed that the importance of a source was determined by the industry a company operated in. It is therefore necessary for Kenyan companies to be informed of the critical value creation sources in their industries to adequately leverage on them.

However, further research is needed to determine whether the difference in leverage of the value creation sources across industries is due to characteristics specific to the industry or due to chance. A research that includes value creation practices of more Kenyan e-businesses across different time frames and stages of maturity is therefore encouraged.

ACKNOWLEDGEMENT

As a freshman, I was torn between choosing entrepreneurship or international business electives. I decided to try out strategic management which supposedly, was a compromise between the two. It took me only thirty minutes in John Nyerere's Turbulence class to realise I had made one of my best decisions yet; and so my love for strategic management was born! It is also to him that I perfected my search for excellence! Perhaps the most important of John Nyerere's attributes was that he was more than a lecturer...he was a friend! Throughout my life in formal education, he stands out as one of my great teachers!

My heartfelt thanks also go to Prof. Meoli Kashorda, who at moment's notice agreed to be my supervisor. It is really to him that this project was possible. Despite his many trips outside the country, his work at KENET, family commitments he *always* created time for me to consult him. His comments went beyond the project at hand to develop lifetime research skills.

Thanks to my siblings Evelyne, Nancy and Allan, who took care of household chores when I was engaged in my research project. My gratitude also goes to my boss Mr. George Kairu for being very patient with me when my project was not completed in the expected time-frame; but more so for his encouragement and understanding. Vincent Chibini, the Strathmore University periodicals librarian who went out of his way to ensure that I had access to the best online periodicals databases. To my colleagues at work who in one way or another assisted in this work: John Olukuru, Ishmael Maina, Richard Mailu, Isaac Mbuthia, Bernard Shiundu, Emmanuel Kala and Joseph Kimemia.

DEDICATION

To mum and dad

TABLE OF CONTENTS

STUDENT'S DECLARATION	ii
COPYRIGHT	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	vi
DEDICATION.....	vii
LIST OF TABLES	xi
CHAPTER 1	1
1.0 INTRODUCTION.....	1
1.1 Background of the Problem	1
1.2 Statement of the Problem	2
1.3 Purpose of the Study	3
1.4 Research Questions	3
1.5 Justification of the Study.....	3
1.5.1 Kenyan Companies	3
1.5.2 Kenyan Entrepreneurs	3
1.5.3 The Kenyan Government	4
1.5.4 Academia and Researchers in Kenya	4
1.5.5 Kenyans Society.....	4
1.6 Scope of the Study	5
1.7 Definition of Terms.....	5
1.7.1 Value	5
1.7.2 E-business	5
1.7.3 Value creation	6
1.7.4 Transaction.....	6
1.8 Chapter Summary.....	6
CHAPTER 2	7
2.0 LITERATURE REVIEW.....	7
2.1 Introduction.....	7
2.2 Value Drivers for Kenyan E-businesses	7
2.2.1 Virtual Markets	9
2.2.2 Value Chain Analysis.....	9
2.2.3 Schumpeterian Innovation	10
2.2.4 Resource-Based View of the Firm	11
2.2.5 Strategic Networks	12
2.2.6 Transaction Cost Economics.....	12
2.2.7 Amit and Zott's (2001) E-business Value Creation Model	13
2.2.8 The Business Model Construct	24

2.2.9	Summary of Value Drivers for Kenyan Businesses.....	26
2.3	Relevance of Amit and Zott's (2001) Model for Kenyan E-businesses	27
2.3.1	Technology–Organization–Environment (TOE) Framework,	27
2.3.2	Amit and Zott's (2001) Model	28
2.3.3	Why Amit and Zott's (2001) Model	29
2.3.4	Measuring Relevance of Amit and Zott's (2001) Model for Kenya	30
2.4	Chapter Summary.....	32
CHAPTER 3	34
3.0	METHODOLOGY.....	34
3.1	Introduction	34
3.2	Research Design.....	34
3.3	Population and Sampling Design	35
3.3.1	Population	35
3.3.2	Sampling Design	36
3.4	Data Collection Methods.....	37
3.5	Research Procedures	38
3.6	Data Analysis Methods	39
3.6.1	Within Case Analysis Technique	40
3.6.2	Cross Case Analysis Technique	40
3.7	Chapter Summary.....	40
CHAPTER 4	42
4.0	RESULTS AND FINDINGS	42
4.1	Introduction	42
4.2	Sources of Value Creation for Kenyan E-businesses.....	42
4.2.1	Sources of Value Creation at Kenya Airways.....	43
4.2.2	Sources of Value Creation at TPS Serena.....	49
4.2.3	Sources of Value Creation at Nation Media Group	55
4.3	Relevance of Amit and Zott's (2001) Model for Kenyan e-businesses	59
4.3.1	Efficiency	60
4.3.2	Complementarities	60
4.3.3	Amit and Zott's (2001) Sources of Value Creation	62
4.3.4	Legal Framework	63
4.3.5	Social Culture.....	64
4.4	Chapter Summary.....	65
CHAPTER 5	66
5.0	DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS	66
5.1	Introduction	66
5.2	Summary	66
5.3	Discussion	67
5.3.1	Sources of Value Creation for Kenyan E-businesses.....	67
5.3.2	Relevance of Value Creation for Kenyan E-businesses.....	69
5.4	Conclusions.....	71
5.4.1	Source of Value Creation for Kenyan E-businesses	71

5.4.2	Relevance of Value Creation for Kenyan E-businesses.....	72
5.5	Recommendations.....	72
5.5.1	Recommendations for Improvement.....	72
5.5.2	Recommendation for Further Studies.....	73
REFERENCES.....		75
APPENDIX A - IMPLEMENTATION SCHEDULE.....		81
APPENDIX B- IMPLEMENTATION BUDGET.....		82
APPENDIX C- COMPANY SUMMARY INFORMATION.....		83
APPENDIX D- RESEARCH QUESTIONNAIRE.....		84
APPENDIX E- COMPANY WEBSITES.....		88
APPENDIX F- NSE PUBLICLY LISTED COMPANIES*.....		90
APPENDIX G- THE BUSINESS MODEL CONSTRUCT.....		91

LIST OF TABLES

Table 1: Theoretical anchoring of sources of value creation in e-business	25
Table 2: Kenyan e-businesses and their favourite value creation sources	42
Table 3: Sources of value creation of Kenya Airways using the business model construct unit of analysis	45
Table 4: Sources of value creation of TPS Serena using the business model construct unit of analysis	53
Table 5: Sources of value creation of Nation Media Group using the business model construct unit of analysis	58
Table 6: E-business applications at Kenya Airways (KQ) and how they impact efficiency	61
Table 7: E-business implementations at TPS Serena and how they made use of complementarities as a source of value creation	63
Table 8: E-business implementations at Nation Media Group and how they made use of Amit and Zott's sources of value creation.....	64

CHAPTER 1

1.0 INTRODUCTION

1.1 Background of the Problem

E-business is becoming increasingly important for countries, organizations and individuals (Bakry S. and Bakry F., 2001). This prompted Kanter (2001) to say that there are only two types of businesses left in the world; e-businesses and “wanna-bes”. Bakry S. and Bakry F. (2001), define e-business as the publishing of information and the performance of different types of transactions, or chains of them, electronically over intranets, extranets, and the Internet. This however, is different from e-commerce which Barnes, Hinton and Mieczkowska (2004) defined as the sharing of business information, maintaining business relationships and conducting business transactions by means of Internet-based technologies. Thus, e-commerce is a subset of e-business.

When referring to e-businesses, Porter (2001) stated that companies that succeed will be those that use the Internet to complement traditional ways of competing and not those that set their Internet initiatives apart from their well established operations. Porter’s (2001) view ignores the value creation practices of e-businesses. Could it be that, successful e-businesses are those that learn how to create or add value? Amit and Zott (2001) proposed a model to identify the sources of value creation for e-businesses as efficiency, complementarities, lock-in, and novelty. The model arose from case studies done on e-businesses in developed countries and though widely used in academia and industry, the author was not aware of any such study carried out on Kenyan e-businesses.

Previous studies by Tsai and Ghoshal (1998) had showed that novel deployments of resources could generate new sources of value. They were building on an earlier study by Hitt, Hoskisson, Johnson and Moesel (1996) that firm innovation had become important for value creation in many industries.

Extant strategy theory had largely focused on the appropriation of value as the basis for explaining and predicting firm performance (Moran and Ghoshal, 1996). In their view, it was not only value appropriation, but also value creation that was the essence of effective

long term firm strategies and was therefore, at the heart of strategy theory. For them, the concept of firm strategy had to be integrated with the process of wealth creation.

Porter (1985) defined value as the amount buyers are willing to pay for what a firm provides them. However, value comes in many forms: technology, market access and information; therefore, value creation can also be seen as a process by which the competitive abilities of business partners are enhanced by being in a relationship (Wilson, 1995). Walter, Ritter and Gemünden (2001) regarded value as the cornerstone of business market management because of the predominant role that functionality or performance plays in business markets. They defined value as the perceived trade-off between multiple benefits and sacrifices gained through a customer relationship by key decision makers in the supplier's organization.

How do Kenyan e-businesses manage to create value? Do they correspond with those identified by Amit and Zott (2001)?

1.2 Statement of the Problem

Amit and Zott (2001) identified the sources of value creation for e-businesses as efficiency, complementarities, novelty and lock-in. Though the model has been useful in highlighting sources of value creation for e-businesses in developed countries (Tse, 2007), similar studies have not been carried out in developing countries; notably Kenya. An e-readiness study carried out by Kenya Education Network [KENET] (2007) showed that most institutions were unable to provide information on the extent of their electronic interaction with suppliers, nor of the value of their on-line business transactions. The rapid growth in the number of businesses that use the Internet is a global phenomenon (Amit and Zott, 2001), but hardly do Kenyan companies really get down to consider how these opportunities may be leveraged to create value. What is observed is that the value creation practices by Kenyan e-businesses go largely unnoticed, unknown and undocumented. This study sought to change this, through the in-depth analysis of value creation practices by Kenyan e-businesses.

1.3 Purpose of the Study

The purpose of this study was to examine sources of value creation on Kenyan electronic businesses as presented by Amit and Zott (2001); namely, efficiency, complementarities, lock-in, and novelty.

1.4 Research Questions

This research was based on the following research questions:

1. What are the sources of value creation for Kenyan e-businesses?
2. Are the measures of value creation formulated by Amit and Zott, relevant to Kenya?

1.5 Justification of the Study

The research is useful to industry and practice. The stakeholders of this research include:

1.5.1 Kenyan Companies

In recent times, firms have been increasing investments in information technology (Carr, 2003). But, do these systems create value? Examination and documentation of best and poor Kenyan e-business practices will raise awareness which will benefit industry.

1.5.2 Kenyan Entrepreneurs

Amit and Zott (2001) argue that a firm's business model is an important locus of innovation and a crucial source of value creation for the firm and its suppliers, partners, and customers. This business model is determined by the entrepreneur. This is in distinction to previous value creation theories that suggested that firms created value by acquiring resources such as capital, labour and raw materials from suppliers to transform them into products completely ignoring the entrepreneurial behaviour that is indispensable for the success of a business (Brandenburger and Stuart, 1996). The need for Kenyan entrepreneurs to be informed of the best value creation opportunities in e-business, will increase the effectiveness of e-business start-ups.

1.5.3 The Kenyan Government

The paper on Millennium Development Goals (MDG) for Kenya points to the role ICT skills play in promoting economic development of a country (Ministry of Planning and National Development [MPND], 2005). If so, value creation in e-business would be synonymous with economic development. The Kenyan government stands to benefit in more tax revenue realised as a result of successful e-businesses enterprises. This economic development will arise from the value created by Kenyan e-businesses.

1.5.4 Academia and Researchers in Kenya

How much value can firms create together with their suppliers and buyers (Brandenburger and Stuart, 1996)? Considering that the rapid growth in the number of businesses that use the Internet is a global phenomenon (Amit and Zott, 2001), the study of value creation in e-businesses is imperative. E-businesses have the potential of generating tremendous new wealth, mostly through entrepreneurial start-ups and corporate ventures (Amit and Zott, 2001). The advent of e-business presents a strong case for the confluence of the entrepreneurship and strategy research streams. Little literature exists in Kenya that has highlighted or even articulated the central issues related to this new phenomenon (Amit and Zott, 2001). Industry best practices should be brought to the attention of academia who will make use of it not only in teaching but also as a basis for further research to improve the comprehension of the value creation sources in e-businesses.

1.5.5 Kenyans Society

Critics like Carr (2003) however, point out that, though IT's potency and ubiquity has increased, its strategic value in organisations has not. Tse (2007) adds that the source of value creation in e-business is still not fully understood as the business of selling over the Internet is not just about technology; it is also about customers. How do Kenyan companies then employ technology to create value for the customer? The research sought to provide useful insights on the role of information technology in strategy especially for Kenyan e-businesses. Kenyans will benefit from employment opportunities that successful e-businesses will provide, but also better services and products delivered to them.

1.6 Scope of the Study

E-businesses have the potential of generating tremendous new wealth for Kenya and Africa, mostly through entrepreneurial start-ups and corporate ventures (Amit and Zott, 2001). Kenyan e-businesses should be able to benefit from this research as it will guide them on how much value they should expect to capture in an e-business operation (Brandenburger and Stuart, 1996). Strategies that focus on creating new value will undoubtedly lead to some of that value spilling over to other firms and to the Kenyan society as a whole (Moran and Ghoshal, 1996).

The research was carried out on Kenyan companies listed on the Nairobi Stock Exchange (NSE). Three companies from the Commercial and Services segment of the NSE formed the sample. The research was carried out in four months; August to November 2007.

1.7 Definition of Terms

This study is concerned about value, the drivers behind value creation, the relationship between value and wealth generation and value creation as a tool for enhancing competitiveness.

1.7.1 Value

Porter (1985) defined value as the amount buyers are willing to pay for what a firm provides them. Value may then be measured by the total revenue of a firm. A firm is profitable if the value it commands exceeds the costs involved in creating the product.

To Brandenburger and Stuart (1996), value referred to the total value created in e-business transactions regardless of whether it is the firm, the customer, or any other participant in the transaction who appropriates that value. This is the definition that was adopted in this research

1.7.2 E-business

In the research done by Amit and Zott (2001) on value creation in electronic businesses, they defined an e-business firm as one that derives a significant proportion (at least 10%) of its revenues from transactions conducted over the Internet.

Bakry S. and Bakry F. (2001) defined e-business as the publishing of information and the performance of different types of transactions, or chains of them, electronically over intranets, extranets, and the Internet. This was the definition that was adopted in this research

1.7.3 Value Creation

Moran and Ghoshal (1996) argued that value creation formulation arises from the combination and exchange of resources. From his study of alliance portfolios, Lavie (2007) added that network resources directly extend and enrich a firm's value-creation opportunities. This then enhances a firm's ability to generate value from its relationships with partners as they pursue shared objectives and extend their range of value chain activities.

For Amit and Zott (2001), value creation is synonymous with wealth creation.

1.7.4 Transaction

According to Williamson (1979), a transaction occurs when a good or service is transferred across a technologically separable interface. This happens when one stage of processing or assembly activity terminates, and another begins. This research adopted this definition.

1.8 Chapter Summary

The purpose of this study was to examine the sources of value creation on Kenyan e-businesses. This study is significant since the rapid pace of technological developments coupled with the growth of e-businesses gives rise to enormous opportunities for value creation and hence creation of wealth.

Amit and Zott's model (2001) was preferred for this study as it presents electronic businesses sources of value creation as efficiency, complementarities, lock-in, and novelty by merging strategic management and entrepreneurship literature. The research was carried out on Kenyan publicly listed companies, between August and November 2007.

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 Introduction

In this chapter, literature from which value creation is based is considered. The chapter begins with Moran and Ghoshal's (1996) work that highlights the tenets of value creation by firms. Then, Nahapiet and Ghoshal (1998) work is reviewed; these show that value creation by firms originates from social capital exchanges. Other literature on value creation examined includes that reviewed by Amit and Zott (2001) on virtual markets, value chain analysis, Schumpeterian innovation, resource based view, strategic networks, and transaction cost economics.

Amit and Zott's (2001) model forms the main body of this chapter since it is the value creation sources of e-businesses that are being considered. These sources are identified as efficiency, novelty, lock-in and complementarities and are further analysed under various headings, and a case of each source is also studied. A critique of each of these sources follows as put forward by Porter (2001) and Tse (2007).

The relevance of Amit and Zott's (2001) model is then considered against various metrics designed in this study, these include; focus practised by Kenyan e-businesses on Amit and Zott's (2001) sources of value creation, the legal framework and social culture.

2.2 Value Drivers for Kenyan E-businesses

Drucker (1994) said that an organisation is built and run on certain assumptions that fit reality; he calls these a company's theory of business. Has the theory of business organisations in the twenty first century changed? Kanter (2001) declared that there are just two types of companies left in the world: dot-coms and "wanna-dots." Therefore, strategy making in the digital age requires a kind of entrepreneurial mind-set if it is to command the energy and dedication of all concerned (Stopford, 2001). Moran and Ghoshal (1996) put it best when they alleged that "it is not only value appropriation but also value creation that is the essence of effective long term firm strategies and that, must lie at the heart of strategy theory" (p. 41).

They had built their argument from industrial organisation economics where the practice in gaining and maintaining market power so as to appropriate as much of the value that accrues from economic rent sustaining barriers as possible is the objective of strategic management. On the other hand however, the resource-based view places greater emphasis on the prevention of other firms from appropriating a firm's own existing rent streams. Both perspectives they argue, focus on factors affecting value appropriation and have little in the way of theory to help understand the sources of value creation.

They say that “value appropriation” as the essence of a firm's strategy is inadequate and misleading, both as a description of what persistently successful firms actually do and also as a prescription for what firms must do to become persistently successful, irrespective of how success may be defined. They advocate for a concept that integrates the firm strategy concept with the process of wealth creation since neither the creation of value, nor its realization, occur randomly.

According to them, firm's can take appropriate steps to obtain the capacity to assimilate new knowledge and to combine it with other knowledge in order to generate new value creating rent streams. Strategies that focus on creating new value will undoubtedly lead to some of that value spilling over to other firms and to society as a whole; the more value a firm creates, the more likely it is to benefit from some of that value in the form of appropriable, transient rents. Moran and Ghoshal's (1996) point was simple, value creation arose from the combination and exchange of resources. But, how do Kenyan e-businesses facilitate exchange and hence foster value creation?

Nahapiet and Ghoshal (1998) developed a theoretical model that sought to illustrate that this exchange is facilitated by social capital; a term used to describe relational resources, embedded in cross-cutting personal ties developed over time useful for the development of individuals in community social organizations, providing a basis for trust cooperation and collective action. In their study, they argued that (1) social capital facilitates the creation of new intellectual capital: (2) organizations, as institutional settings are conducive to the development of high levels of social capital: and (3) it is because of their more dense social capital that firms, within certain limits have an advantage over markets in creating and sharing intellectual capital. The question therefore arises as to how Kenyan e-businesses offer opportunities of using social capital to create value?

Following these leads, Tsai and Ghoshal (1998) found strong support for Nahapiet and Ghoshal's (1998) proposals about an association between social capital and firms' value creation. In their study Amit and Zott (2001) analysed various value creation strategic management and entrepreneurship frameworks.

2.2.1 Virtual Markets

According to Amit and Zott (2001), virtual markets refer to settings in which business transactions are conducted via open networks based on the fixed and wireless Internet infrastructure. These markets are characterized by high connectivity, a focus on transactions and the importance of information goods and networks and high reach and richness of information. They argued that e-businesses are characterised by virtual markets that establish a firm's value creation potential. In virtual markets, traditional boundaries between firms along the value chain are disregarded as business processes are shared among firms from different industries. The characteristics of virtual markets combined with the vastly reduced costs of information processing allows for profound changes in the ways companies operate and in how economic exchanges are structured. They also open new opportunities for wealth creation. Thus, conventional theories of how value is created are being challenged. But how important are virtual markets in Kenya...now? What about in future?

2.2.2 Value Chain Analysis

Reviewing Porter's (1985) work, Amit and Zott (2001) said that the value chain framework analysed value creation at the firm level by identifying activities of the firm and then studying the economic implications of those activities. It had four steps: (1) defining the strategic business unit, (2) identifying critical activities, (3) defining products, and (4) determining the value of an activity. Value chain analysis explores the primary activities, which have a direct impact on value creation, and support activities, which affect value only through their impact on the performance of the primary activities.

Amit and Zott (2001) point out that it is here that Porter defined value as 'the amount buyers are willing to pay for what a firm provides them. They continue that according to Porter, a firm can be seen as profitable if the value it commands exceeds the costs involved in creating the product. Value can be created by differentiation along every step of the value chain, through activities resulting in products and services that lower buyers'

costs or raise buyers' performance. Drivers of product differentiation, and hence sources of value creation, are policy choices (what activities to perform and how), linkages (within the value chain or with suppliers and channels), timing (of activities), location, sharing of activities among business units, learning, integration, scale and institutional factors. Amit and Zott (2001) highlight another work by Porter and Millar (1985), who argue that information technology creates value by supporting differentiation strategies.

The model however, is more suitable for the analysis of production and manufacturing firms than for service firms as Amit and Zott (2001) point out quoting Stabell and Fjeldstad (1998). Amit and Zott (2001) say that value creation opportunities in virtual markets may result from new combinations of information, physical products and services, innovative configurations of transactions, and the reconfiguration and integration of resources, capabilities, roles and relationships among suppliers, partners and customers.

2.2.3 Schumpeterian Innovation

The theory of economic development and new value creation through the process of technological change and innovation was pioneered by Schumpeter in 1934 (Amit and Zott, 2001). They argued that Schumpeter had identified several sources of innovation (hence, value creation) including the introduction of new goods or new production methods, the creation of new markets, the discovery of new supply sources, and the reorganization of industries. Hence in 1942, he introduced the notion of 'creative destruction' noting that following technological change, certain rents become available to entrepreneurs which later diminish as innovations become established practices in economic life.

Amit and Zott (2001) highlight that in Schumpeter's theory, innovation is the source of value creation. Thus technology is considered to drive novel combinations of resources (and the services they provide). This then is the foundation of new products and production methods, which in turn, lead to the transformation of markets and industries, and hence to economic development. Amit and Zott (2001) say that Teece (1987) added that the effectiveness of protective property rights (appropriability regime) and complementary assets can add to the value creation potential of innovations whereas

Moran and Ghoshal (1999) highlighted the role of economic exchange through which the latent value imbedded in the new combination of resources is realizable.

It is with this background in mind that Amit and Zott's (2001) model for value drivers of e-business developed; from received theoretical perspectives of strategic management and entrepreneurship.

2.2.4 Resource-Based View of the Firm

The resource based view (RBV) which builds on Schumpeter's perspective states that the marshalling and unique combination of a set of complementary and specialized resources and capabilities (which are heterogeneous within an industry, scarce, durable, not easily traded, and difficult to imitate), may lead to value creation (Amit and Zott, 2001). Hence as Amit and Zott continue to explain, in RBV, services rendered by the firm's unique bundle of resources and capabilities may lead to value creation. They quote Barney (1997), who said that a firm's resources and capabilities are valuable if and only if, they reduce a firm's costs or increase its revenues compared to what would have been the case if the firm did not possess those resources.

Amit and Zott (2001) say that the emergence of virtual markets opens up new sources of value creation since relational capabilities and new complementarities among a firm's resources and capabilities can be exploited (for example, between online and offline capabilities). They emphasise that information-based resources and capabilities, which have a higher degree of mobility than other types of resources and capabilities increase in importance within ebusiness firms, value migration is likely to increase and the sustainability of newly created value may be reduced. They bring to attention Dierickx and Cool's (1989) work that time compression diseconomies provide an effective barrier to imitation for firm-specific resources and capabilities that had to be built over time due to factor market imperfections, and hence enable the preservation of value. Taking up from Barney (1986), Dierickx and Cool define strategic factor markets as a market where the resources necessary to implement a strategy are acquired. For example, the market for market share is cited as a relevant strategic factor market for implementing a cost leadership strategy.

Accessing such resources through partnering and resource sharing agreements is more viable in virtual markets, yet the preservation of value, and hence its creation becomes more challenging, because rivals may have easy access to substitute resources as well (Amit and Zott, 2001).

2.2.5 Strategic Networks

Amit and Zott (2001) say that strategic networks are ‘stable inter-organizational ties which are strategically important to participating firms. From the work of Gulati, Nohria and Zaheer (2000) they point out that strategic alliances may take the form of, joint ventures, long-term buyer–supplier partnerships, amongst other ties. According to Amit and Zott, one of the key questions strategic network theorists seek to answer is, how is value created in networks (for example, through inter-firm asset co-specialization)?

Referring to Gulati (1998) and Lorenzoni and Lipparini’s (1999) work, Amit and Zott (2001) say that the appearance of networks of firms in which market and hierarchical governance mechanisms coexist has enhanced the range of possible organizational arrangements for value creation. Hence strategic networks arguments have moved beyond structures to explore the importance of governance mechanisms such as trust and the importance of resources and capabilities especially those of suppliers and customers for value creation.

From Kogut (2000), Amit and Zott (2001) outline some sources of value in strategic networks to include: shortened time to market, enhanced transaction efficiency, reduced asymmetries of information, and improved coordination between the firms.

2.2.6 Transaction Cost Economics

From Williamson’s (1975, 1979, 1983) works Amit and Zott (2001) adopt a definition that a transaction occurs when a good or service is transferred across a technologically separable interface. They say that transaction cost economics identifies transaction efficiency as a major source of value, as enhanced efficiency reduces costs. For instance, value creation can derive from the attenuation of uncertainty, complexity, information asymmetry, and the small-numbers bargaining conditions. Moreover, reputation, trust, and transactional experience can lower the cost of idiosyncratic exchanges between firms.

They conclude however, that organizations that economize on transaction costs can be expected to extract more value from transactions.

2.2.7 Amit and Zott's (2001) E-business Value Creation Model

In their findings, Amit and Zott (2001) say that no single entrepreneurship or strategic management theory could fully explain the value creation potential of e-businesses as e-businesses have the potential of generating tremendous new wealth, mostly through entrepreneurial start-ups and corporate ventures. Amit and Zott (2001) presented the value drivers of e-business as four interdependent dimensions, namely:

1. Efficiency; this consists of search costs, selection range, symmetric information, speed, scale economics etc.
2. Complementarities; this consists of between products and services for customers (vertical versus horizontal), between on-line and offline assets, between technologies and between activities.
3. Lock-in; this consists of switching costs, loyalty programs, dominant design, trust, customization, positive network externalities (direct and indirect)
4. and Novelty; which consists of new transaction structures, new transactional content and new participants.

This is expressed diagrammatically by Figure 1 below:

Absence of literature regarding the value drivers of Kenyan businesses highlights the importance of this study. Amit and Zott (2001) explained the different elements in the diagram as follows:

2.2.7.1 Efficiency

Transaction efficiency is identified as one of the primary value drivers for e-business consistent with transaction costs theory. Transaction efficiency increases when the costs per transaction decrease and can result in any of the ways documented below by Amit and Zott (2001).

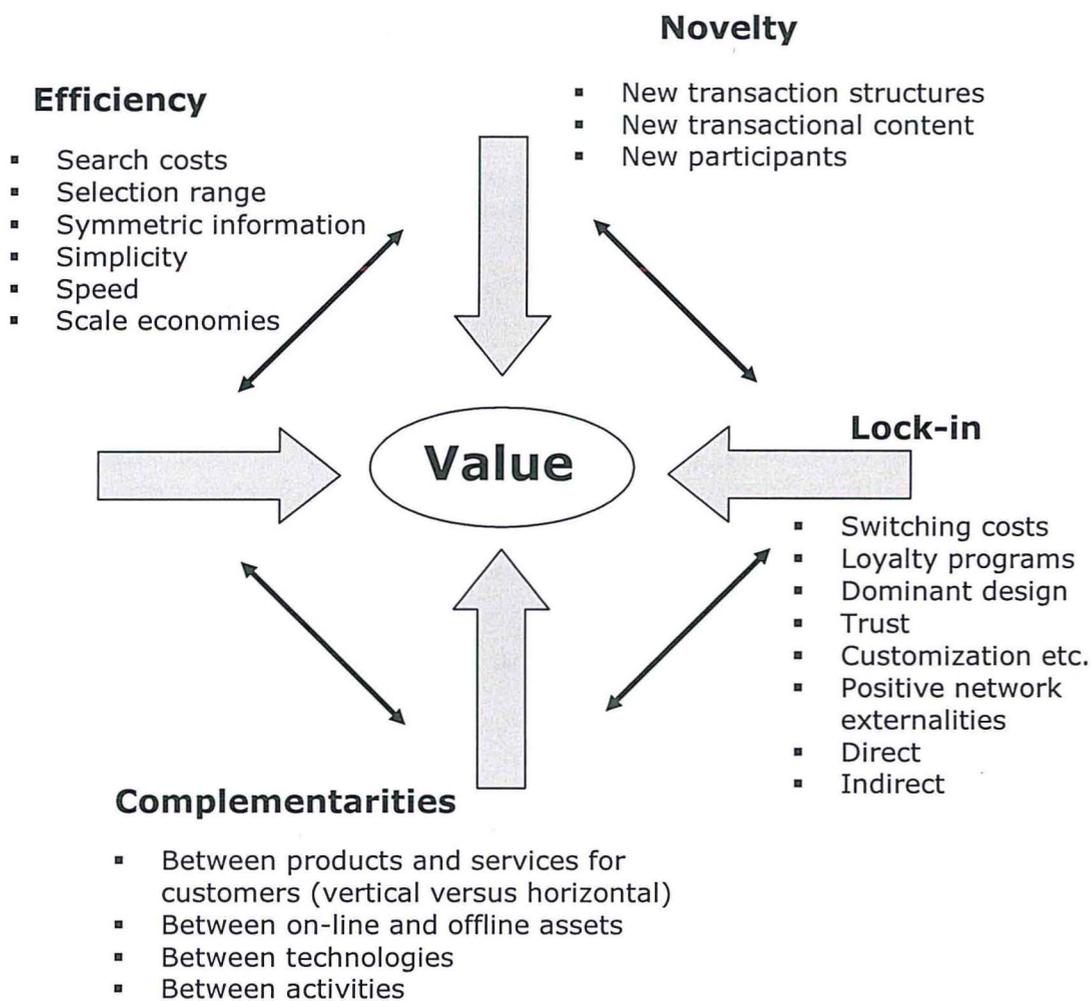


Figure 1: Sources of value creation in e-business

(a) Search costs

Companies can reduce transaction costs by ensuring either, (1) reducing the cost of a business process activity already being conducted, as when a transaction that is currently conducted by phone or fax is automated and (2) reduce the cost of matching buyers and sellers as it is potentially less expensive to search for products compare prices or buyers over the Internet than to read catalogues and make phone calls. As a result, buyers will find sellers they might not have otherwise found (Amit and Zott (2001). Improved information can also reduce customers' search and bargaining costs as well as opportunistic behaviour (Lucking-Reiley and Spulber, 2001).

(b) Selection range

E-businesses enhance transaction efficiency by providing a greater selection of products online at lower costs by reducing distribution costs and streamlining inventory management (Amit and Zott (2001). According to Coltman, Devinney, Latukefu and Midgley (2001) providing classic customer service is the key to repeat purchasing. They gave the example of Brandwise.com a comparison-shopping web site that enabled consumers realise value by narrowing down on their selections from the plethora of products available in the marketplace.

(c) Symmetric information

Efficiency enhancements relative to offline businesses and relative to other online businesses can be realized by reducing information asymmetries between buyers and sellers through the supply of up-to-date and comprehensive information. By leveraging this cheap interconnectivity of virtual markets, e-businesses enhance transaction efficiency by enabling more informed decision making (Amit and Zott (2001). In his study of highly networked Japanese firms, Dyer (1997) found that information flows and reduced asymmetries of information among other factors, were important in reducing the potential transaction costs associated with specialized assets.

(d) Simplicity

E-businesses enhance transaction efficiency by simplifying the process as there is less likelihood of making mistakes compared to offline businesses (Amit and Zott, 2001). Lucking-Reiley and Spulber (2001) say that the development of software and communications standards e.g. Extensible Markup Language (XML) to develop data descriptions and protocols that describe practically all aspects of a transaction including product features, transportation, prices, and credit terms was being widely adopted by manufacturers, suppliers and distributors. Such standardization was important in enabling computers of both parties to a transaction understand precisely what was being traded, so that each party could automatically update its internal records such as billing and inventory, greatly simplifying the transaction process.

(e) Speed

A coupled process encourages iterations and the search for creative solutions; though sometimes, speed is more important than innovation (Eppinger, 2001). According to

Amit and Zott (2001), this is when the speed and facility with which information can be transmitted via the Internet makes the e-business approach convenient and easy.

(f) Scale economies

Both vendors and customers benefit from scale economies through demand aggregation and bulk purchasing. E-businesses streamline the supply chain by speeding up transaction processing and order fulfilment. Amit and Zott (2001) refer to a study done by Garciano and Kaplan (2001) that found online rather than an offline auction format for trading cars between businesses led to transaction costs to be decreased by half. Other business costs like marketing and sales costs, transaction-processing costs, and communication costs could also be reduced in an efficient e-business, and a firm's value-creating potential can be enhanced through scalability i.e., increasing the number of transactions that flow through the e-business platform.

(g) Autobytel.com

Amit and Zott (2001) give Autobytel.com as a case in point to illustrate how efficiency is used to create value. Potential auto buyers are supplied with detailed and comprehensive comparative shopping information on different models and the costs to the dealers of these models (*selection range*). Potential buyers can then quickly make well-informed decisions (*symmetric information*). The buying process is substantially simplified (*simplicity*) and accelerated, (*speed*) and bargaining costs are reduced (*search costs*). While vendors' margins on each sale might be lower, sales volumes increase at essentially no marginal costs (*scale economies*).

(h) Critique of Efficiency

Tse (2007) points out that the peril with Internet information, lies in its superficiality. In many cases, the on-line channel is unlikely to instil in consumers the confidence required to make a purchase. Also important to retailers is the fact that offering shoppers more information does not necessarily make them more confident or more willing to buy on-line.

2.2.7.2 Complementarities

The Resource Based View (RBV) theory highlights the role of complementarities among strategic assets as a source of value creation (Amit and Schoemaker, 1993).

Complementarities are present whenever having a bundle of goods together provides more value than the total value of having each of the goods separately. For instance, customers who buy products over the Internet value the possibility of getting after-sales service offered through bricks-and-mortar retail outlets, including the convenience of returning or exchanging merchandise (Amit and Zott, 2001).

(a) Between products and services for customers (vertical versus horizontal)

Amit and Zott (2001) said that, e-businesses leverage this potential for value creation by offering bundles of complementary products and services to customers. These complementary goods may be vertical complementarities (for example, after-sales services) or horizontal complementarities (for example, one-stop shopping, or cameras and films) that are provided by partner firms. Christensen and Methlie (2003) continue that horizontal integration of products, services and information based on complementary components in businesses leads to increased convenience and lower transaction costs for the customers.

(b) Between on-line and offline assets

Customers who buy products over the Internet value the possibility of getting after-sales service offered through bricks and- mortar retail outlets, including the convenience of returning or exchanging merchandise (Amit and Zott, 2001). Das and Teng (2000) developed a resource based theory of strategic alliances (between offline and online assets) in which they suggest that the rationale for these kind of alliances is the value creation potential of firm resources that are pooled together.

(c) Between technologies

Davern and Kauffman (2000) developed the idea that complementary assets (especially business process design i.e. technology and human capital) influenced a firm's realization of value. Amit and Zott (2001), went further to say e-businesses could create value by capitalizing on complementarities among technologies such as linking the imaging technology of one business with the Internet communication technology of another, thereby unleashing hidden value.

(d) Between activities

According to Amit and Zott (2001), e-businesses may also create value by capitalizing on complementarities among activities such as supply-chain integration. Christensen and

Methlie (2003) said that complementarities defined the horizontal scope of a provider, and changed the value creating system from a linear value chain focused on profit maximization within a firm to a network of interrelationships that focused on maximizing the ultimate customer value, as well as a mechanism for sharing the generated revenues among the participants of the network. This effect of complementarities had an exponential effect such that demand increase was a function of the number of complementary components of the product or service.

(e) Xoom.com

Amit and Zott (2001) give the example of Xoom.com a company that made use of complementarities. The company facilitated community building among Internet users and exploited its customer base through a mix of e-business activities, such as auctions, sales, and direct marketing (*complementarities between activities*). Xoom.com attracted customers by offering an array of free complementary Internet services, such as home page building and hosting, access to chat-rooms and message boards, e-mail, online greeting cards, downloadable software utilities, and clip art (*horizontal complementarities between products and services for customers*). These services were not directly related to the products Xoom.com sold or to the auctions it hosted on its website.

(f) Critique of Complementarities

Porter (2001) argues that although complements are important to an industry's growth, they have no direct relationship to industry profitability. Whereas a close substitute reduces potential profitability, a close complement can exert either a positive or a negative influence. Complements therefore affect industry profitability indirectly through their influence on the five competitive forces. If a complement raises switching costs for the combined product offering, it can raise profitability. But if a complement works to standardize the industry's product offering, as Microsoft's operating system has done in personal computers, it will increase rivalry and depress profitability.

With the Internet, he continues, widespread partnering with producers of complements is just as likely to exacerbate an industry's structural problems as it is to mitigate them. As partnerships proliferate, companies tend to become more, increasing rivalry. He

concludes by alleging that successful companies will use the Internet to complement traditional ways of competing.

In a study of business to business exchanges (B2B) within the electronics component industry however, Day, Fein and Ruppertsberger (2003) found that there was a high survival rate (67%,) amongst companies that focused more on complementary services. These services included hard-to-find items and the liquidation of excess inventories. Stieglitz and Heine (2007) believe that not taking complementarities into account will lead to a loss in value creation, revenues and ultimately in the profits of a firm, because it will fail to realize its full potential. They however note that the values of complementary assets are interdependent, and therefore their use has to be actively coordinated. They underpin the role of general management in the coordination of complementary assets and activities.

2.2.7.3 Novelty

Amit and Zott (2001) argue that the unique characteristics of virtual markets i.e., the removal of geographical and physical constraints, possible reversal of information flows from customers to vendors, and other novel information bundling and channelling techniques make the possibilities for innovation in e-businesses seem endless.

(a) New transaction structures

There can be substantial first-mover advantages for e-business innovators (Lieberman and Montgomery, 1998); such that being the first to market with a novel business method makes it easier to create switching costs by capturing 'mindshare,' and by developing brand awareness and reputation. Priceline.com achieved this by introducing reverse markets, whereby individual buyers indicated their purchase needs and reservation prices to sellers (Amit and Zott, 2001). They continue that eBay was also the first company to introduce customer- to-customer auctions on a large scale.

(b) New transactional content

Moran and Ghoshal (1999), say that the main innovation of some e-businesses resides in their complementary elements, such as the resources and capabilities they combine. Amit and Zott (2001) add that, sometimes, even low-value items could be successfully traded between individual consumers.

(c) New participants

Arthur (1996) argued that first movers were in a good position to initiate the positive feedback dynamics that derived from network externalities to achieve a critical mass of suppliers and/or customers before others did. He concluded that in 'winner-takes-most markets', it was imperative to enter a new market first. Amit and Zott (2001) applied this dimension of innovation in e-business to the appropriate selection of participating parties. For example, firms could direct and intensify traffic to their web site by initiating affiliate programs with third parties that were compensated for enabling the execution of transactions from their own web sites. Autobytel.com a car dealer revolutionized the automobile-retailing process in the United States through linking potential buyers, auto dealers, finance companies, and insurance companies, thus enabling round the- clock one-stop car shopping from home.

(d) Critique of Novelty

E-businesses innovate in the way they do business, that is, in the structuring of transactions. For example, eBay was the first company to introduce customer- to-customer auctions on a large scale (Amit and Zott, 2001). The unique characteristics of virtual markets, continue the authors, makes the possibilities for innovation seem endless. For example, e-business firms can identify and incorporate valuable new complementary products and services into their bundle of offerings in novel ways.

Tse (2007) says that novelty presupposes first mover advantage. Quoting Boulding and Christen (2001), he says that being the first to enter a market does not always create profitability in the long-term because as the brand and marketing advantages fade over time, the fall in revenue becomes insufficient to cover the high costs of being a pioneer.

2.2.7.4 Lock-in

The efficient organization of economic activity entails matching governance structures with transactional attributes in a discriminating way. This highlights the importance of transaction costs to towards the organization of economic activity (Williamson, 1979). Amit and Zott, (2001), showed that lock-in prevented the migration of customers and strategic partners to competitors, thus creating value. A firm's strategic assets, such as its brand name, and buyer-seller trust, both contributed to lock-in. Lock-in was implemented in two main ways switching costs and positive network externalities.

(a) Switching costs

(Williamson, 1979) stated that “if transaction costs are negligible, the organization of economic activity is irrelevant, since any advantages one mode of organization appears to hold over another will simply be eliminated by costless contracting” (p. 233). Amit and Zott (2001), explain that lock-in is manifested as switching costs, which are anchored in the transaction cost framework. Ways in which switching costs may be implemented in e-businesses include: loyalty programs, dominant design, trust, customisation etc.

(i) Loyalty programs

Customer retention can be enhanced through loyalty programs by rewarding repeat customers. Bonus points collected via the use of Master Card are redeemable towards U.S. retailer Barnesandnoble.com reward certificates which in turn may be used to purchase Barnesandnoble.com products (Amit and Zott, 2001). Christensen and Methlie (2003), found a strong association between e-business enabled customer retention initiatives and the increase in financial value indicators; sales revenue per employee, gross profit margin, and return on investments.

(ii) Dominant design

One of the maxims widely accepted in knowledge-based markets is that it pays to have superb technology, twice or three times better in some dimension—price, speed, convenience—to dislodge a locked-in rival (Arthur, 1996). Amit and Zott (2001) stated that firms could develop technology to dominant design and proprietary standards for business processes, products, and services (for example, Amazon’s patented shopping cart) creating value.

(iii) Trust

Other things being equal, idiosyncratic exchange relations which feature personal trust will survive greater stress and display greater adaptability (Williamson, 1979). Amit and Zott (2001), add that firms that established trustful relationships with customers, for example, by offering them transaction safety and reliability guaranteed by independent and highly credible third parties realised value.

(iv) Customization

Familiarity with the interface design of a web site requires customer learning; once this learning has begun, it inhibits customers from switching to other sites where their

learning would have to begin again (Amit and Zott, 2001). They continue that online vendors can then use data-mining methods to personalize products, information, and services. Shankar and Winer (2006) then define customization as the business process in which customer equity (i.e., aggregate lifetime value of a firm's existing and potential customers) is continuously created, enhanced, and managed by interacting with customers through multiple channels.

(b) Positive network externalities

Amit and Zott, (2001) state that networks may exhibit externalities in that the production or consumption activities of one party connected to the network have an effect on the production or utility functions of other participants in the network. This effect is not transmitted through the price mechanism. Network externalities are usually understood as positive consumption externalities in which the utility that a user derives from consumption of the good increases with the number of other agents consuming the good. Arthur (1996) concludes that this created a positive feedback loop, and more importantly, increasing returns and positive feedback may derive from network effects. Network externalities may be either direct or indirect.

(v) Direct

Arthur (1996) categorically stated that technological products did not stand alone. They depended on the existence of other products and other technologies. He gives the example of Novell (a networking company) that set up incentives for software developers to write for its Netware rather than for its rivals. The software writers did just that. By building Novell's Netware success, they ensured their own. Novell thus managed cross-product positive feedbacks actively to lock in its market. It went on to profit hugely from upgrades, spin-offs, and applications of its own.

Amit and Zott (2001) illustrate that in the context of e-business, network externalities are present when the value created for customers' increases with the size of the customer base. For example, a community site such as that created by Fortunecity, where a user benefits when there are more participants with whom she or he can interact with in chat rooms, on bulletin boards.

(vi) Indirect

According to Economides (1996), financial exchange networks exhibited indirect network externalities. There were two such ways in which these externalities arose. First, these arose in the act of exchanging assets or goods. Second, externalities arose in the array of vertically related services that composed a financial transaction. These included the services of a broker, of bringing the offer to the floor, matching the offer, etc. However, the first way in which externalities arose in financial markets was more important.

Amit and Zott (2001) showed that *indirect* network externalities arose when economic agents benefited from the existence of positive feedback loops with groups of agents. For example, a buyer on an online auction site such as eBay had no immediate advantage from the presence of additional buyers since other buyers willing to purchase the same merchandise may prevent the desired trade. However, the presence of more buyers (a signal of current and future market liquidity) made it more attractive for potential sellers to put their products up for sale at that particular site. This, in return, enhanced the site's attractiveness to potential buyers. Buyers thus benefited indirectly from increasing numbers of other buyers. The same logic held for sellers. In an auction setting, the complementary components of the network would be the buyers and sellers. The total value created therefore was a direct function of network size.

(c) Critique of Lock-in

Amit and Zott (2001) say that the value-creating potential of an e-business is enhanced by the extent to which customers are motivated to engage in repeat transactions, and by the extent to which strategic partners have incentives to maintain and improve their associations. Lock-in they continue helps prevent the migration of customers and strategic partners to competitors, thus creating value. Virtual markets also enable e-business firms to create virtual communities that bond participants to a particular e-business. Their conclusion is that the efficiency features, complementary products and service offerings of an e-business may serve to attract and retain customers and partners; hence, there is an important relationship between lock-in, efficiency, and complementarities as sources of value creation.

Porter (2001) disagrees. He maintains that switching costs are likely to be lower, not higher, on the Internet. It is not even necessary he continues, to have network effects so as to achieve barriers to entry; they have to be proprietary to one company. The openness of the Internet, its common standards and protocols and its ease of navigation, makes it difficult for a single company to capture the benefits of a network effect. America Online he says is the exception rather than the rule. And even if a company is lucky enough to control a network effect, it often reaches a point of diminishing returns once there is a critical mass of customers. Moreover, its creation will require a large investment that may offset future benefits. In conclusion, he says that Internet brands have proven difficult to build, due to the lack of physical presence and direct human contact that makes virtual businesses less tangible to customers and traditional businesses.

Smagalla (2004) reports of a four year research done on B2C initiatives in Japan where convenience store chains expanded the scope of offerings by including portions of e-commerce and mobile –commerce value chains. These stores continually added products and services that attracted customers, even if they did not contribute directly to the bottom line. These kind of alliances have succeeded in supplementing the relative scarcity of venture capital while leveraging R&D and brand recognition.

E-commerce is poised for a fundamental change— a shift from making online purchases (commercial transactions involving a single consumer interacting with a two-dimensional Web page) to going shopping online (a social experience involving groups of people interacting with one another in a three-dimensional Web space) (Hemp, 2006). He cites the growing popularity of online environments in which thousands of people interact in real time in 3-D virtual worlds places such as *Second Life*, *Entropia Universe*, and *There*. Hemp mentions some real world stores that have already opened shops in these worlds; American Apparel and Adidas.

2.2.8 The Business Model Construct

Amit and Zott (2001), claim that a firm's business model is an important locus of innovation and a crucial source of value creation for the firm its suppliers, partners, and customers. They therefore proposed the business model construct as a unit of analysis for future research on value creation in e-business. (See Appendix G for the business model

construct). The model is explained in terms of transaction content, transaction structure and transaction governance.

Table 1: Theoretical anchoring of sources of value creation in e-business

	Efficiency	Comple- mentarities	Lock-in	Novelty
Value chain analysis	Medium	Medium	Low	Medium
Schumpeterian innovation	Low	Low	Low	High
Resource based view	Low	High	Medium	Medium
Theory of strategic networks	Medium	Medium	High	Medium
Transaction cost economics	High	Low	Medium	Low

2.2.8.1 Transaction Content

Makadok (2001) defined a resource as an observable (but not necessarily tangible) asset that could be valued and traded—such as a brand, a patent, a parcel of land, or a license. A capability, on the other hand, was not observable (and hence necessarily intangible), and therefore could not be valued, and changed hands only as part of its entire unit. Amit and Zott (2001) defined transaction content as the goods or information exchanged, and the resources and capabilities required to enable that exchange.

2.2.8.2 Transaction Structure

Gulati et al (2000) say that strategic networks potentially provide a firm with access to information, resources, markets, and technologies; with advantages from learning, scale, and scope economies; and allow firms to achieve strategic objectives, such as sharing risks and outsourcing value-chain stages and organizational functions. A firm’s network of relationships was therefore both a source of opportunities and constraints.

Amit and Zott, (2001) used transaction structures to refer to the parties that participated in an exchange and the ways in which these parties were linked. Also included was the order in which the exchanges took place (i.e., their sequencing), and the adopted exchange mechanism for enabling transactions. The choice of a transaction structure influenced the flexibility, adaptability, and scalability of the actual transactions.

2.2.8.3 Transaction Governance

Williamson (1979) argued that special governance structures supplanted standard market-cum-classical contract exchanges when transaction-specific values were great. He gave idiosyncratic commercial, labour, and family relationships as examples. Amit and Zott (2001) defined transaction structures as the way in which flows of information, resources, and goods were controlled by the relevant parties. Included in the definition was the legal form of the organization, and the incentives for the participants in the transactions.

2.2.9 Summary of Value Drivers for Kenyan Businesses

At the time of writing, no study on value creation practices of Kenyan e-businesses had been done. This research was therefore ground breaking as far a Kenya is concerned towards developing literature that would enable better understanding of value creation for Kenyan electronic businesses.

In their analysis Amit and Zott (2001) said that that no single value creation theoretical framework discussed above (i.e., value chain analysis, Schumpeterian innovation, RBV, strategic network theory, transaction cost economics) should be given priority over the others when examining the value creation potential of e-businesses. What was required was the integration of the various frameworks. From Table 1, shown below, they summarised the theoretical lenses that were commonly used in the fields of strategic management and entrepreneurship for viewing and explaining wealth creation. The frameworks were inadequate as they emphasized distinct sources of value.

Each of the identified sources of value creation in e-businesses, efficiency, complementarities, lock-in and novelty demanded equal attention. They proposed the business model construct as a unifying unit of analysis that captured the value creation arising from multiple sources. The business model they said should depict the content,

structure, and governance of transactions designed so as to create value through the exploitation of business opportunities. Pateli and Giaglis (2003) say that the evolution of e-business technology has passed from the early phase of hype and innovation to the mature phase of adoption and use.

Chesbrough, Ahern, Finn, & Guerraz (2006) discovered that many well-intended technologies devised for the developing world had not become commercially viable and had remained in the realm of the design studio or as charitable distribution programs. However, products backed by organizations with a strong focus on the development of a comprehensive business model were able to develop commercially sustainable products.

The research findings in chapter 4 on sources of value creation complementarities, novelty, efficiency and lock-in are presented using Amit and Zott's (2001) business model construct.

2.3 Relevance of Amit and Zott's (2001) Model for Kenyan E-businesses

Lee (2005) says that renowned economist, Robert M. Solow, once remarked: "We see the computer age everywhere except in the productivity statistics" (p. 13). Indeed, the business value of information technology continues to attract attention in the era of post dot-coms and overall budget cuts (Lee, 2005). There is no shortage of e-business value templates which oftentimes rely on economical justifications (Lee, 2005). Which of these models are relevant to Kenya? Two models of interest in this study include the Technology-organisation-environment (TOE) framework and Amit and Zott's (2001) model.

2.3.1 Technology–Organization–Environment (TOE) Framework,

Developed by Zhu, Kraemer, Xu, and Dedrick (2004), the model used the technology–organization–environment (TOE) framework, to develop a research model for assessing the value of e-business at the firm level. The theoretical model was tested using data collected from 612 firms across 10 countries in the financial services industry. They examined how e-business value is influenced by economic environments, and then compared samples from developed and developing countries. Their findings demonstrated:

1. Within the TOE framework, technology readiness emerged as the strongest factor for e-business value, while financial resources, global scope, and regulatory environment significantly contributed to e-business value.
2. Firm size was negatively related to e-business value, suggesting that structural inertia associated with large firms tended to retard e-business value.
3. Competitive pressure often drove firms to adopt e-business, but e-business value was associated more with internal organizational resources (for example, technological readiness) than with external pressure to adopt.
4. While financial resources are an important factor in developing countries, technological capabilities become far more important in developed countries. This suggests that as firms move into deeper stages of e-business transformation, the key determinant of e-business value shifts from monetary spending to higher dimensions of organizational capabilities.
5. Government regulation played a much more important role in developing countries than in developed countries.

Their study concluded that IT investments had a positive contribution to firm performance and e-business value as economic environments may shape e-business transformation.

2.3.2 Amit and Zott's (2001) Model

Amit and Zott (2001) realised that the rapid pace of technological developments coupled with the growth of e-businesses gave rise to enormous opportunities for the creation new wealth. From their examination of strategic management and the entrepreneurship literature, it was clear that none of the received theories could not fully explain the sources of new value creation in e-business. An integration of theoretical perspectives on value creation was needed. They discovered that a firm's business model was an important locus of innovation and a crucial source of value creation for the firm its suppliers, partners, and customers. Through their examination of how 59 e-businesses created value, they developed the business model construct as a unit of analysis for future research on value creation.

2.3.3 Why Amit and Zott's (2001) Model

According to Tse (2007), Amit and Zott's (2001) study represents one of the most comprehensive and ambitious attempts to deepen the understanding of the strategic issues facing e-business firms.

When reached for comment via an e-mail sent on July 31st 2007, Prof. Raphael Amit of the Wharton School confirmed this in a brief answer:

“It is appropriate and very relevant; it is used around the world by academics and practitioners”

However, the model is not without problems. According to Tse (2007), 60% of the 30 firms that Amit and Zott (2001) had lauded for business excellence had stopped trading, had been de-listed, or had gone bankrupt. For those firms that had remained in business, a majority had dramatically trimmed the size of their operations. He then summarised some of the shortfalls of value creation models for e-commerce as follows:

1. Not all consumers embrace new technologies when they are introduced.
2. Many consumers do not buy on-line when it is incompatible with their lifestyles.
3. Many products and services require consumer expertise and face to face interaction is preferred.

The model had also been widely used. Christensen and Methlie (2003) used it to explore value creation practices of Norwegian enterprises. In their study of e-business frameworks, the model was amongst those considered by Pateli and Giaglis (2003).

Is the model then relevant for Kenya? How can relevance be established? What business value success metric will be used to establish relevance? Lee (2005) says that inconsistent metrics of business value confound this line of research by not having unified measures. Many studies present different value metrics; soft versus hard, productivity versus quality etc.

2.3.4 Measuring Relevance of Amit and Zott's (2001) Model for Kenya

Lee's (2005) recommendation is that value metrics need to be defined according to the specific contexts where different value drivers dominate IT value processes. For this reason, the relevance of value creation measures for Kenya as established by Amit and Zott (2001) was based on three issues: the focus on Amit and Zott's sources of value creation, the legal framework and the social culture.

2.3.4.1 Focus on Amit and Zott's (2001) Sources of Value Creation.

From their data analysis, Amit and Zott (2001) concluded that the four sources of value creation complementarities, novelty, efficiency and lock-in were interdependent. The research sought to establish whether this was true or if there was indeed a difference in focus in the implementation of the value creation sources by Kenyan companies. Which of the four sources of value creation was the main driving force behind Kenyan organisations deployment of e-business systems?

(a) Efficiency

New transaction mechanisms in markets are based on lower transaction costs and improved market efficiencies (Amit and Zott, 2001). Efficiency gains affect delivery times of both resources from suppliers and partners upstream, and finished goods to customers downstream. Disintegration of the value chain, e.g., with more business activities outsourced, taking advantage of economies of scale in production or eliminating intermediaries in the delivery channels (disintermediation), also leads to efficiency gains (Christensen and Methlie, 2003). Is efficiency as a source value creation more important in some businesses than others? This calls for understanding of a company's business model (Ovans, 2000). Amit and Zott (2001) developed the business model construct which depicts the content, structure and governance of transactions and is a useful unit of analysis for e-businesses.

(b) Complementarities

Horizontal integration of products, services and information based on complementary components leads to increased convenience and lower transaction costs for the customers (Christensen and Methlie, 2003). For Kenyan companies is efficiency more important than complementarities in lowering transactions costs? Just how important are complementarities in creating value for Kenyan e-businesses? However, Amit and Zott

(2001) contend that e-businesses may also create value by capitalizing on complementarities among activities such as supply-chain integration, and complementarities among technologies such as linking the imaging technology of one business with the Internet communication technology of another, thereby unleashing hidden value.

(c) Novelty

Regardless of the term used, the accelerating growth of information and communication technologies has raised the interest for transforming traditional business models or developing new ones that better exploit the opportunities enabled by technological innovations. The primary limitations of such a contribution however concern the driver of the change, which is considered to be a technology innovation rather than a business opportunity (Pateli and Giaglis, 2003). Is novelty an important source of value creation in Kenya? Perhaps other sources are more important; but then what would that mean for Amit and Zott's (2001) model which holds that the four sources of value creation novelty, complementarities, lock-in and efficiency are interdependent? Novelty then as a source of value creation has interesting characteristics in determining the relevance of the model.

(d) Lock-in

Amit and Zott (2001) say that given the enormous reach of virtual markets, e-business firms often connect numerous parties that participate in commercial transactions. Thus they can be considered network generators. Networks may exhibit externalities in that the production or consumption activities of one party connected to the network may have an effect on the production or utility functions of other participants in the network. This is collaborated by Christensen and Methlie, (2003) who say that communication in electronic networks creates opportunities for new types of interactions and relationships. This enables both sellers and buyers to play new roles, enabling both parties to collect and store more information about each other. But how do Kenyan companies leverage on lock-in? It would be interesting to see the kind of lock-in mechanisms that Kenyan e-businesses employ and the interplay mechanisms with other sources of value creation.

2.3.4.2 Legal Framework

Iliachenko (2005) says that the political - legal Internet business environment is virtually global since there are no national borders. This makes Internet access possible for virtually any country. Due to this, every actor (firm, organisation), operates basically under its national laws. Kenya introduced the draft E-transactions Bill in 2007 to provide an enabling legal environment to provide e-Government and e-Commerce services (Ministry of Information and Communication [MIC], 2007). Is value creation in e-businesses fostered by legal incentives? For instance, acceptability of online transactional vehicles? Legal redress of online transactions in a court of law? Etc . Failure of this criteria increases the credibility of Amit and Zott's (2001) model (as this criteria is not featured directly by the model) for Kenyan e-businesses.

2.3.4.3 Social Culture

When two parties begin to trust each other, they become more willing to share their resources without worrying that they will be taken advantage of by the other party (Tsai and Ghoshal, 1998). This therefore means that trust fosters exchange. Taking human factors into consideration therefore, is crucial to any e-commerce strategy (Tse, 2007). What are some of the cultural aspects that foster value creation in e-business? Amit and Zott's (2001) model does not address this variable (well, at least not directly). Failure of this criterion will establish credibility of the Amit and Zott's (2001) model as being a relevant model for Kenyan e-businesses.

2.4 Chapter Summary

Understanding the sources of value creation for electronic businesses will inform academia and the industry of best practices. Amit and Zott's (2001) model has been studied to identify how e-businesses are able to create wealth through complementarities, novelty, lock-in and efficiency companies. To study e-business value creation practices, Amit and Zott (2001) suggested the business model unit of analysis which has been described.

Two models have been described that analyse value creation practices of e-businesses, the Technology- organisation –environment framework (TOE) and Amit and Zott's (2001) model. Amit and Zott's (2001) model was chosen since it is more

comprehensive. Relevance of the model will be established by looking at Kenyan e-business focus on Amit and Zott's value creation sources and analysing the legal framework and social culture as possible sources of value creation.

CHAPTER 3

3.0 METHODOLOGY

3.1 Introduction

Growth and value creation have become the dominant themes for managers (Prahalad and Ramaswamy, 2004). But how does one go about measuring value? Amit and Zott (2001) explored the theoretical foundations of value creation by examining how 59 American and European e-businesses that had recently become publicly traded corporations, created value. Their observation was that e-businesses could create new value by the ways in which transactions were enabled.

This research used the same methodology used by Amit and Zott (2001) case study. Kenyan publicly traded companies from various industries that had implemented e-commerce companies were identified and investigated. Data was collected over a two month period i.e. October and November 2007.

This chapter is organised as follows: First, the Research Design is introduced; this research adopts the case study as its research design. Next, the population of the study is described which consists of public Kenyan companies listed on the Nairobi Stock Exchange (NSE). The Sampling Frame, Sampling Technique and Sample Size are then described. Data Collection instruments consisted of questionnaires, management interviews, and company communiqués. The Research Procedure then explains how the research instruments were administered. A detailed explanation of Data Analysis then follows. The last item is a summary of the chapter.

3.2 Research Design

The research design used was case study. But what is a case study? The case study represents a research strategy, to be likened to experiments, histories, or simulations, which may be considered alternative research strategies (Yin, 1981). He continues to say that as a research strategy, the distinguishing characteristic of a case study is that it attempts to examine: (a) a contemporary phenomenon in its real-life context, especially when (b) the boundaries between phenomenon and context are not clearly evident. Experiments differ from this in that they deliberately divorce a phenomenon from its

context. Histories differ in that they are limited to phenomena of the past, where relevant informants may be unavailable for interview and relevant events unavailable for direct observation.

However, some researchers perception of case studies is that they are subjective; giving too much scope for a researcher's own interpretations. Thus, the validity of case studies is seen as wanting (Flyvbjerg, 2006). This assumes that that qualitative analysis - and its implicit companion, the case study - cannot yet be regarded as rational, much less scientific ventures (Yin, 1981). Therefore, qualitative research on organizations cannot be expected to transcend story-telling (Yin, 1981).

An advantage of case study research however is that theory developed from case study research is likely to have important strengths like novelty, testability and empirical validity which arise from the intimate linkage with empirical evidence (Eisenhardt, 1989). Flyvbjerg (2006) concludes by saying that research that focuses on large random samples or entire populations for example, questionnaire surveys with related quantitative analysis, have the advantages of breadth but a problem of depth. For the case studies, the situation is the reverse. Case study is therefore a necessary and sufficient method for certain important research tasks in the social sciences, which holds up well when compared to other methods in the gamut of social science research methodology (Flyvbjerg, 2006).

Eisenhardt (1989) recommends case study design for new research areas, or research areas for which existing theory seems inadequate since this facilitates developing theory, which is a central activity of organisational research. According to Tse (2007), the source of value creation in e-business is still not fully understood; this fact lends credibility to the use of this method. Amit and Zott (2001) also made use of the inductive case approach in their study of value creation sources in e-businesses.

3.3 Population and Sampling Design

3.3.1 Population

This study adopted Bakry S. and Bakry F.'s (2001) definition of an e-business; i.e. a company is considered to be an e-business if in the normal course of its operations, it

publishes information and performs different types of transactions or chains of them electronically over intranets, extranets, and the Internet. The population therefore consisted of Kenyan companies (profit making and not-for-profit), that had e-business implementations. Included in the population were Internet Service Providers (ISP's) like Africa Online and Access Kenya. Excluded from the population were computer hardware dealers and shops; though these provided infrastructure for e-business, they did not themselves engage in e-business.

3.3.2 Sampling Design

3.3.2.1 Sampling Frame

A comprehensive listing of Kenyan e-businesses does not exist. However, Nairobi Stock Exchange (NSE) maintains a listing of publicly listed Kenyan companies. This listing formed the sampling frame of Kenyan companies. At the time of the study, there were fifty four publicly listed companies (See Appendix F for the full listing). Amit and Zott (2001) also used publicly listed companies in their research. Nairobi Stock Exchange (NSE) categorized the companies into 5 major categories; Agricultural, Commercial and Services, Finance and Investments, Industrial and Allied and Alternative Investment Market segments.

In this study, a convenient sample of companies was drawn from the Commercial and Services segment of the NSE. The segment was selected due to the diversity of companies found in the segment but mainly due to the richness of e-business implementations amongst the companies. For example, the sector had Access Kenya, the only listed Internet Service Provider (ISP), Uchumi supermarket that relied on IT systems for point of sales (both credit and cash purchases), inventory management, banking systems. The segment consisted of 11 companies but only 10 had actively trading counters. At the time of the research, Uchumi Supermarkets had the trading of its stocks suspended. The sector was chosen over others since companies in this sector heavily relied on information technology (IT) for their operations.

The selection of the Kenya Airways, TPS Serena and Nation Media Group companies was purposeful to the research as these companies were market leaders in their sectors and had well established e-business models.

3.3.2.2 Sampling Technique

A purposeful or convenient sample of e-businesses was selected from the Commercial and Services segment of the NSE due to the richness of the companies' e-business implementations amongst Kenyan companies. Selected companies were from different industry sectors to remove industry bias. These were Kenya Airways, TPS Serena and Nation Media Group. Cases were selected on the basis of expectations about their information content. This is in accordance with Eisenhardt's (1989) recommendation that cases should be chosen for theoretical not statistical reasons as the purpose is to either replicate previous cases or to extend emergent theory. Flyvbjerg (2006) also advises the use of this type of information oriented selection.

3.3.2.3 Sample Size

Of the 11 companies from the Commercial and services segment of the NSE, 3 companies formed the sample: Kenya Airways, Nation Media Group and TPS Serena. The selection of three distinct industries ensured that the results of the study do not suffer from industry specific bias. This was not a statistical study.

3.4 Data Collection Methods

The data collection instruments used by Amit and Zott (2001) were also used in this research. Data was collected from publicly available sources; IPO prospectuses, annual reports investor communiqués and company websites. In this study, company annual reports, organisation websites and investor communiqués were used to collect data.

A semi-structured questionnaire (refer to Appendix D) was used to collect information about: (a) the company (for example, founding date, size, products and services provided; (b) potential sources of value creation (for example, questions included: how important are complementary products or services?); (c) the firm's strategy (for example, questions included: describe the firm's e-business value drivers, how do the value drivers position the company vis-à-vis competitors?). The questionnaire was administered to managers at each company and unclear items were clarified by the researcher. Managers sometimes made available additional written material (annual reports and investor communiqués) or demonstrated on the computer certain aspects of the IT systems. All managers included in

the study granted one hour interviews as the researcher made additional notes on the questionnaire; for example to an answer that was not fully clear to the interviewer. Additional material was collected from company websites.

There were approximately 10 open-ended questions, consistent with the primary objectives of this research (See Appendix D); to investigate the value drivers of Kenyan e-businesses (See Appendix D Section A – Part C) and to establish the relevance of Amit and Zott’s (2001) model in the Kenyan context (See Appendix D Section B –Part A). The three companies were subject to diverse accounting and disclosure practices, making comparisons across the firms difficult.

Data was gathered by multiple data collection methods; interviews, questionnaires, annual reports, information from company websites and investor communiqués and later combined resulting in stronger substantiation of constructs (Eisenhardt, 1989).

3.5 Research Procedures

Following in Amit and Zott’s (2001) footsteps, the research began with an initial version of a questionnaire that reflected the working framework. The questionnaire was constructed from the Amit and Zott’s (2001) model. The main purpose of the questionnaire was to bring focus and clarity to questions that were to be asked in the study.

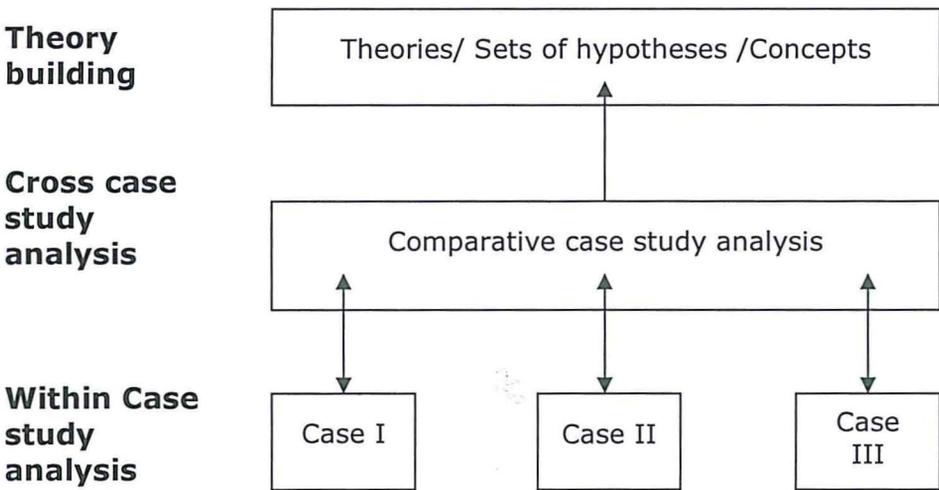


Figure 2: Diagram illustrating the research procedure followed in this study

This initial questionnaire was pre-tested on one case (pilot study). The questionnaire was then modified and some questions added, while others were dropped while others were combined

Adapting Amit and Zott's (2001) procedures, in-depth inquiries into the sources of value creation was carried out for the three firms by administering the questionnaire from Nairobi over a 2 month period, (October and November 2007). Also included in the study, were company visits and management interviews that lasted a minimum of one hour.

Ten semi- structured questions were used in final questionnaire administered in the study (See Appendix D). Answers to questions were compiled from information gathered from the multiple data sources (interviews, questionnaires, annual reports, company websites, investor communiqués etc.). Data collection often resulted in several paragraphs being written in response to a question. This provided a rich base for data analysis. Since data collection and data analysis activities were strongly linked, stronger formulation of constructs was achieved through triangulation of the evidence gathered (Eisenhardt, 1989). This speeded up analyses and revealed helpful adjustments to data collection.

Each case served to test theoretical insights gained from the examination of previous cases, and to modify or refine them as given by Eisenhardt (1989). This was what Eisenhardt called "treating a series of cases like a series of experiments" (p. 540). The replication in logic fostered by this comparative case analysis led to the emergence of testable theory that was free of researcher bias and allowed closer correspondence between theory and data (Eisenhardt, 1989). Thus use of this method (case study) enabled better understanding of the value creation drivers in Kenyan e-businesses Figure 2 above summarises the research procedure.

3.6 Data Analysis Methods

Data analysis is the heart of building theory from case studies (Eisenhardt, 1989). This is because although case studies may often begin with little conceptual framework, they should be organised according to specific propositions, questions, or activities with flexibility provided for modifying them as the analysis progresses (Yin, 1981).

Two data analysis techniques were employed in the study: (a) within case analysis and (b) cross case analysis.

3.6.1 Within Case Analysis Technique

Within Case Analysis involved generating detailed case study write-ups for each company included in the research (Eisenhardt, 1989). The write-ups were developed using questionnaires and management interviews as data collection methods. Company communiqués, company annual reports, and company websites were used as data sources. The overall idea of using this method (Within Case Analysis) was to become intimately familiar with each case as a standalone entity, which in turn accelerated the Cross Case Analysis comparisons (Eisenhardt, 1989). This was also in line with treating each case as an experiment as described in the Research Procedures above. The process allowed unique patterns of each case to emerge before patterns across cases could be generalised (Eisenhardt, 1989).

3.6.2 Cross Case Analysis Technique

Cross Case Analysis technique was coupled with the Within Case Analysis technique to search for patterns. Cross case analyses involved looking at the data in many divergent ways. For instance, juxtaposition of similar cases to break simplistic frames (Eisenhardt, 1989). In the same way, the search for similarity in seemingly different cases led to more sophisticated understanding (Eisenhardt, 1989). When a pattern from one data source (e.g. management interview) is corroborated by evidence from another, (e.g. annual report) the finding is stronger and better grounded (Eisenhardt, 1989). Cross Case searching tactics enabled critical insights into patterns of data improving the likelihood of accurate and reliable theory with a close fit with the data (Eisenhardt, 1989). Also, Cross Case searching tactics enhanced the probability of capturing novel findings which existed in the data (Eisenhardt, 1989).

3.7 Chapter Summary

In this research, use was made of the case study methodology. Amit and Zott (2001) used the same approach to investigate the sources of value creation. This is the first time this kind of research is being done in Kenya.

Tse (2007) points out that the sources of value creation in e-business are hardly understood. Therefore, to better understand them, theory was inducted from case study research. Eisenhardt (1989) proposes that the best way of inducting theories from case studies is through a process of Within Case Analysis and replication of logic; a process that is highly iterative though tightly linked to data. This methodology was used by Amit and Zott (2001) in their research of value drivers for e-business. The advantage of the methodology is that it is highly appropriate for new topic areas (Eisenhardt, 1989).

CHAPTER 4

4.0 RESULTS AND FINDINGS

4.1 Introduction

After an introduction into the sources of value creation for Kenyan e-businesses, data collected from Kenyan companies (i.e. Kenya Airways, TPS Serena and Nation Media Group) is presented. This is done in tabular form using Amit and Zott's (2001) business model construct as the unit of analysis with accompanying narrative explanations. See Appendix G for more details on the business model construct. Where necessary, a critique of the missed opportunities for each company follows.

The second part of the findings relate to the relevance of Amit and Zott's (2001) model for Kenya. This is established by determining the focus each company had on the sources of value creation in their e-business implementations. Data on some of the e-business implementations of these companies is presented. Other possible sources of value creation in e-business - not included in Amit and Zott's (2001) model - are tested; the effect of the legal framework and the effect of culture. The chapter summary follows.

4.2 Sources of Value Creation for Kenyan E-businesses

Section A - Part C of the questionnaire (see Appendix D), was used to collect data on the value creation sources according to Amit and Zott's (2001) model. This data is presented in Tables 3, 4 and 5. The Kenyan e-businesses researched on (Kenya Airways, TPS

Table 2: Kenyan e-businesses and their favourite value creation sources

Company	Value Creation Source			
	Efficiency	Complementarities	Lock-in	Novelty
Kenya Airways		TPS Serena	Nation Media Group	Nation Media Group
Nation Media Group		Nation Media Group		

Serena and Nation Media Group), were able to create value according to sources given by Amit and Zott (2001); complementarities, novelty, lock-in and efficiency. The data seemed to suggest that efficiency and complementarities were the favourite value creation

sources for Kenyan e-businesses. Table 2 summarises the favourite value creation sources of the Kenyan companies studied.

4.2.1 Sources of Value Creation at Kenya Airways

From the questionnaire Section A - Part C (See Appendix D), data on sources of value creation for Kenya Airways was collected. The questions were based on Amit and Zott's (2001) model on sources of value creation for e-businesses. These findings are detailed in Table 3. Kenya Airways recognised value creation in e-business in the ways enumerated by Amit and Zott (2001) i.e. complementarities, lock-in, efficiency and novelty. The data findings showed that of these sources, the most important source for the Kenya Airways was the efficiency.

4.2.1.1 E-business Efficiency at Kenya Airways

Data was compiled from the questionnaire Section A - Part C question 5 (See Appendix D), the Kenya Airways website (www.kenya-airways.com), Kenya Airways investor communiqués, Kenya Airways manager interviews and Kenya Airways Annual Report 2006 -2007. Table 3 below highlights the sources of value creation for Kenya Airways using the Amit and Zott's (2001) business model construct as the unit of analysis. The notes below give further details to Kenya Airways value creation practices outlined by Table 3.

Certain, initiatives at Kenya Airways have enabled the company to experience increased transaction efficiency in their e-business implementations. These are outlined in Table 3. Using the Table 3 the efficiency column and going downwards, the following attributes of efficiency contributed to value creation for Kenya Airways: transaction simplicity, scalability of transaction volume, reduced communication marketing and transaction processing costs, transaction speed, reduction in asymmetry of information services, safety of operations and the transparency of transactions. These are explained below:

(a) Transaction simplicity

Convenience of online e-ticketing. At the end of the 2006/2007 Kenya Airways financial year, the airline had achieved 65% e-ticketing in terms of its entire passenger uplifts network-wide

Online tracking and improved ground handling services. In one year, the cargo warehouse had noted an improvement of 23% fewer incidents per 100,000 kgs handled.

Airline tickets can also be purchased by sending an email.

(b) Scalability of transaction volume

Customers could book from anywhere: Australia, China, South Africa etc. The new e-commerce booking tool increased the 2006/2007 Kenya Airways revenues by over 300% over the previous year

(c) Costs for marketing, sales, transaction processing and communication

Close to 10% of ticket sales were now done online, which translated to cost savings for the company. This was likely to grow as other organisations like British Airways were already carrying over 50% of their ticket sales online.

The opening up of new branches especially for new destinations and the hiring of more sales personnel would be necessary to increase sales. Deployment of an e-commerce system had kept marketing, sales and running costs low.

(d) Transaction speed

The online human resources recruitment system had resulted in faster processing of internal and external applications. Kenya Airways no longer received paper applications.

(e) Information made available reduces asymmetry of information services

A baggage reconciliation system had improved ground handling services. This translated to informed settlement of baggage enquiries by company personnel and up to date management reports.

The site had frequently asked questions (FAQs) section to assist new users clarify transaction terms. For example, number of times Kenya Airways flew to Mombasa per week, what wines were served online, investor information etc.

The Kenya Airways site also included a hotels list. Customers could therefore easily compare prices and make informed decisions.

Table 3: Sources of value creation of Kenya Airways using the business model construct unit of analysis

	Efficiency	Complementarities	Lock-in	Novelty
Business model structure (<i>parties that participate</i>)	<ul style="list-style-type: none"> ▪ Users found it convenient to acquire e-tickets. ▪ Ubiquity in booking, Australia, China, RSA etc. ▪ Online ticket sales translated to cost savings. ▪ No need to open new sales branches. ▪ Faster processing of HR applications. 	<ul style="list-style-type: none"> ▪ New business partners; Nairobi Serena and London Heathrow Express. 	<ul style="list-style-type: none"> ▪ Flying Blue(Air France/KLM) Frequent Flyer program and Skyteam Alliance. ▪ UN staff can make bookings from war torn areas. 	<ul style="list-style-type: none"> ▪ Ticket settlement for code shared flights effected through IATA clearing house.
Business model content (<i>goods and services being exchanged</i>)	<ul style="list-style-type: none"> ▪ Improved ground handling services. ▪ Frequently asked questions (FAQs). ▪ The KQ site contained a preferred hotels list. 		<ul style="list-style-type: none"> ▪ E-newsletter dispatched to customers. 	<ul style="list-style-type: none"> ▪ Purchase of duty free products online ▪ On code shared flights, tickets sold as KQ, passengers fly KLM.
Business model governance (<i>way goods and services controlled</i>)	<ul style="list-style-type: none"> ▪ Baggage reconciliation improved safety in ground handling services. ▪ Online HR recruitment & online advertisement of tenders resulted in transparency. 		<ul style="list-style-type: none"> ▪ Major debit and credit cards accepted. ▪ Flying Blue Frequent Flyer redemption points. 	<ul style="list-style-type: none"> ▪ Online check-in instead of in-line check-in.

(f) Safety of operations

A baggage reconciliation system and other ground handling initiatives had greatly improved baggage service delivery and safety performance. Baggage controllers monitored baggage loading in real time and fewer manual sheets were used to track baggage processing/status.

In one year alone, the Cargo Warehouse had noted an improvement of 23% fewer accident incidents per 100,000 kgs handled.

(g) Transparency of transactions

Tenders were advertised online leaving little room for canvassing. An electronic online human resources recruitment system at KQ had resulted in faster and more transparent processing of internal and external applications. Kenya Airways no longer received paper-based applications.

4.2.1.2 Complementarities of E-business at Kenya Airways

Data was compiled from the questionnaire Section A - Part C question 6 (See Appendix D), the Kenya Airways website (www.kenya-airways.com), Kenya Airways investor communiqués, Kenya Airways manager interviews and Kenya Airways Annual Report 2006 -2007. This is presented in Table 3.

Looking at the complementarities column of Table 3, and working downwards, access to complementary products and services was identified as a source of value creation for Kenya Airways.

(a) Access to complementary products and services

Kenya Airways customers could now access London Heathrow Express tickets from the Kenya Airways website (www.kenya-airways.com). Customers visiting to Kenya could now also make bookings of rooms for Nairobi Serena Hotel online.

4.2.1.3 E-business Lock-in at Kenya Airways

The data was compiled from the questionnaire Section A - Part C question 7 (See Appendix D), the Kenya Airways website (www.kenya-airways.com), Kenya Airways

investor communiqués, Kenya Airways manager interviews and Kenya Airways Annual Report 2006 -2007. The data is presented in Table 3.

With reference to Table 3 the lock-in column and moving downwards, the following attributes of lock-in were identified as having been implemented by Kenya Airways to prevent the migration of customers to competitors; indirect network externalities, transaction reliability, customised features and offerings, information flow security and control processes and loyalty programs. These are further explained below.

(a) Indirect network externalities

Flying Blue (KLM/Air France) Frequent Flyer program makes flying by Kenya Airways an attractive choice for Europeans flying to and from Africa. The Flying Blue Customer Service Center began operations in June 2007 dedicated to handling service requests on the Flying Blue Frequent Flyer program that handled over 50,000 members residing in Nairobi, Uganda, Ethiopia, Sudan, Malawi, Zambia, Rwanda, Burundi and Maputo (KQ, 2007).

(b) Transaction reliability

There were places where civil strife made the setting up of KQ offices impossible for example, Sudan. United Nations workers in Congo and Darfur could still make flight bookings using the e-commerce system.

(c) Customised features and offerings

E-newsletters were sent to a database of users and customers.

(d) Information flow security and control processes

Major debit and credit cards for example, Visa Electron cards were accepted.

(e) Loyalty programs

Buying tickets sold online was cheaper than purchasing from a travel agent. There were more promotional offers available by purchasing online. Flying Blue members miles (points) could be redeemed for free tickets etc.

4.2.1.4 E-business Novelty at Kenya Airways

The data was compiled from the questionnaire Section A - Part C question 4 (See Appendix D), the Kenya Airways website (www.kenya-airways.com), Kenya Airways

investor communiqués, Kenya Airways manager interviews and Kenya Airways Annual Report 2006 -2007. This data is presented in Table 3.

Removal of geographical barriers occasioned by virtual markets led to the following initiatives by Kenya Airways to achieve lock-in as a source of value creation in e-business. Starting with the last column of Table 3, and working downwards, the following attributes of novelty as a source of value creation for Kenya Airways were identified: new combinations of products/services, unprecedented richness (quality and depth) of linkages and new combinations of products and services.

(a) Unprecedented richness (quality and depth) of linkages

Kenya Airways, KLM Royal Dutch Airlines and Precision Air Services from time to time carried each other's passengers travelling on the other airline's tickets. The settlement was effected through IATA clearing house, of which all airlines were members.

(b) New combinations of products/services

Customers could order duty free products online and these could be delivered by the cabin service crew on board.

(c) New combinations of products and services

For code shared flights, tickets could be sold as Kenya Airways but passengers could fly KLM.

(d) New incentives for customers

For selected countries, passengers had the option of checking-in online from the company's website. This expedited the check-in process at the airport.

4.2.1.5 Missed Opportunities at Kenya Airways

Using Amit and Zott's (2001) model, some of the opportunities that Kenya Airways missed are considered.

(a) Payment service providers (PSPs)

Absence of Payment Service Providers (PSPs) so that online payments may be processed locally has seriously hampered Kenya Airways operations. Offshore accounts have to be maintained to process all payments made in local and foreign currency. This has had an impact on efficiency as this directly affects transaction communication costs. At the time

of this research, Kenyan banks that offered clearance in the processing of e-payments did so at great risk as yet no law existed that assured them the legality of the practice. This affected the transaction governance of e-payments and hence control of information flow and security control of the processes. This was poorly leveraged by the airline to ensure lock-in of customers. Use of Automated Teller Machines (ATMs) and mobile telephony frameworks for instance could be used to ensure lock-in of customers.

(b) Personalized offerings

Business was dictated by the consumer, but still consumers could not personalise the website content, the airline's products, or even the airline's information and services for passengers (Amit and Zott, 2001). Customers were not offered a chance to create their own content and feedback from customers was not controlled and was generally gathered from what passengers put on other sites as this was seen to be a more open forum.

(c) Supply chain integration

There is still room for the airline to improve the richness and depth of information especially for suppliers' not just customers. Supply Chain Management (SCM) integration amongst suppliers tracking of tenders, payment, giving more information on transaction turnaround times, reasons for tender/application rejection. To this end the airline has implemented a jet fuel management system.

(d) Continuous professional development

Kenya Airways operated in an environment where value was created through provision of better services at low cost in response to increased competition from new players. The company had yet to enable online transaction content access of complementary products and services from partner firms - Rolls Royce and KLM) - for continuous professional development amongst its staff.

4.2.2 Sources of Value Creation at TPS Serena

From the questionnaire Section A - Part C (See Appendix D), data on sources of value creation for TPS Serena was collected. The questions were based on Amit and Zott's (2001) model on sources of value creation for e-businesses. These findings are detailed in Table 4. TPS Serena has complementarities as the most important variable for value creation.

4.2.2.1 E-business Efficiency at TPS Serena

Data on efficiency as a source of value creation for TPS Serena was compiled from the questionnaire Section A - Part C question 5 (See Appendix D), the Aga Khan Foundation for Economic Development website (AKFED) (www.akfed.org) website, TPS Serena's manager interviews and Kenya Airways Annual Report 2006 -2007.

Table 4 below highlights the sources of value creation for TPS Serena using Amit and Zott's (2001) business model construct as the unit of analysis. The notes then give further details to TPS Serena's value creation practices outlined by Table 4.

From Table 4 below and starting with the column on efficiency and moving downwards, the following attributes of efficiency illustrate how the TPS Serena was able to create value. These are: demand aggregation, transaction simplicity, reduction of information asymmetry, distribution cost reduction, supply aggregation and transaction speed. They are explained below in detail.

(a) Demand aggregation

E-marketing i.e. emails were sent to previous customers allowing individual customers to benefit from scale economies. The company website allowed the company achieve a global reach without involving travel agents.

(b) Transaction simplicity

Transactions were simplified since customers (including travel agents) could make bookings 24 hours a day, 7 days a week, and 365 days a year from anywhere on the globe with Internet access. There was no need for customers to call and make reservations for example. The website serviced the largest Spanish travel agent.

(c) Distribution cost reduction

The company availed brochures online to give information on its lodges and hotels.

(d) Supply aggregation

All e-business initiatives were managed from Nairobi. Therefore, individual suppliers benefited from scale economies.

(e) Transaction speed

Transactions could be completed faster. Emails from the United Kingdom, United States of America, Asia and other parts of Europe could be serviced faster than postal mail. Users could download TPS Serena brochures which was a faster way to access them than through travel agents or postal mail.

(f) Information reduces asymmetry

As much as 85% of customers that had visited the *Maisha* Health Club at the Nairobi Serena said that they had read about it on the hotel's website. Customers chose products based on specification. For example, information was readily available from the company's website on how to access open four wheel drive (4WD) vehicles, trained tour guides etc. Other competing tourist safari companies like *Kobo* lacked this facility.

4.2.2.2 Complementarities of E-business at TPS Serena

The data was compiled from the questionnaire Section A - Part C question 6 (See Appendix D), the Aga Khan Foundation for Economic Development (AKFED) (www.akfed.org) website, TPS Serena manager interviews and the TPS Serena 2006 Annual Report. This is presented in Table 4.

From Table 4 the complementarities column and moving downwards; technologies of participants, horizontal products and services, complementarities between activities, vertical products and services and activities of participants are the complementarities attributes that illustrate how the TPS Serena was able to create value in e-business. These are explained below:

(a) Cross-selling

Users were able to know about various hotel products by accessing the company's website. While viewing one product, customers were made aware of another product. For instance, the main restaurant at Nairobi Serena offered some of the best Kenyan cuisine. The hotel also boasted of the best spa in Kenya, the *Maisha* Health Club.

(b) Activities of participants

Nairobi Serena customers arriving at the Jomo Kenyatta International Airport (JKIA) could have access to Kenatco Taxi limousines from the airport to the hotel.

(c) Complementarities between activities

Special packages were available to tourists for example, honey moon packages, wedding packages that involved celebrating the wedding in a real Maasai *manyatta* with the Maasai singing songs in praise of the newly weds. The package included a commissioner of oaths.

(d) Combination of online and off-line assets

Customers patronising Nairobi Serena hotel could have their laptops configured for wi-fi access.

(e) Horizontal products and services

Comprehensive tour packages involved (to and fro) picking up of the customer from the Jomo Kenyatta International Airport (JKIA) book-in stay at Nairobi Serena Hotel, air transport and book-in stay at Mara Serena Safari Lodge and Safari drive.

(f) Technologies of participants

TPS Serena's finance professionals were able to access the company's bank accounts directly without the intervention of their bankers (Barclay's Bank plc).

(g) Vertical products and services

Included services such as game viewing from hot-air balloons walking safaris in the African bush, sunbathing on deserted beaches, shopping for traditional artefacts, windsurfing in the Indian Ocean, conference facilities, chopper Safaris available at Kampala Serena hotel etc.

4.2.2.3 E-business Lock-in at TPS Serena

The data was compiled from the questionnaire Section A - Part C question 7 (See Appendix D), the Aga Khan Foundation for Economic Development (AKFED) (www.akfed.org) website, TPS Serena manager interviews and the TPS Serena 2006 Annual Report. The data is presented in Table 4.

Table 4: Sources of value creation of TPS Serena using the business model construct unit of analysis

	Efficiency	Complementarities	Lock-in	Novelty
Business model structure (<i>parties that participate</i>)	<ul style="list-style-type: none"> ▪ E-marketing: emails to previous customers. ▪ 24/7/365 availability of making a reservation by customers. ▪ Brochures available online. ▪ E-business initiatives managed from Nairobi. ▪ Faster communication enabled through email. 	<ul style="list-style-type: none"> ▪ <i>Maisha</i> Health Club and <i>Mandhari</i> restaurant. ▪ <i>Kenatco</i> taxis picked travellers from the airport to the hotel. ▪ <i>Manyatta</i> weddings and honeymoon packages. 		<ul style="list-style-type: none"> ▪ Serena adverts on the KTB website.
Business model content (<i>goods and services being exchanged</i>)	<ul style="list-style-type: none"> ▪ Customers select products on specification. ▪ More visits by customers to the <i>Maisha</i> Health Club. 	<ul style="list-style-type: none"> ▪ Wi-fi access to customers. ▪ Comprehensive tour packages; JKIA-Nairobi Serena-Wilson Airport-Mara Serena and back ▪ Access to TPS Serena bank accounts from the Barclays website. ▪ Hot air ballooning, bush safaris, etc. 	<ul style="list-style-type: none"> ▪ Corporate clients have special codes for accessing website. ▪ Email feed-back systems. 	
Business model governance (<i>way goods controlled</i>)			<ul style="list-style-type: none"> ▪ Flying Blue members access to Serena. 	

Using Table 4 the column on lock-in and moving downwards, personalised features, customised features and loyalty programs were the attributed that illustrated how TPS Serena was able to create value.

(a) Customised features

Corporate clients were offered a special code for accessing website services for example, United Nations and World Bank customers. This gave TPS Serena flexibility in charging clients.

(b) Personalised features

Customers gave email feedback, suggestions/complaints. This assisted the hotel in its research and development (R&D).

(c) Loyalty programs

Flying Blue members exchanged miles for an award voucher to stay and access services in TPS Serena properties.

4.2.2.4 E-business Novelty at TPS Serena

Data was compiled from the questionnaire Section A - Part C especially question 4 (See Appendix D), the Aga Khan Foundation for Economic Development (AKFED) (www.akfed.org) website, TPS Serena manager interviews and the TPS Serena 2006 Annual Report. The data is presented in Table 4.

From Table 4 the column on novelty and moving downwards, new links between participants is the attribute of novelty that illustrates how the TPS Serena was able to create value.

(a) New links between participants

TPS Serena advertisements were run on the Kenya Tourist Board (KTB) website.

4.2.2.5 Missed Opportunities for TPS Serena

(a) Cross-selling

It was not clear whether Serena hotel used data mining to enhance effective cross-selling of its products. The website registered between 50,000 to 100,000 hits per day and

customers spent an average of five to six minutes on the website but still preferred to go to travel agents.

(b) Customers creating content

Complementarities needed to move beyond transaction structure to include more of customers creating content. Complementarities to allow customers to make flight bookings of for example, Air Kenya, Virgin Atlantic, Delta Airlines, Kenya Airways unaided from Serena website.

(c) Payment structures

Credit card payments took too long to clear; 1 to 2 hours. Customers still found paying through the website risky. A trade-off had to be made between security, convenience and efficiency.

4.2.3 Sources of Value Creation at Nation Media Group

From the questionnaire Section A - Part C (See Appendix D), data on sources of value creation for Nation Media Group was collected. The questions were based on Amit and Zott's (2001) model on sources of value creation for e-businesses. These findings are detailed in Table 5. Nation Media Group recognised value creation in e-business in the ways enumerated by Amit and Zott (2001) i.e. complementarities, lock-in, efficiency and novelty.

4.2.3.1 E-business Efficiency at Nation Media Group

Table 5 below highlights the sources of value creation for Nation Media Group using the Amit and Zott's (2001) business model construct as the unit of analysis. The notes below give further details to Nation Media Group value creation practices outlined by Table 5. The data was compiled from the questionnaire Section A - Part C question 5 (See Appendix D), the Nation Media Group website (www.nationmedia.com) and Nation Media Group manager interviews.

From Table 5 below the column on efficiency and moving downwards; transaction simplicity, access to a large number products services and information made available as a basis of decision making are some of the attributes of efficiency that illustrate how Nation Media Group was able to create value.

(a) Transaction simplicity

Booking print media advertising space was now easier; agencies could book spaces via email and proper records maintained by the in-house system.

The key to the popularity of the Nation media site was content. The site had been designed in such a way that navigation was easy.

(b) Access to a large number products services and information

Users could have access to Nation media content from other countries for example, The Monitor in Uganda, and Mwananchi in Tanzania.

(c) Information made available as a basis of decision making

Investors were kept updated on the performance of the company through downloadable annual reports, half year results, company stock performance etc.

4.2.3.2 Complementarities of E-business at Nation Media Group

The data was compiled from the questionnaire Section A - Part C question 6 (See Appendix D), the Nation Media Group website (www.nationmedia.com) and Nation Media Group manager interviews. This is presented in Table 5.

(a) Access to complementary products and information from partner firms

Nation media had partnered with *Cellulant* a mobile content operator to provide the back office content management system for their mobile customers. *Cellulant* was a known operator for mobile phone content for example, ring tones.

(b) Combination of online and off-line resources and capabilities

Payments for Nation media services for example, access to premium content on the site, payment for web adverts etc. could be made in form of cheques or through wire transfers for institutions outside the country.

4.2.3.3 E-business Lock-in at Nation Media Group

The data was compiled from the questionnaire Section A - Part C question 7 (See Appendix D), the Nation Media Group website (www.nationmedia.com) and Nation Media Group manager interviews. This is presented in Table 5.

From Table 5 below and going down the lock-in column, the following: positive direct network externalities, dominant design, customised offering of features and information security and control processes were some of the attributes identified from lock-in as a source of value creation for the Nation Media Group.

(a) Positive direct network externalities

Most of the content from the print edition was available on the Nation media website. Eighty percent of site visitors were outside the country. The company enjoyed the highest hit rate of any sub-Saharan site registering an average of 4 million hits per day. Kenyan news discussions on many Kenyan blog sites revolved around content accessed from the Nation media site.

(b) Dominant design

Nation media group and mobile phone subscriber company Safaricom were in partnership where users could receive news alerts through the short messaging service (SMS). Users had the option of subscribing to the service or accessing it on demand.

(c) Customised offering features

The company had launched its own blogs and users could submit their opinions for posting. Nation media was able to analyse statistics of the online advertiser's ads. Which ad had the most clicks and then recommend an appropriate online ad to advertisers. For example, button ads, banners etc.

(d) Information security and control processes

Banks in East and Central Africa still do not process credit card payments. Absence of payment service providers (PSPs) and payment gateways had meant that companies had to maintain off-shore accounts to process e-commerce payments. Customers could pay for premium content on the Nation media site via credit card, *PayPal* or *2COCheckpoint*.

4.2.3.4 E-business Novelty at Nation Media Group (NMG)

The data was compiled from the questionnaire Section A - Part C question 4 (See Appendix D), the Nation Media Group website (www.nationmedia.com) and Nation Media Group manager interviews. This is presented in Table 5.

Table 5: Sources of value creation of Nation Media Group using the business model construct unit of analysis

	Efficiency	Complementarities	Lock-in	Novelty
Business model structure (<i>parties that participate</i>)	<ul style="list-style-type: none"> ▪ Proper records maintained of advertising space. Early bookings possible. ▪ Access to the Monitor in Uganda and Mwananchi in Tanzania. ▪ Ease of navigation. 		<ul style="list-style-type: none"> ▪ Most site visitors live outside Kenya. 	<ul style="list-style-type: none"> ▪ Users could download mobile ring tones. ▪ New online advertisers. ▪ Streaming of live events.
Business model content (<i>goods and services being exchanged</i>)	<ul style="list-style-type: none"> ▪ Annual reports and stock updates available on company website. 	<ul style="list-style-type: none"> ▪ Partnering with Cellulant mobile content operator. ▪ Payment can also be made by cheques or wire transfers. 	<ul style="list-style-type: none"> ▪ Safaricom-NMG news alert services. ▪ Launch of NMG web blogs. ▪ Statistical analyses of web ads. 	<ul style="list-style-type: none"> ▪ News updates for Safaricom subscribers.
Business model governance (<i>way goods and services controlled</i>)			<ul style="list-style-type: none"> ▪ Premium content on the site could be accessed at a fee. 	

From Table 5 above and going down the efficiency column, the following: unprecedented number of participants, to introduce business model and new participants were attributes identified from novelty as a source of value creation for the Nation Media Group.

(a) Unprecedented number of participants

The company's revenues were boosted by a new breed of companies that advertised online for example, MamaMikes a company that sold shopping vouchers to Kenyans in the Diaspora. Other companies allowed users to download mobile phone ring tones.

(b) First to introduce business model

Nation had been able to stream live events via satellite for example, rugby matches

(c) New combinations of products and services

In collaboration with Kenyan mobile telephone company Safaricom, consumers could subscribe to news updates and information for example, on general elections, updates on scores of soccer matches, breaking news etc. via the short messaging service (SMS).

The company had recently employed six web designers and five Internet editors. The company had also launched four of its own blogs.

4.3 Relevance of Amit and Zott's (2001) Model for Kenyan e-businesses

The data on relevance of Amit and Zott's (2001) model for Kenyan e-businesses was collected by questionnaire (See Appendix D, Section B of the questionnaire), management interviews and from various archival sources; company websites, company annual reports and investor communiqués.

Relevance of Amit and Zott's' (2001) model in the Kenyan context was measured by considering the focus of e-business value creation sources companies had in their e-business deployments (See Appendix D, Section B question 8). The four choices of question 8 of the questionnaire were derived from Amit and Zott's four sources of value creation; complementarities, novelty, efficiency and lock-in. Respondents were required to give details of which combination of the four sources, (or other sources), were the company's focus in their implementations. Responses to this question were tied to data received of Section A – Part C (sources of value creation) and sometimes Section A – Part B (E-business implementations) of the questionnaire.

4.3.1 Efficiency

Data on efficiency as a source of value creation for Kenyan e-businesses was collected by questionnaire (See Appendix D, Section B question 8), management interviews and from various archival sources; company websites, company annual reports and investor communiqués

Amit and Zott's (2001) had suggested that the value creation potential of e-businesses hinged on four interdependent dimensions, namely: efficiency, complementarities, lock-in, and novelty. The data suggested that Kenya Airways unlike the other companies considered, relied more on efficiency as a source of value creation in its e-business deployments.

4.3.1.1 E-business Applications at Kenya Airways

Data on the e-business applications in Kenya Airways was collected by questionnaire (See questionnaire in Appendix D Section A –Part B) and corroborated with information from the company's 2006/2007 Annual Report.

Kenya Airways was able to create value in its e-business implementations by focussing on efficiency as a source of value creation. This increased the credibility of Amit and Zott's model (2001) in the Kenyan context. Table 6 above shows a list of Kenya Airways e-business applications and summarises how these were used by the company to achieve efficiency. Data shown in Table 3 supports these findings. Kenya Airways in its e-business implementations seems to focus more on efficiency as a source of value creation than on the other sources of sources of value creation; novelty, complementarities and lock-in.

4.3.2 Complementarities

The data on complementarities as a source of value creation for Kenyan e-businesses was collected by questionnaire (See Appendix D, Section B), management interviews and from various archival sources; company websites, company annual reports and investor communiqués.

Table 6: E-business applications at Kenya Airways (KQ) and how they impact efficiency

E-business application	Details
1. E-ticketing	By the end of the 2006/2007 the company had achieved 65% e-ticketing in terms of its entire passenger uplifts network-wide.
2. Reservations system and ticketing systems (<i>Altea-Sell</i>)	In 2006/7, KQ together with its partner KLM implemented the <i>Altea-Sell</i> reservations and ticketing system. The airline system had been successfully launched on 1 April 2007.
3. Sales inventory and departure control systems	These systems were due for implementation and were scheduled to take place from late 2007 to 2009/10
4. Human resources online recruitment system	The online HR recruitment system had resulted in faster and more transparent processing of internal and external applications. As of 1st August, 2007, KQ no longer received paper based applications.
5. Flight data monitoring system	In conformity with International Civil Aviation Organisation (ICAO) safety requirements, the airline had implemented a Flight Data Monitoring system, for collection and analysis of flight data. The data was used to study events and trends and generate reports to show changes against time
6. Fuel management system - <i>fuel plus</i>	Use of this system had enabled the airline to automatically verify all jet fuel invoices against contract terms and conditions thereby reducing invoice processing time and effort. With better fuel budgeting and planning, the airline had been able to undertake more predictive fuel management. Fuel represented 27.8% of all costs and a 1% increase in the unit price of fuel had reduced profit after tax by KShs 52.6m.
7. Company website	In February 2006, the company had re-launched its website to have a new look and feel, booking engine and content. This had resulted in a 300% increase in customer uptake with revenues going up over the previous year. Future innovations had included a wider selection of fares.
8. Baggage reconciliation system	A baggage reconciliation system, had managed the flow and handling of passenger baggage through the airline's hub at JKIA.

The data suggests that TPS Serena, relies more on complementarities as a source of value creation in its e-business deployments than on the other sources; novelty, efficiency and lock-in. This can clearly be seen from the focus the company has established in its e-business deployments. Table 7 below summarises some of TPS Serena's e-business deployments.

4.3.2.1 E-business Applications at TPS Serena

Data on the e-business applications at TPS Serena was collected by questionnaire (See questionnaire in Appendix D Section A –Part B) and corroborated with information from the company's 2006 Annual Report.

TPS Serena's focussed on those e-business implementations that could enable the company use complementarities as a source of value creation. These are summarised in Table 7 below.

This shows that Amit and Zott's (2001) model is indeed relevant to Kenya as TPS Serena could make use of complementarities (one of the sources mentioned by Amit and Zott), to derive value in its e-business deployments. Findings tabulated in Table 4 also support this view. The company has many more e-business implementations using complementarities than efficiency, lock-in and novelty.

4.3.3 Amit and Zott's (2001) Sources of Value Creation

This data was collected by questionnaire (See Appendix D, Section B), management interviews and from various archival sources; company websites, company annual reports and investor communiqués.

Nation Media Group focussed on the four sources of value creation – novelty, efficiency, complementarities and lock-in seemingly equally, in its e-business implementations. Of the three companies considered, (the others being Kenya Airways and TPS Serena), it was the only one that had achieved this feat.

4.3.3.1 E-business Applications at Nation Media Group

Data on the e-business applications in Nation Media Group was collected by questionnaire (See questionnaire in Appendix D Section A –Part B) corroborated with data from the company's website.

From Table 8 below, Nation Media Group had seemingly focussed equally on the four sources of value creation – novelty, lock-in, efficiency and complementarities- in its e-business implementations.

Table 7: E-business implementations at TPS Serena and how they made use of complementarities as a source of value creation

E-business implementation	Details
1. Company website	The company website featured brochures of several Serena products of for example, Safari packages, conference facilities etc
2. Email communication systems	Being in the hospitality industry, it was paramount for the company to be in contact with its customers. Most customers would prefer email to other systems of communication.
3. Hotel booking and reservations system	The company had implemented a room bookings and reservations system. From the system, travel agents were allocated their quota of bed-spaces they should sell for the year. The management periodically reviewed the performance of travel agents and channels.
4. Integrated computerised processing systems	These systems supported the finance operations and allowed processing of different transactions for example, profit sharing agreement with <i>Kenatco</i> taxis. The Nairobi office handled the back-office operations of the hotel chain.

This further raised the credibility of Amit and Zott's (2001) model on the sources of value creation in e-business. This finding was corroborated by data findings shown in Table 5. Nation Media Group was also the only company to have made effective use of Amit and Zott's novelty and lock-in dimensions, as sources of value creation. (See Tables 3, 4 and 5 above).

4.3.4 Legal Framework

The data on the legal framework as a source of value creation for Kenyan e-businesses was collected by questionnaire (See Appendix D, Section B - Part B) and from management interviews.

Table 8: E-business implementations at Nation Media Group and how they made use of Amit and Zott's sources of value creation

E-business implementation	Details
1. Company website	The company had a news website that had similar content to <i>Nation</i> newspaper print edition. Other products with a web presence included a regional newspaper <i>The East African</i> and business paper <i>Business Daily</i> .
2. Web content management software	The company changed its website on a daily basis with news items. Search facilities allowed users to retrieve older news items or related stories.
3. Interfaces with supplier systems	<p>The company had interfaced its systems with some suppliers to provide additional content.</p> <p>(i) For example with leading African mobile ring-tone supplier <i>Cellulant</i> to provide favourite ring-tones to users</p> <p>(ii) The company provided television channel news content through posts on <i>YouTube</i>.</p> <p>(iii) Users on the Safaricom mobile phone network can access news alerts.</p>
4. Web advertisement analysis software	The company had deployed a system to analyse website advertisements.

The managers interviewed saw no reason to attribute value creation of their e-businesses to the legal framework. All managers were unconcerned about the Kenyan E-transaction Bill of 2007 or even its contents. Since the legal framework was not isolated by Amit and Zott's (2001) model, the model can then be said to be of importance for e-businesses.

4.3.5 Social Culture

The data on social culture as a source of value creation for Kenyan e-businesses was collected by questionnaire (See Appendix D, Section B - Part C) and from management interviews.

All managers interviewed were not sure whether they could attribute the value creation experienced by their e-businesses to cultural factors. This factor was therefore eliminated. Even so, this variable did not feature in Amit and Zott's (2001) model. As such, it can be

said that the failure of this criterion served to increase confidence in the relevance of Amit and Zott's (2001) for Kenyan businesses.

4.4 Chapter Summary

Section A - Part C of the questionnaire (see Appendix D), was used to collect data on the sources of value creation for Kenyan e-businesses. Sources of value creation for Kenyan companies - Kenya Airways, TPS Serena and Nation Media Group - were found to be complementarities, efficiency, novelty and lock-in as identified by Amit and Zott in 2001. This is detailed in Tables 3, 4 and 5 above.

Section B - of the questionnaire (see Appendix D), was used to collect data on the relevance of Amit and Zott's (2001) model for Kenya. Relevance was measured by establishing the focus each company had in utilising the sources of value creation isolated by Amit and Zott. This data is detailed in Tables 6, 7 and 8. The data revealed that Kenyan e-businesses differed in their focus of business sources.

CHAPTER 5

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter begins with a discussion of the major findings of the study i.e. sources of value creation for Kenyan e-businesses and the relevance of Amit and Zott's (2001) perspective for Kenyan e-businesses. Other works are also considered include: Dierickx and Cool's (1989) work on the resource based view; Lorenzoni and Lipparini's (1999) work and Kogut's (2000) work on strategic networks. Major conclusions are stated, followed by a recommendation and discussion for both industry and academia. The chapter ends with a summary of the important elements of the study.

5.2 Summary

The purpose of this study was to examine the sources of value creation in Kenyan electronic businesses as presented by Amit and Zott (2001); efficiency, complementarities, lock-in, and novelty. The study was guided by two research questions:

1. What are the sources of value creation for Kenyan e-businesses?
2. Are the measures of value creation formulated by Amit and Zott, relevant to Kenya?

The research methodology used was case study. This study was carried out on three Kenyan companies; Kenya Airways, TPS Serena and Nation Media Group. All of them public companies listed on the Nairobi Stock Exchange (NSE) chosen due to the richness of their e-business implementations amongst Kenyan companies. The companies were drawn from the Commercials and Services segment of the NSE. Data was collected from company annual reports, investor communiqués, questionnaires, organisation websites and management interviews. Two techniques were used for data was analysis; within case analysis and the cross case analysis. The findings were tabulated according to Amit and Zott's (2001) business model construct.

The major research findings for each research question are as follows: For the first research question, the sources of value creation for Kenyan e-businesses were found to be, lock-in, complementarities, efficiency and novelty as put forward by Amit and Zott in 2001.

For the second research objective, the measures of value creation formulated by Amit and Zott (2001) were found to be relevant for Kenyan e-businesses. This was determined by establishing the focus Kenyan e-businesses had in their e-business deployments. For instance, Kenya Airways focussed on efficiency, TPS Serena focussed on complementarities and Nation Media Group seemed to focus on novelty in their e-business deployments.

5.3 Discussion

A discussion of (a) the sources of value creation for Kenyan e-businesses and (b) the relevance of Amit and Zott's (2001) model will be discussed. For the first objective, Nation Media Group's novel way of innovation through exchange mechanisms is discussed. Comparison of findings with Amit and Zott's (2001) model is also considered.

The relevance of the model in the Kenyan context is discussed. Amit and Zott's (2001) model allows managers to look at e-businesses as "business".

5.3.1 Sources of Value Creation for Kenyan E-businesses

Kenyan companies have leveraged on value creation sources in novel ways. For example, Nation Media Group (NMG) provides content to Kenyans in the Diaspora hence setting up a marketplace for advertisers (within and without the country) to reach Kenyans wherever they are. The site provides a setting for foreign investors to gauge the Kenyan investment climate and for Kenyans in the Diaspora to catch up with the happenings at home. For these Kenyans, this not about being as close home as they can get; his is home! It is therefore not surprising that often many of them are better informed than resident Kenyans hence shaping opinions back home. Nationmedia.com is not just about content; it is about everybody that looks at that content. The site has achieved powerful positive externalities for news and information fuelled by the advantage of being the first mover. This finding supports Lorenzoni and Lipparini's (1999) work that once a firm begins collaborating like Nation Media Group has, it develops experience at interacting, and this

provides fertile ground for further innovative interactions. Clearly, as mentioned by Amit and Zott (2001) e-business firms often innovate through novel exchange mechanisms and transaction structures not present in firms that are more traditional. This is because as they say, the unique characteristics of virtual markets make the possibilities for innovation seem endless.

Amit and Zott (2001) say that the sources of value creation namely: efficiency, complementarities, lock-in and novelty are interdependent. The findings showed that this was true. However, companies that did not effectively use all sources of value creation (i.e. they under leveraged on the value creation sources) suffered. This was brought about due to lost value creation opportunities in e-business deployments. For instance, TPS Serena lost many value creating opportunities by not using data-mining technologies for cross selling. To unleash unrealised value, companies had to leverage on the value creation sources equally. Nation Media Group was such a company. Table 5 illustrates how Nation Media Group has seemingly leveraged on the four sources of value creation - efficiency, complementarities, lock-in and novelty – equally. This is in contrast to Kenya Airways (Table 3) and TPS Serena (Table 4). Missed value creation opportunities for these companies have been highlighted by the narratives accompanying both tables.

What led to some Kenyan companies to under leverage on the sources of value creation? Could this be due to time compression diseconomies that curtail value creation as suggested by Dierickx and Cool (1989)? This could not be established from this study. However, the study does offer some leads. The sources of value creation were not industry specific; rather, the industry an organisation was involved in, seemed to influence the importance of a source. For instance, transaction efficiency seems to characterise the transaction intensive industries like airline industry. Table 3 brings this out clearly as can be seen from the many initiatives of Kenya Airways depicted by the efficiency column. Due to the experiential nature of hotel goods, complementarities more than any other source, seem to typify the hotel industry. This is shown by the complementarities column of TPS Serena (Table 5). In media publishing, all the four sources of value creation – complementarities, efficiency, lock-in and novelty - appear to be equally important. Table 6 summarises Nation Media Group's leverage of these value creation sources. It may also be that the importance of the value creation sources is due to industry idiosyncrasy.

Kogut's (2000) view is that though the source of value and its imputation may not always be clear, value is not a mystical entity. Still, Amit and Zott (2001) point out that, virtual markets broaden the notion of innovation since they span firm and industry boundaries rendering this finding suspect. This research shows that though this is true, they are also determined by it. The insight is however not conclusive, and more data from different companies and across different timeframes is necessary for further cross case and within case analysis. The difference in leverage of the value creation sources may well be limited by the incumbent managers' perspectives who may not realise potential value arising from e-business resource combinations. Further research in this area is also needed so as to establish whether sustained leveraging on industry dependent value creation sources is necessary for a company to achieve a sustainable competitive advantage. Amongst the three firms in the study however, Nation Media Group is the only company that seems to have a better balanced leverage from the value creation sources.

The business model unit of analysis proposed by Amit and Zott (2001) is of great interest to Kenyan managers and academicians. From the company analyses of missed opportunities of Kenya Airways and TPS Serena covered in chapter 4, managers of both companies seem to be obsessed with only one source of value creation; efficiency and complementarities respectively. All the same, Amit and Zott (2001) point out these sources of value creation are interdependent. Due to this, both companies experienced missed opportunities due to under leverage of the value creation sources.

5.3.2 Relevance of Value Creation for Kenyan E-businesses

The relevance of Amit and Zott's (2001) model in the Kenyan context was determined by establishing the focus Kenyan companies placed on the sources of value creation complementarities, efficiency, novelty and lock-in.

The research findings revealed that Kenyan companies did not make use of Amit and Zott's (2001) value creation sources – complementarities, efficiency, novelty and lock-in - in their e-business deployments. This established the relevance of Amit and Zott's (2001) model in the Kenyan context. All the managers that were interviewed were ignorant of Amit and Zott's (2001) model. This meant that they had a limited understanding of the real sources of value creation in their e-business. The companies

examined therefore differed in their focus of value creation sources. Kenya Airways for instance had implemented many e-business systems with the sole focus of improving efficiency (Table 6). TPS Serena had a focus on complementarities in its e-business deployments (Table 4). Nation Media Group was the only company to have more or less equally focussed on all the four sources; complementarities, efficiency, novelty and lock-in in its e-business implementations.

The focus that a company had on the value creation sources impinged on opportunities exploited by the company. For instance, Kenya Airways could create more value from its business processes by focussing on complementarities through integration of its supplier e-business systems i.e. supply chain management (SCM). Suppliers and customers would be able to track tenders, payments, get more information on transaction turnaround times, access reasons for tender/application rejection etc. TPS Serena lost out on value creation opportunities by not focussing on lock-in that would have led to opening its website to e-commerce payments, locking-in e-commerce customers.

Kenya Airways and TPS Serena hence failed to exploit opportunities in the market due to their short-sighted focus on efficiency and complementarities as sources of value creation. This finding establishes the relevance of Amit and Zott's (2001) model together within the Kenyan context. The findings also support Lorenzoni and Lipparini's (1999) work on strategic networks as facilitators of value creation. Kenyan companies made use of the sources of value creation - complementarities, efficiency novelty and lock-in - in their e-business implementations. The sources of value creation are interdependent (Amit and Zott, 2001); therefore, companies that do not focus equally on the sources will not fully exploit the value creating capabilities.

The model is therefore useful for Kenyan businesses as it provides a framework of looking at e-businesses as "business" and provides a guide on how to leverage sources of value creation so that they are balanced. The business model construct sharpens the understanding of the new exchange mechanisms and transaction methods unique to e-businesses; not just to new products or production processes (Amit and Zott, 2001). In this study for instance, it was clear that the only company in the sample that had adequately leveraged on the sources of value creation for e-businesses was the Nation Media Group which had developed a new exchange mechanisms. New transaction

mechanisms are enabled from the Nation media website. For example, users could download their favourite mobile phone ring tones. This represented convergence of both mobile telephony and computer technologies. Another example included those companies and institutions from other countries that targeted Kenyans living in those countries but could only have access to them if they advertised on the Nation website. This was a novel example of a new exchange mechanism enabled by bringing together new participants.

5.4 Conclusions

The purpose of this study was to examine sources of value creation for Kenyan electronic businesses as presented by Amit and Zott (2001). The study was guided by the research questions: (a) What are the sources of value creation for Kenyan e-businesses? (b) Are the measures of value creation formulated by Amit and Zott, relevant to Kenya? The study was typically case study with data being collected from company annual reports, investor communiqués, organisation websites and company management interviews. Data was analysed and presented in Chapter 4 using the business model unit of analysis proposed by Amit and Zott in 2001 with frequent cross case and within case analysis (Eisenhardt, 1989).

Conclusions are examined under the titles sources of value creation for Kenyan e-businesses and then also as the relevance of Amit and Zott's (2001) model for Kenyan e-businesses.

5.4.1 Source of Value Creation for Kenyan E-businesses

The sources of value creation for Kenyan e-businesses examined remain the same as those highlighted by Amit and Zott (2001) in their research; complementarities, novelty, efficiency and lock-in. Strategic networks (i.e. virtual markets) also facilitate value creation (Lorenzoni and Lipparini, 1999). However, though value creation sources are interdependent, the study found that they are not important in the same way in distinct industries. Transaction intensive industries like Kenya Airways find the criticality of *efficiency* paramount in their processes. Most of the company's e-business deployments are for enhancing efficiency e.g. online e-ticketing systems, baggage reconciliation systems, human resources online recruitment systems etc. Likewise, TPS Serena in the hospitality industry due to the experiential nature of its products, heavily leverages on,

complementarities. The company's website emphasizes cross-selling of products, hotel travel agents have access to hotel's bookings and reservations system etc.

The study also revealed that differences in value creation source leverage practices by e-businesses could be due to the industry a company operated in but also due to cognitive perspectives formed by managers.

5.4.2 Relevance of Value Creation for Kenyan E-businesses

Relevance of Amit and Zott's (2001) model in the Kenyan context was established by considering the focus of e-business value creation sources Kenyan companies had in their e-business deployments. The findings revealed that Kenyan companies did make use of sources of value creation established by Amit and Zott (2001) but differed in the focus in implementing e-business systems; Also value cannot be seen as a mystical entity (Kogut, 2000). This study did not identify the legal framework and social culture as sources of value creation and neither had Amit and Zott (2001) isolated them in their study. Only the variables introduced by Amit and Zott efficiency, novelty, lock-in and complementarities were found to be significant for Kenyan e-businesses.

5.5 Recommendations

Amit and Zott's (2001) framework provides interesting insights into the value creation practices of Kenyan e-commerce companies. These are discussed below.

5.5.1 Recommendations for Improvement

Recommendations for practice are based on the research objectives of this study (a) What are the sources of value creation for Kenyan e-businesses and (b) Are the measures of value creation formulated by Amit and Zott, relevant to Kenya?

These recommendations will enable Kenyan companies to enhance their value creation practices.

5.5.1.1 Sources of Value Creation for Kenyan E-businesses

The Kenyan companies have implemented various e-business systems that have enabled them to create value. However, these fall short of best practices for two reasons:

1. Kenyan managers of the companies in the study maintain parochial perspectives characterised by the industry they operate in (i.e. they over-leverage on a single value creation source) not realising that e-business value creation sources are interdependent (Amit and Zott, 2001).
2. The Kenyan companies in the study have yet to establish new e-business exchange mechanisms as identified by Amit and Zott (2001) to adequately leverage on the value creation sources.

These two reasons translate to missed opportunities by the Kenyan e-businesses studied. This is because they consider value as a mystical entity as suggested by Kogut (2000). Being the first mover in Kenya (*novelty*) is a source of advantage and these value creation opportunities will be realised by companies that seize them first. For instance, Nation media Group pioneered content provision on its site and is now the company in sub-Saharan Africa that enjoys the largest number of hits.

The recommendation is that Kenyan managers should be aware of the two pitfalls, (which should be addressed) when designing e-business systems.

5.5.1.2 Relevance of Value Creation for Kenyan E-businesses

There is need to raise awareness amongst Kenyan managers about Amit and Zott's (2001) model so that they can use it to effectively deploy e-business applications in their e-business models. Current practices by Kenyan managers fall short of practices enunciated by the model with some companies realising modest creation of value in their e-business deployments (See Missed opportunities in chapter 4).

5.5.2 Recommendation for Further Studies

The importance of value creation sources across distinct e-businesses seems to vary with industry though not determined by it. But what is the relationship between the industry and value creation sources? This study shows that the industry a company operates in does influence the sources of value creation but is not conclusive on which of the two determines the other.

The study findings support Amit and Zott's (2001) conclusions that the sources of value creation are interdependent; also strategic networks (i.e. virtual markets), enable value

creation as alleged by Lorenzoni and Lipparini (1999). However, companies studied showed marked difference in leverage across industries. The study concluded that manager parochialism contributed to under leverage in value creation sources. However, the study did not rule out industry idiosyncrasy and serendipity as possible contributors to this short-sightedness. If the former, leveraging on the industry specific value creation sources may necessitate penetration strategies by an entrant but provide an incumbent with a tool for raising entry barriers. Future research into value creation practices by e-business across different time frames and stages of maturity is needed.

The research also showed that the legal framework and social culture were not sources of value creation. However, data was never collected from legal experts and end consumers. Therefore, the conclusions regarding the two as possible sources of value creation or at least determinants in value creation cannot be ruled out.

REFERENCES

- Amit, R. & Schoemaker, P. (1993). Strategic Assets and Organizational Rent, *Strategic Management Journal*, 14(1): 33–46
- Amit, R. & Zott, C. (2001). Value Creation in E-Business, *Strategic Management Journal*, 22, 493–520
- Arthur W. (1996). Increasing Returns and the New World of Business, *Harvard Business Review*, 74(4): 100–109
- Bakry, S. & Bakry, F. (2001). A Strategic View for the Development of E-Business, *International Journal of Network Management*, 11, 103 – 112
- Barnes, D., Hinton, M., & Mieczkowska, S. (2004). Managing the Transition from Bricks-and-Mortar to Clicks-and-Mortar: A Business Process Perspective, *Knowledge and Process Management*, 11(3), 99–209
- Barney, J. (1986). Strategic Factor Markets: Expectations, Luck, and Business Strategy, *Management Science*, 32(10), 1231-1241
- Barney, J. (1997). *Gaining and Sustaining Competitive Advantage*, Reading, MA: Addison-Wesley
- Boulding, W. & Christen, M. (2001). First-Mover Disadvantage, *Harvard Business Review*, 79(9), 20-21
- Brandenburger, A., & Stuart, H. (1996). Value-based Business Strategy. *Journal of Economics and Management Strategy*, 5, 5–25
- Carr, N. (2003). IT Doesn't Matter, *Harvard Business Review*, 81(5), 41-49
- Chesbrough, H., Ahern, S., Finn, M., & Guerraz S. (2006). Business Models for Technology in the Developing World: The Role of Non-Governmental Organizations, *California Management Review*, 48(3), 47-61
- Christensen, G. & Methlie, L. (2003). Value Creation in E-business: Exploring the Impacts of Internet Enabled Business Conduct, *In the Proceedings of the 16th*

Bled Electronic Commerce Conference E-transformation, Bled, Slovenia, June 9-11

- Coltman, T., Devinney, T., Latukefu, A., Midgley, D. (2001). E business: Revolution, Evolution, or Hype? *California Management Review*, 44(1), 57–86
- Das, T. & Teng, B. (2000). A Resource-Based Theory of Strategic Alliances, *Journal of Management*, 26(1), 31-61
- Davern, M. & Kauffman, R. (2000). Discovering Potential and Realizing Value from Information Technology Investments, *Journal of Management Information Systems*, 16(4), 121-143
- Day, G., Fein, A., & Ruppertsberger, G. (2003). Shakeouts in Digital Markets: Lessons from B2B Exchanges, *California Management Review*, 45(2), 131-50
- Dierickx, I. & Cool, K. (1989). Asset Stock Accumulation and Sustainability of Competitive Advantage, *Management Science*, 35, 1504–1511
- Drucker, P. (1994). The Theory of Business, *Harvard Business Review*, 72(5), 95-104
- Dyer, J. (1997). Effective Interfirm Collaboration: How Firms Minimize Transaction Costs and Maximize Transaction Value, *Strategic Management Journal*, 18(7), 535–556
- Economides, N. (1996). The Economics of Networks, *International Journal of Industrial Organization*, 14(2): 673–699
- Eisenhardt, K. (1989). Building Theories from Case Study Research, *Academy of Management Review*, 14, 532–550
- Eppinger, S. (2001). Innovation at the Speed of Information, *Harvard Business Review*, 79,(1) 149-158
- Flyvbjerg, B. (2006). Five Misunderstandings about Case-Study Research, *Qualitative Inquiry*, 12(2), 219-245

- Garicano, L., & Kaplan S. (2001). The Effects of Business-to-Business E-Commerce on Transaction Costs, *The Journal of Industrial Economics*, 49, 463-485
- Gulati, R. (1998). Alliances and Networks, *Strategic Management Journal*, 19(4), 293–317
- Gulati, R., Nohria, N. & Zaheer, A. (2000). Strategic Networks, *Strategic Management Journal*, Special Issue, 21(3), 203–215
- Hemp, P. (2006). Are you Ready for E-Tailing 2.0?, *Harvard Business Review*, 84(10), 28-28
- Hitt, M., Hoskisson, R., Johnson, R. & Moesel, D. (1996). The Market for Corporate Control and Firm Innovation, *The Academy of Management Journal*, 39(5), 1084-1119
- Iliachenko, E. (2005). *Internet Marketing Value Creation Framework: A Conceptual Framework*. (Unpublished PhD Industrial Marketing Thesis, Luleå University of Technology, 2001). Luleå, Sweden
- Kanter, R. (2001). The Ten Deadly Mistakes of Wanna-dots, *Harvard Business Review*, 79(1), 91-100
- Kenya Education Network [KENET] (2007). E-readiness survey of academic institutions in Kenya, Nairobi, Kenya: KENET
- Kogut, B. (2000). The Network as Knowledge: Generative Rules and the Emergence of Structure, *Strategic Management Journal*, Special Issue 21(3), 405–425
- Lavie, D. (2007). Value Creation and Appropriation in Alliance Portfolios, *Academy of Management Proceedings*, 1-6
- Lee, D. (2005). Contextual IT Business Value and Barriers: An E-Government and E-Business Perspective, *In the Proceedings of the 38th Hawaii International Conference on System Sciences*, Hawaii, 1-10
- Lieberman, M. & Montgomery, D. (1988). First-mover Advantages. *Strategic Management Journal*, Summer Special Issue 9, 41–58

- Lorenzoni, G. & Lipparini, A. (1999). The Leveraging of Interfirm Relationships as a Distinctive Organizational Capability: A Longitudinal Study. *Strategic Management Journal*, 20(4), 317–338
- Lucking-Reiley, D. & Spulber, D. (2001). Business-to-Business Electronic Commerce, *The Journal of Economic Perspectives*, 15(1), 55-68
- Makadok, R. (2001). Towards a Synthesis of Resource Based and Dynamic Capability Views of Rent Creation, *Strategic Management Journal*, 22(5), 387–402
- Ministry of Information and Communications. (2007). Electronic Transactions Bill 2007, Nairobi, Kenya: Ministry of Information and Communications
- Ministry of Planning and National Development. (2005). *Millennium Development Goals in Kenya Needs & Costs*, Nairobi, Kenya: Ministry of Planning and National Development
- Moran, P. & Ghoshal, S. (1996). Value Creation by Firms, *Academy of Management Proceedings*, 41-45
- Moran, P. & Ghoshal, S. (1999). Markets, Firms, and the Process of Economic Development, *Academy of Management Review*, 24(3), 390–412
- Nahapiet, J. & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organizational Advantage, *Academy of Management Review*, 23(2), 242-266
- Ovans, A. (2000). Can You Patent Your Business Model?, *Harvard Business Review*, 78(4), 16
- Pateli, A. & Giaglis, G. (2003). A Framework for Understanding and Analysing eBusiness Models, *In the Proceedings at the 16th Bled Electronic Commerce Conference eTransformation*, Bled, Slovenia, June 9-11
- Porter, M. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York, NY: Free Press
- Porter, M. (2001). Strategy and the Internet, *Harvard Business Review*, 79(3), 62–78

- Prahalad, C. & Ramaswamy, V. (2004). Co-Creation Experiences: the Next Practice in Value Creation, *Journal of Interactive Marketing*, 18(3), 5-14
- Shankar, V. & Winer, R. (2006). When Customer Relationship Management Meets Data Mining, *Journal of Interactive Marketing*, 20(3-4), 1-4
- Smagalla, D. (2004). Japanese Experiences with B2C E-Commerce, Can Innovative Partnerships Increase Store Traffic and Improve Revenue Stream? *MIT Sloan Management Review*, 45(3), 6-6
- Stabell, C. & Fjeldstad, O. (1998). Configuring Value for Competitive Advantage: On Chains, Shops, and Networks, *Strategic Management Journal*, 19(5), 413-43
- Stieglitz, N. & Heine, K. (2007). Innovations and the Role of Complementarities in a Strategic Theory of The Firm, *Strategic Management Journal*, 28, 1-15
- Stopford, J. (2001). Should Strategy Makers Become Dream Weavers?, *Harvard Business Review*, 79(1), 165-169
- Teece, D. (1987). Profiting from Technological Innovations: Implications for Integration, Collaboration, Licensing, and Public Policy. In D. J. Teece (Ed), *The Competitive Challenge: Strategies for Industrial Innovation and Renewal* (pp. 185-219). Cambridge, MA; Ballinger
- Tsai, W. & Ghoshal, S. (1998). Social Capital and Value Creation: The Role of Intrafirm Networks, *The Academy of Management Journal*, 41(4), 464-476
- Tse, T. (2007). Reconsidering the source of value of e-business strategies, *Strategic Change*, 16, 117-126
- Walter, A., Ritter, T. & Gemünden, H. (2001). Value Creation in Buyer-Seller Relationships Theoretical Considerations and Empirical Results from a Supplier's Perspective, *Industrial Marketing Management*, 30, 365-377
- Williamson, O. (1979). Transaction Cost Economics: The Governance of Contractual Relations, *Journal of Law and Economics*, 22(2), 233-261

- Wilson, D. (1995). An Integrated Model of Buyer-Seller Relationships, *Journal of the Academy of Marketing Science*, 23, 335–345
- Yin, R. (1981). The Case Study Crisis: Some Answers, *Administrative Science Quarterly*, 26(1), 58-65
- Zhu, K., Kraemer, K., Xu, S., & Dedrick, J. (2004). Information Technology Payoff in E-Business Environments: An International Perspective on Value Creation of E-Business in the Financial Services Industry, *Journal of Management Information Systems*, 21 (1), 17–54

APPENDIX A - IMPLEMENTATION SCHEDULE

YEAR 2007

		Week															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Proposal	Introduction chapter																
	Literature review chapter																
	Research methodology chapter																
	Proposal editing																
	Proposal presentation and supervisor discussion																
	Break																
Data collection & analysis	Developing questionnaire																
	Company visits																
	Restructuring questionnaire for further analysis																
	Analysing data and discussions																
	Conclusions and recommendations																
	Editing of project																

APPENDIX B- IMPLEMENTATION BUDGET

Item Description	Amount (Kshs)
Laptop computer Duo Core, Windows Vista [®] 1.86Ghz, 80GB HDD, Tru-brite screen, 1GB RAM	84,000
Printer HP laser printer	20,000
Travelling	30,000
Printing	10,000
Telephone costs	10,000
Total cost	154,000

APPENDIX C- COMPANY SUMMARY INFORMATION

Company	Products and business industry	Countries in operation	Foundat ion Year	IPO date	Number of employees	Website	Stock Exchanges traded
Kenya Airways	airline	<i>Africa:</i> Kenya, Mauritius, Eritrea, Ethiopia, DRC, Nigeria, Tanzania & Zanzibar, RSA, Sierra Leone, Ivory Coast, Ghana, Cameroon, Senegal, Egypt, Comoros, Malawi, Zambia, Rwanda, Burundi <i>Europe:</i> Turkey, UK Netherlands, France <i>Asia:</i> ,China, India, , Korea, <i>Middle East:</i> UAE	February 1977	March 1996	4,154	www.kenya-airways.com	NSE, USE, TSE
TPS Serena	Hotel Chain	Kenya, Zanzibar, Tanzania, RSA, Uganda, Rwanda, Pakistan, Mozambique, Afghanistan	Mar 1971	Apr 1997	2360 employees in Kenya, Uganda, Tanzania, Zanzibar and Rwanda	www.serenahotels.com/	NSE
Nation Media Group (NMG)	Newsprint and broadcasting company	Kenya, Uganda, Tanzania	1959	1973	2000	http://www.nationmedia.com	NSE

*Exchange offer date

APPENDIX D- RESEARCH QUESTIONNAIRE

SECTION A: SOURCES OF VALUE CREATION FOR E-BUSINESSES

Part A: Company Background

1. Please give the following general information on the company:

- a. Number of branches
- b. Number of employees
- c. Location
- d. Lumber of clients i.e. client base
- e. Number of products
- f. Information systems deployed by the organisation

Use the space below to give additional general information

2. Please give a brief history of the company to include:

- a. Founders
- b. Why was it founded
- c. Company's vision/mission
- d. Current shareholding

Part B: E-Business Implementations

3. What business function has greatly benefited from your e-business implementations (please select all options that apply)

- a. Sales
- b. Marketing
- c. Finance
- d. Customer care
- e. Operations
- a. Other

Use the space below to further explain details of your selection(s)

Part C: Sources of Value Creation

4. What have you been able to do with e-business that could not be done before that has led to positive growth in the business? (please select all options that apply)
- a. New business insights
 - b. New business opportunities
 - c. Improvement of critical business activities¹
 - d. New business partners
 - e. Access to new markets
 - f. Other

Use the space below to further explain details of your selection(s)

5. How has e-business changed the delivery of your products? (please select all options that apply)
- a. It has been easier for customers to locate products
 - b. Customers have access to a greater variety of products
 - c. Customers are more aware of product characteristics and therefore select products on product specification
 - d. It is simpler for customers to make purchases
 - e. The business is able to reduce costs by carrying out more sales online
 - f. Customers prefer doing business online because it is faster
 - g. Other

Use the space below to further explain details of your selection(s)

6. How important are complementary² products and services? (see footnote 1 for definition of complementary products and please select all options that apply)
- a. Ability to create alliances with other online business partners
 - b. Ability to create alliances with other offline business partners .
 - c. More product offerings for customers
 - d. Enabling the inter-working of distinct technologies
 - e. Other

Use the space below to further explain details of your selection(s)

¹ Critical business activities are those activities which the business will not be able to do without for a prolonged period of time e.g. supermarket point of sale systems

² A player is your complementor if customers value your product more when they have the other player's product than when they have your product alone e.g.. bread and butter

7. How has implementation of e-business enhanced the extent to which customers are motivated to engage in repeat transactions (please select all options that apply)
- a. Product redesign has made it difficult for customers to switch from your company to other companies
 - b. The company website has enabled the rise of an online community and customers are able to exchange what they have in common
 - c. Presence of other buyers or sellers attracts new users to the site
 - d. Other

Use the space below to further explain details of your selection(s)

SECTION B: RELEVANCE OF AMIT AND ZOTT'S (2001) MODEL IN THE KENYAN CONTEXT

Part A: Company's Focus on Source of Value Creation

8. How has the implementation of e-business improved your business? (please select all options that apply)
- a. Efficiency in carrying out business processes
 - b. Enhancement of complementarities in business
 - c. New ways of carrying out business processes
 - d. Customer retainment
 - e. Other ways.

Use the space below to further explain details of your selection(s)

Part B: Legal Framework in E-business

9. What are the legal incentives that led to the e-business practices? (please select all options that apply)
- a. Acceptability of online transactional vehicles by customers
 - b. Ease of converting online payments to daily use currencies
 - c. Ease of enforcing online transactions in courts of law
 - d. Online channels promise more secure transactions
 - e. Better governance mechanisms in e-business as compared to other business mechanisms
 - f. Other

Use the space below to further explain details of your selection(s)

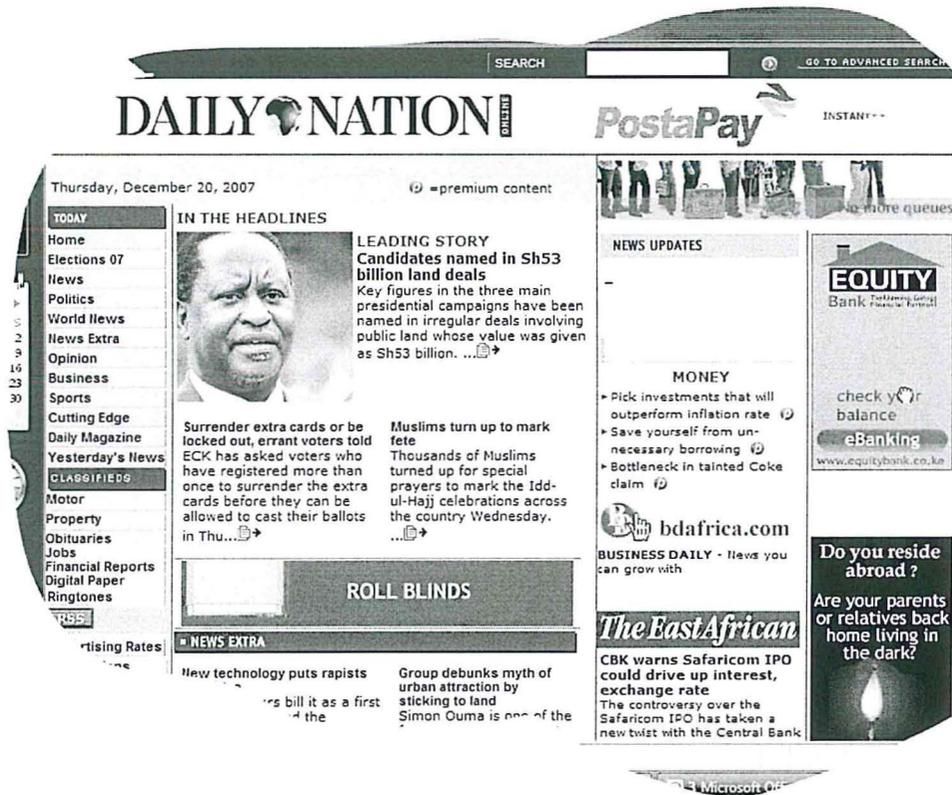
Part C: Social Culture in E-business

10. What are the social cultural reasons that have led your company's continued use of e-business processes (please select all options that apply)

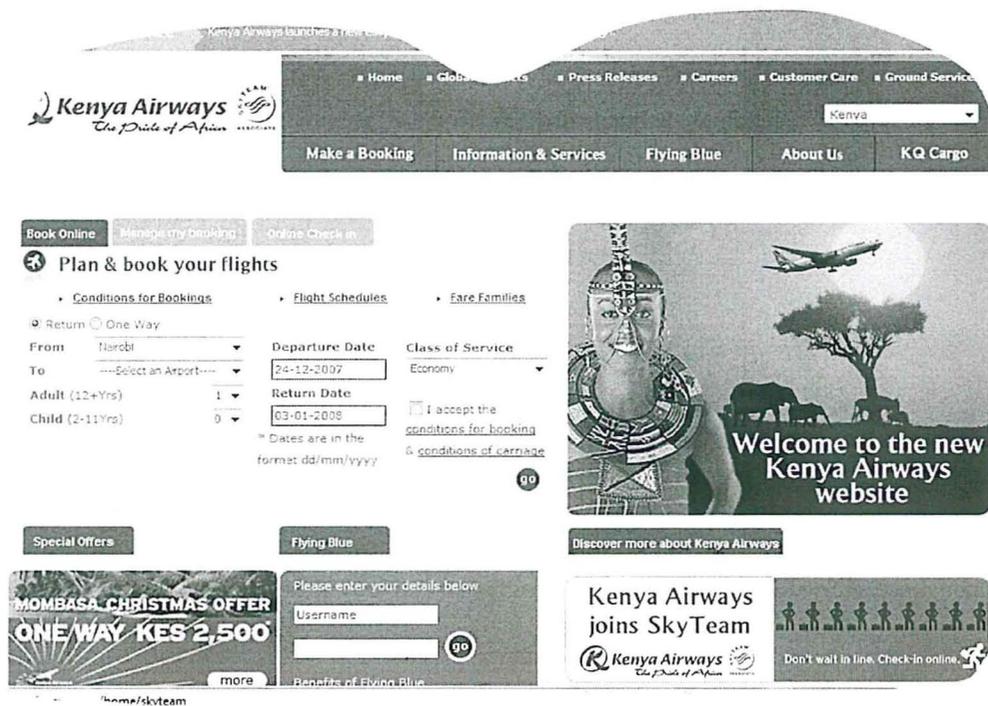
- a. More educated users
- b. Users find e-business initiatives more secure and therefore trustworthy
- c. Users find it easy to conduct online payments
- d. Low costs of e-business transactions
- e. Improved managerial, organizational and coordination processes within the company
- f. Other

Use the space below to further explain details of your selection(s)

APPENDIX E- COMPANY WEBSITES



Website 1: Nation Media Website



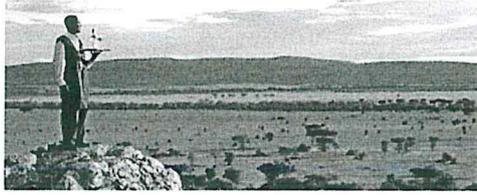
Website 2: Kenya Airways Website



SERENA HOTELS
SAFARI LODGES • HOTELS • RESORTS

- RESERVATIONS
- SAFARI LODGES
- HOTELS
- RESORTS
- SERENA SAFARIS
- SERENA SPECIALS
- SERENA MAISHA SPA
- PRODUCTS
- ENVIRONMENT
- GEOGRAPHY
- POSTCARD
- RESOURCES
- COMPANY
- CAREERS
- NEWS

Welcome to Serena Hotels



Serena Hotels are located in some of the world's most exciting and exotic destinations. Each Serena experience is tailored to be a unique and unforgettable experience, whether in a luxury safari camp or in one of the hotels or resorts.

Feature



Serenading Serengeti
6 days (5 nights) in Tanzania:
Kirawira Camp Western Serengeti
Lake Manyara Serena Safari Lodge
Serengeti Serena Safari Lodge
[Find out more](#) | [Reservations](#)

Business



Islamabad Serena Hotel (Pakistan)
The Margallah Hills, part of the Himalayan mountain range, form a scenic backdrop for the Islamabad Serena Hotel, in the capital of Pakistan. Islamabad is just 15 km from its older twin city of Rawalpindi...
[See more](#) | [Reservations](#)

Adventure



Igorongoro Serena Safari Lodge (Tanzania)

Website 3: TPS Serena Website

APPENDIX F- NSE PUBLICLY LISTED COMPANIES*

Agricultural		Industrial and Allied	
1	Unilever Tea Kenya Ltd	29	Athi River Mining
2	Kakuzi	30	B.O.C Kenya
3	Rea Vipingo	31	Bamburi Cement
4	Sasini Tea and Coffee Ltd	32	BAT Kenya Ltd
Commercial and Services		33	Carbacid Investments
5	AccessKenya Group	34	Crown Berger
6	Car and General (K)	35	E.A. Cables
7	CMC Holdings	36	E.A. Portland Cement
8	Hutchings Biemer	37	East African Breweries
9	Kenya Airways	38	Eveready EA
10	Marshalls (E.A.)	39	Kenya Oil Co
11	Nation Media Group	40	KP&LC
12	ScanGroup	41	KenGen
13	Standard Group	42	Mumias Sugar Co.
14	TPS EA (Serena)	43	Olympia Capital
15	Uchumi Supermarket [§]	44	Sameer Africa
Finance and Investment		45	Total Kenya
16	Barclays Bank	46	Unga Group
17	CFC Bank	Alt Investment Market Segment	
18	Diamond Trust Bank	47	A. Baumann & Co
19	Equity Bank	48	City Trust
20	Housing Finance Co	49	Eaagads
21	I.C.D.C Investments Co	50	Express
22	Jubilee Holdings	51	Williamson Tea Kenya
23	KCB	52	Kapchorua Tea Co
24	Kenya Re Corporation	53	Kenya Orchards
25	NBK	54	Limuru Tea Co
26	NIC Bank		
27	Pan Africa Insurance		
28	Standard Chartered Limited		

*As of October 2007

[§]Trading shares of these companies was suspended

APPENDIX G- THE BUSINESS MODEL CONSTRUCT

	Efficiency	Complementarities	Lock-in	Novelty
Business model structure	<ul style="list-style-type: none"> ▪ Exchange mechanism ▪ Transaction speed ▪ Bargaining costs ▪ Costs for marketing, sales, transaction processing, communication ▪ Access to large number of products, services, information ▪ Inventory costs of participating firms ▪ Transaction simplicity ▪ Demand aggregation ▪ Supply aggregation ▪ Scalability of transaction volume 	<ul style="list-style-type: none"> ▪ Cross-selling ▪ Activities of participants e.g., supply chain integration ▪ Combination of on-line and off-line transactions 	<ul style="list-style-type: none"> ▪ Transaction reliability ▪ Affiliate programs ▪ Direct network externalities ▪ Indirect network externalities ▪ Transaction safety mechanism ▪ Learning investments made by participants 	<ul style="list-style-type: none"> ▪ New participants ▪ Unprecedented number of participants and/or goods ▪ New links between participants ▪ Unprecedented richness (quality and depth) of linkages ▪ Patents applied for or accorded on business methods ▪ Business model structure relies on trade secrets and copyrights ▪ First to introduce business model
Business model content	<ul style="list-style-type: none"> ▪ Information made available as a basis for decision making; reduces asymmetry of information <ul style="list-style-type: none"> ▪ About goods ▪ About participants ▪ Transparency of transactions, i.e., information that is provided about flows of goods 	<ul style="list-style-type: none"> ▪ Combination of on-line and offline resources and capabilities ▪ Access to complementary products, services and information <ul style="list-style-type: none"> ▪ From firm ▪ From partner firms ▪ From customers ▪ Vertical products/services ▪ Horizontal products/services ▪ Technologies of participants 	<ul style="list-style-type: none"> ▪ Promotion of trust through third party ▪ Participants deploy specialized assets (e.g. software) ▪ Dominant design ▪ Customised and/or personalised offerings and features 	<ul style="list-style-type: none"> ▪ New (combinations of) products, services, information
Business model governance		<ul style="list-style-type: none"> ▪ Incentives to develop co-specialised resources ▪ Alliance capabilities of partners 	<ul style="list-style-type: none"> ▪ Loyalty programs ▪ Information flow security and control purposes ▪ Customers control use of personal information ▪ Importance of community concept 	<ul style="list-style-type: none"> ▪ New incentives (e.g., customers can create content)