

THE VALUE CHAIN ANALYSIS IN TELKOM KENYA

By

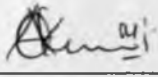
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**A Management Research Project Submitted In Partial Fulfillment
Of The Requirements For Award Of The Degree Of Master Of
Business Administration, School Of Business, University Of
Nairobi**

October 2010

DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university.

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This Management Research Project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

To my loving mother Mary, my father Jason, my brothers and sisters

ACKNOWLEDGEMENT

I would like to express my sincere thanks to my supervisor Dr. Ogutu whose guidance and encouragement through the various stages of this project was indeed invaluable. To all the lecturers who have taken me through the entire program.

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ABBREVIATIONS

- ADSL** -Asymmetric Digital Subscriber Line
- ARICEA**-Association of Regulators for Information and Communication in Eastern and Southern Africa
- ASP**-Applications Service Provider
- BSS**-Base Station Subsystem
- CBK**-Central Bank of Kenya
- CCK** -Communications Commission of Kenya
- CDMA**-Code Division Multiple Access
- COMESA**-Community of Eastern and Southern Africa
- CPE** - Customer Premises Equipment
- CSP**-Contents Service Provider
- CTRO**-Commercial Trunked Radio Operator
- DCNO**-Data Carrier Network Operator
- EAC**-East African Community
- EAPTC**- East African Posts and Telecommunication Corporation
- Essay** - Eastern Africa Submarine Cable System
- EDGE**-Enhanced Data rates for GSM Evolution
- EGPRS**-Enhanced General Packet Radio Service
- ETACS**-External Total Access Communications Systems
- ETOM** – Enhanced Telecom Operations Map
- FM** - Frequency Modulation
- FT Group** - France Telecom Group
- GATS**-General Agreement on Trade in Services
- GDP**-Gross Domestic Product
- GITS**-Government IT Services
- GNI**-Gross National Income
- GPRS**-General Packet Radio Service
- GSM**-Global Mobile Systems
- HSDPA**-High Speed Downlink Packet Access
- ICT**-Information and Communications Technology
- IP** – Internet Protocol

ISP-Internet Service Provider
IT-Information Technology
ITU-International Telecommunications Union
ISDN-Integrated Services Digital Network
IXP-Internet Exchange Point
KBC- Kenya Broadcasting Corporation
KCA 98 –Kenya Communications Act 1998
KDN- Kenya Data Network
KEBS- Kenya Bureau of Standards
KP&TC -Kenya Posts and Telecommunications Corporation
KES- Kenya Shilling
KICTANET –Kenya ICT Policy Action Network
KIF –Kenya ICT Federation
KIXP- Kenya Internet exchange Point
LAN-Local Area Network
LLO -Local Loop Operator
NFP-Network Facilities Provider
MISD-Micro-Information Systems Department
MOIC-Minister of Information and Communications
MPC -Monopolies and Prices Commission
MTC- Mobile Telecommunication Company
NCS-National Communication Secretariat
NEPAD-New Partnership for Africa’s Development
OBS - Orange Business Services
PCK-Postal Corporation of Kenya
PDNO-Public Data Network Operator
RIA! -Research ICT Africa!
RTO-Rural Telecommunications Operator
SNO -Second National Operator
TEAMS-The East African Marine System
TESPOK-Telecommunications Services Providers Organization of Kenya
TKL –Telkom Kenya Ltd

TV-Television

UA-Universal Access

VANS-Value Added Network Services

VAS -Value Added Services

VAT-Value Added Tax

VoIP -Voice over Internet Protocol

VSAT-Very Small Aperture Terminal

WTO-World Trade Organization

XDSL -Digital Subscriber Lines

ABSTRACT

The objectives of this study were to determine the value chain activities that constitute the value chain in Telkom Kenya and also to establish Key factors influencing the value chain activities in Telkom Kenya. Value chain analysis is undertaken in order to understand the behavior of costs & the sources of differentiation (Shank and Govindarajan, 1993). In the telecommunication industry differentiation is achieved by creating a perception amongst targeted customers that the services offered as a whole are unique in some important way, usually by being of higher quality. The appeal for differentiation is strong for telecommunication firms, for which image & perception of quality are important. This perception allows the firms to charge higher service fees, so as to outperform the competition in revenues without reducing costs significantly.

According to Porter (1980), the business of a firm can best be described as a value chain in which total revenues minus total costs of all activities undertaken to develop & market a product or service yields value. Firms in the Telco industry have a similar internal value chain, which includes activities such as marketing and contract management, service provisioning, network infrastructure operations, equipment procurement, service development, billing, developing co-operative agreements and providing customer service.

The research design used for this study is that of the value addition process in an dynamic telecommunications environment. The principal advantage of such a research method is that it can collect a great deal of data about strategic value proposition choices that Telco firms have made with reference to the external environment. The data analysis method is qualitative. Data presentation is in the content that was analyzed from in-depth interviews.

Firms that undertake value chain management practices seriously in their organization often aim to improve their performance in terms of, for example, higher profits, better responsiveness to the market, and long-term competitive advantage.

CHAPTER ONE: INTRODUCTION

1.1 Background of Study

The environment is constantly changing and so it makes it imperative for organizations to constantly adapt their activities in order to succeed (Ansoff, 1987). Technology has evolved significantly and it is increasingly being used by businesses and consumers alike. The fast changing telecommunication business environment has led to more competition, increased choice for consumer lower prices, lower margins, replacement of tangible assets with information, investments from analogue to digital and expansion market economies (Muchira 2005).

For businesses, the last two decades have been marked by the transition of large and cumbersome mainframe computing systems, to personal computers offering increased capabilities and occupying only a small area of personal and work space. The latest innovative services are found in mobile devices that introduce higher levels of flexibility and personalization. Technologies such as those supporting electronic business (e-Business) and mobile business (m-Business) are being used across organizations extensively in an attempt to improve operations and subsequently translate in either financial gains or strategic advantages. Opportunities for realizing either of the two types of benefits can be identified through an examination of a business' value chain.

Organizations therefore are aiming to realise more income than their expenses and cost. According to Porter (2001), a firm can achieve a sustainable competitive advantage by focusing on operational effectiveness and distinctive strategic positioning. Telecom services on the mobile platform are becoming more complex every day. These services are not only limited to voice services, but a set of other services such as data communication and multimedia services. The telecom industry has become much more intricate than it was before, several parties and industries are involved and this includes: network operators who provide the network infrastructure and put requirements on mobile phones, mobile manufactures, mobile platforms providers, CSP, ISP's, industry regulator like the CCK, CTRO, DCNO, KEBS, KIXP, LLO, PDNO, TESPOK and other players who provide more specific components such as memories and displays. With time the value chain for telecom services started to be fragmented to a more stratified approach (Anderson & Jönsson, 2006). Consequently, companies have appeared in the industry where they provide innovative

services in different parts of the value chain. Companies like Safaricom, Zain, and Telkom Kenya are examples of this change in the industry. They provide technology-based solutions for mobile users that allow them to communicate much more effectively and efficiently.

Global telecommunications businesses are changing from state owned to privately owned, market oriented companies. There is also a rapid shift towards convergence in which telecommunication is converging with broadcasting and computing in a seamless way. The global ICT sector is undergoing a radical transformation from the plain old telephone Service “POTS”, to one that includes voice, data, internet access- both broadband fixed and broadband wireless services, multimedia services, mobile TV services and other services that can be found on a converged platform.

The project begins by defining telecom services with respect to mobile technologies and presenting a business-centric interaction model that helps explain the interactions among all participants involved in an organization’s possible activities. Then, an overview of the value chain and the impact of telecommunication services on it are provided through the citation of potential mobile and wireless business applications currently available. Finally, a discussion on the factors influencing the value chain activities of Telkom Kenya as well as considerations for future research are provided.

1.1.1 The value chain

According to Porter (2001), the business of a firm can best be described as the value chain in which total revenues minus total cost of all activities undertaken to develop and market a service yields value. All organizations consist of activities that link together to develop the value of the business, and together these activities form the organization’s value chain. Such activities may include purchasing activities, manufacturing the products, distribution and marketing of the company’s products and services (Lynch, 2003)

A firm will be profitable as long as total revenues exceed total costs incurred in creating and delivering the product or service. Therefore firms should strive to understand not only their value chain operations, but also their competitors, suppliers and distributors value chains. The typical value chain of a company can take the shape designed below.

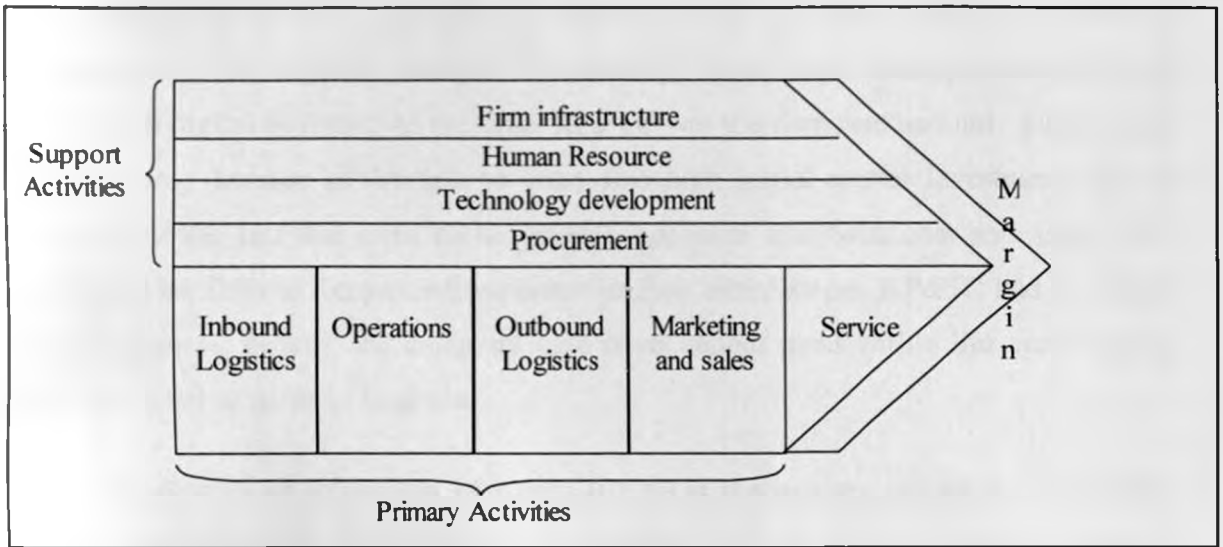


Figure 1: The value chain model

Source: M.E.Porter, Competitive Advantage, Free press, 1985

1.1.2 The Telecommunication Sector in Kenya

The growth in telecommunications industry in Kenya and Africa at large has been phenomenal at best of times and steady at worst. These industry leaders see the African continent as the next battleground in the quest for global expansion, market share and domination by these multinationals. This has come on the back drop of the mobile penetration progressively approaching saturation levels.

Kenya's mobile phone company, Safaricom has progressively grown to become the most profitable company in Eastern Africa as well as the largest corporate taxpayer in Kenya. It currently has over 14.1 million subscribers and it is still growing. Thus the contribution of the telecommunication sector to the economy cannot be overemphasized. Zain Kenya has continued to provide competition in the market and two new players entered the market in the last quarter of 2008. The 1st was Telkom Kenya, whose majority shareholding was in late 2007 acquired by a consortium led by France Telecom. France Telecom and Telkom Kenya rolled out a GSM network under its powerful Orange brand flagship. This was closely followed by a partnership between Econet Wireless and Essar of India, which launched under the brand name Yu.

Telecommunication services in Kenya were originally provided by East African Posts & Telecommunications Corporation. In 1977 after the collapse of EAC, the government of

Kenya established KP&TC as a national operator. Later in 1980s KP&TC upgraded its infrastructure in line with the changes in technology for example analogue switches were replaced with digital switches. At the time, KP&TC was the dominant and only player in the industry mainly because of barriers to entry like high initial capital investment. This is vindicated by the fact that even earlier mobile operators like Safaricom and some ISP's piggybacked on Telkom Kenya's infrastructure in their initial stages. KP&TC had no written mission statement. Instead, the company used development plans with a life cycle ranging from 3 to 5 years to guide its business.

The Communications Commission of Kenya (CCK) is the industry regulatory commission emerging from the split in KP&TC and was charged with the roles of issuing licenses to telecoms and postal operators, overseeing price regulation, establishment of interconnection principles, management of radio frequency spectrum and type-approval of telecommunications equipment. According to CCK the market structure is divided along fixed lines and mobile phone services; end user retail and interconnection wholesale service. The services provided are mainly basic voice and text messages-SMS,data which is growing rapidly increased bandwidth from the fibre optic connectivity provided by Seacom.Later this year we expect the TEAMS optic fibre cable to land as well as Eassy sometime next year.

Safaricom was established as a department within Telkom Kenya and later as a fully owned subsidiary of Telkom Kenya, which was providing mobile telephone services. This service was limited in coverage and was considered premium service thus expensive and unaffordable by most people. With time the company has grown to be the leading mobile service provider in Eastern African region. Services currently provided by Safaricom include voice mail, pre-paid and post-paid mobile phone services, 24-hour customer service, short messaging service, value-added services e.g. calling line identity, call waiting and call holding, roaming services, emergency numbers, automated scratch card vending machine, M-Pesa money transfer service, Internet services, Get it 411 and 191 direct.

In 2004, Celtel International invested US\$250 million in KenCell Communications Limited to acquire the majority stake in all financial assets and liabilities. The founding local partner, Sameer Group, continued to hold 40% of the equity in KenCell. This acquisition added a further 1.2 million subscribers to Celtel's pan African network bringing the number of users to four million in 13 African countries. KenCell was consequently re-branded to Celtel Kenya

following this acquisition. The Kenyan presence of Celtel International was through a local company, Celtel Kenya Limited. Celtel International held 60% stake in Celtel Kenya while Sameer Group owned the remaining 40%. At the time, Celtel International was wholly owned by Mobile Telecommunications Company K.S.C. (MTC) of Kuwait. In 2006, MTC was re-branded to Zain. This was followed by a worldwide re-branding of all its operations to 'Zain'. All operators in Africa formerly trading with the brand name Celtel were re-branded to 'Zain' complete with new corporate logo and colors. Zain launched "one network" regional roaming product in east Africa and later extended it to Gabon,, DRC and Congo Brazzaville, this compelled other competitors to enter into strategic alliances regionally. Safaricom is one such example when it entered alliances with Vodacom Tanzania, MTN Uganda, and Uganda Telecomm Ltd (UTL)

Econet is the latest entrant into the mobile telecommunications market. It is a joint venture between Essar of India and Econet Wireless. It is currently involved in a fierce price war with the early entrants Safaricom and Zain in the mobile phone market. Essar has invested its network infrastructure through network sharing with Safaricom through a term called co-location. Econet Kenya recently signed an infrastructure deal with Chinese telecommunications equipment manufacturer and vendor ZTE for the development of its infrastructure.

Other players in the telecommunications market include ISPs such as KDN, Access Kenya, Swiftglobal, Africa Online, Jamii Telecom and Wananchi Online amongst others. The preceding brief overview in the industry provides a picture of the level of competition currently in the market and the direction it is likely to take in the next few years. This is likely to continue putting pressure on the respective revenues and profitability in the telecommunications sector.

1.1.3 Telkom Kenya

Telkom Kenya is the largest public telecommunications operator in Kenya. The incumbent was previously part of KP&TC but was incorporated as an independent company in 1999 under the Companies Act. The operator offers data, voice and Internet services to home, enterprises and international organizations. Despite its strong foundation, the company had been making losses by virtue of operating in a market which is experiencing increasing competition. In December 2007 France Telecom acquired a 51 per cent stake in Telekom

Kenya. As of 17 September 2008, Telekom Kenya started providing its services under a new commercial brand - Orange.

The company has come up with network development initiatives to enhance growth in connectivity through supplier credit arrangements and wireless lines for the rural areas; migration to Internet Protocol (IP) based next generation networks to enhance provision of new services; deployment of broadband services countrywide and Broadband Wireless Services in Nairobi and Mombasa; Outsourcing of Access network and deployment of Long Distance Optic Fibre Infrastructure. To enable the company be privatized the sale of 26% of the company's shares to a strategic equity partner and offer 34% (subsequent to the entrance of the strategic partner) through an Initial Public Offering in the Nairobi Stock Exchange had to be planned within the 2007/2008 financial year. To ensure that there is proper co-ordination and implementation of the change programme, a number of new corporate structure has been adopted.

To understand the value proposition of Telkom Kenya as a business, three components are of interest: relevant actors, unique attributes of Telecommunication technology, and the types of activities supported. To comprehensively do a value chain analysis the following relevant actors need to be analysed: Employees, systems, consumers, connectivity, personalization and localization.

Employees are individuals that are part of an organization. Telkom Kenya employees may need or want to interact with other colleagues or employees of other businesses. In addition, these employees may be at the receiving end of an interaction initiated by both internal and external information systems. One example of a business application in this area is wireless notification by a system via SMS for a critical update. To this end, the possible wireless interactions are Employee-to-Employee (E2E), Employee-to-Consumer (E2C), and Employee-to-System (E2S). It is important to note that most such interactions could naturally involve activities in the reverse direction, e.g. a wireless System-to-Employee (S2E) interaction mode as well.

Systems are machines that are run by businesses and could either be front-end (e.g. web interface) or back-end systems (e.g. corporate database). An example of this type of interaction is an employee engaged in wireless (and possibly remote) access of the business'

enterprise Resource Planning (ERP) system. To this end, the potential wireless interactions are System-to-Consumer (S2C), System-to-Employee (S2E), and System-to-System (S2S). Again, the activity could occur in the reverse direction as well.

Consumers are individuals that a business may interact with wirelessly. One example is an interaction between an employee and the consumer by means of SMS or e-mail. To this end, the potential wireless interactions are Consumer-to-System (C2S), Consumer-to-Employee (C2E), and Consumer-to-Consumer (C2C) to the extent it relates to the business activities (e.g. community-based interactions).

Having identified the technological interactions, the next relevant component in formulating a value proposition for telecommunications technology to organizations is to understand its unique or enhanced attributes, which include connectivity, personalization, and localization (Turban, 2002). A wireless infrastructure enables mobile workers with 24/7 connectivity supporting anytime, anywhere communication and information exchange. Mobile devices are typically assigned to single users, who are then able to personalize interface and application settings that may not only increase their satisfaction with using the device but may also improve the efficiency and effectiveness of the system.

Localization is particularly important as it adds a new dimension to reachability extending from the Internet's ability to reach a location (i.e. IP address) to reaching a user (i.e. a mobile worker) or an item (e.g. tracking a shipment). The context of value creation for telecommunications technology becomes complete by the types of organizational activities supported. These activities can be explored within the framework of Porter's (1985) value chain.

1.2 Statement of the Research Problem

Porter (1985) coined the term —value chain as the set of linked activities performed by an organization that impact its competitiveness. The value chain consists of two major sets of activities, five primary and four support activities. Primary activities are directly concerned with the creation or delivery of a product or service while the support activities are facilitated by primary activities, which span the entire organization. In addition, service optimization

may be used in streamlining operations and freeing up resources —for the strategic initiatives that drive growth and competitive advantage, and accelerate time to business outcomes (HP, 2007). Margin refers to the potential profit margin that an organization could realize through the sale of its product or service, provided the customer is willing to pay more than the cost of the good sold (i.e. cost of all value chain activities involved, from start to finish, in selling a good).

The main challenges facing the telecom industry include; Market demand for mobile/wireless broadband, demand for mobile expansion in value chain, e.g., advertising, music, TV/Video, Reduce Risks, Fight Competition, Reduce Churn, Reduce costs/resources, Vendor independence, Handle service complexity. According to Abrahamsen and Williams (2005), customers choose on the basis of certain criteria that would enable them discriminate one firm from the other. A good understanding of value chain in the telecommunication industry will enable telco's roll out more innovative and cost effective services to the market.

Studies focusing on Value chain analysis have been documented (Odero, 2006; Musau, 2003; Kirui, 2001; Mulaki, 2000). However, the studies have been focused on different contexts. For instance Odero (2006), looked at the Value Chain and competitive advantage in the corporate banking industry in Kenya in which he explored the competitive factors in the banks value chain that brought out an advantage. Musau (2003) explores practices by large manufacturing firms in Kenya. The studies done so far have focused on different industries, which have different contexts that presented unique characteristics. There is no known study that focused on the telecommunication industry in Kenya that focuses on the value chain. It is for this purpose that Telkom Kenya becomes critical for study in order to bridge the inherent knowledge gap and understand its strategic direction with the advent of privatization. The study therefore seeks to address this knowledge gap by answering the following questions: what are the activities that constitute the value chain in Telkom Kenya and secondly what are the factors influencing the value chain activities in Telkom Kenya.

1.3 Research Objectives

The objectives of the study are to: -

- i. To determine the activities that constitutes the value chain in Telkom Kenya.
- ii. To determine the factors influencing the value chain activities in Telkom Kenya.

1.4 Importance of the Study

The study will aid the stakeholders and the consumers of different services to appreciate the challenges facing the industry and the efforts made by telecommunication operators to provide cutting edge services.

The policy makers will also obtain knowledge of the mobile industry dynamics and will therefore obtain guidance from this study in designing appropriate policies that will safeguard future innovations that can be patented to the company.

The management and interested investors in the telecommunication industry can use the findings in crafting viable value addition services with respect to the industry direction. And finally the study will be used by researchers in both academic and business, as a source of reference in forming their future research topics and studies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Concept of Value chain

Every company has specific routines/activities and processes that allow their business to produce products or provide services to customers. Each of these routines/activities can add different levels of value and costs. The collection of all these activities that create a final product is called value chain. The concept of value chain was developed by Porter (1985) where the main idea is to use it as an analysis tool for strategic planning. With use of the value chain, it is possible to assess the organization's ability to create customer value through work activities (Coulter 2005). The value chain analysis is a systematic way of classifying all of the organization's functional activities that produce value (and cost) in an organization. The concept of value chain can be extended beyond a company; this can be applied to the whole industry, that is, a set of interconnected value chains from the firm's suppliers and firm's buyers forming what Porter called Value System (Porter, 1985).

Porter (1990) also described the value chain framework "an interdependent system or network of activities, connected by linkages". When the system is managed carefully, the linkages can be a vital source of competitive advantage (Pathania-Jain, 2001). The industry wide synchronized interactions of those local value chains create an extended value chain sometimes global in extent. The value chain analysis essentially entails the linkage of two areas. Firstly, the value chain links the value of the organizations' activities with its main functional parts. Then the assessment of the contribution of each part in the overall added value of the business is made (Lynch, 2003).

According to Nelson (1991), understanding how firms differ is a central challenge for both the theory and practice of strategic management. In a dynamic, economic and institutional setting, changes in dominant competitive logic of firms is of particular interest (Prahalad and Hamel, 1994). Hence a complete but parsimonious typology of the alternative forms of creation is a pre-requisite for expressing and exploring how firms differ in a competitive sense.

Porter's value chain framework (1985) is presently the accepted language for both representing and analyzing the logic of firm-level value creation. Although Porter's industrial organization (Five - Forces) competitive analysis framework (Porter, 1980) is challenged in resources-based critiques (Barney, 1991); (Felt, 1984), the value chain maintains its central

role as framework for the analysis of firm level competitive strength and weaknesses. Value chain analysis is a method of decomposing the firm into strategically important activities and understanding their impact on cost and value. According to Porter (1985, 1990), the overall value – creating logic of the value chain with its generic categories of activities is valid in all industries. What activities are vital to a given firm’s competitive advantage however is seen as industry dependent.

According to Porter (1990) the value chain model allows firms competing in the same industry to be differentiated. Porter (1990), industry structure explains the sustainability of profit against bargaining and against direct and indirect competitors. Profit difference vis-à-vis direct rivals, however depends on competitive positioning. From this perspective a business is identified as a discrete but interrelated set of activities. Competitive advantage results from the firms’ ability to perform the required activities either at lower costs than their rivals or in differentiated ways that create buyer value and allow the firm to command a premium price.

The value chain framework quickly made its way as a powerful analysis tool for strategic planning. Its ultimate goal is to maximize the value creation while minimizing costs. According to Hax (1996) this element of strategic planning process is referred to as internal scrutiny at the business level, and deals with a set of actions that are essentially controllable by the firm. The application of the value chain framework can’t be used in all the industries the way it is. Therefore the value chain, is but one of three generic value configurations. Based on Thompson’s (1967) typology of long -linked, intensive and mediating technologies, we explore the idea that the value chain models the activities of a long–linked technology, while the value shop models firms where value is created by mobilizing resources and activities to resolve a particular customer problem and the value network models firms that create value by facilitating a network relationship between their customers using a mediating technology. Examples of companies that create value by facilitating exchange among their customers are telephone companies, transportation companies, insurance companies and banks.

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2.2 Value chain activities

Porter (2001) examines the impact of the Internet on the competitive positioning of a firm. In this work he argues that the basic tool for understanding the impact of information technologies, such as the Internet, on companies is the value chain. According to this approach, the impact of information technologies on a company can be assessed by examining the influence of such technologies on the primary and support activities in the value chain. Here, we employ this approach to gain an understanding into the impact of telecommunication technologies on companies.

The value chain analysis framework postulates that competitive advantage is understood by disaggregating the value creation process of the firm into discrete activities that contribute to the firm's relative cost position and create a basis for differentiation. The basic assumption underlying the disaggregation is that activities are the building blocks by which a firm creates a product that is valuable to its customers. Different activities have different economics and contribute differently to the valuable characteristics of the product. The activity of disaggregation must be complete in the sense that it captures *all* activities performed by the firm. To maintain a strategic and manageable perspective on value creation, it is important that the activity disaggregation not be too detailed, while still enabling one to identify those activities that are strategically important. The heuristic proposed by Porter for disaggregating activities is that the resulting activities (1) have different economics, (2) have a high potential impact on differentiation (value), or (3) represent a significant or growing proportion of cost.

2.2.1 Primary activities

In telecommunications, explicit activities decomposition models are well established both as the micro level of peer-to-peer communications on and at the industry level in delineating industry actors. The primary activities of the value network in a telecoms firm are discussed below

Inbound Logistics Activities associated with receiving, storing, and disseminating inputs to the product. Includes receiving, storing, inventory control, transportation scheduling.

Operations include machining, packaging, assembly, equipment maintenance, testing and all other value-creating activities that transform the inputs into the final product. Outbound Logistics activities required to get the finished product to the customers: warehousing, order fulfillment, transportation, and distribution management.

Marketing and Sales activities associated with getting buyers to purchase the product including channel selection, advertising, promotion, selling, pricing, retail management, etc. In Telkom Kenya we have CEC (Customer Experience Centres), online partner portals, among other avenues for managing contracts between the company and its customers. Greater commitments between mediator and customer leads to more extensive contract and contracting processes. This includes Advertising, Sale of terminal equipment

Service activities that maintain and enhance the product's value, including customer support, repair services, installation, training, spare parts management, upgrading, etc. In telecommunication service provisioning depends on the nature of the mediation. It also includes invoicing, Customer Service and manual services.

Network Infrastructure operations consists of activities associated with maintaining and running a physical and information infrastructure. The activities keep the network in an alert station ready to service customer requests. The specific network infrastructure operation activities depend on the nature of infrastructure used. In telephone and other public utility companies, the key infrastructure is switches or distributional centers. Includes operation and maintenance of switches, lines, terminals, and interconnection with other firms.

2.2.2 Support activities

Procurement of raw materials, servicing, spare parts, buildings, machines, etc. In telecommunications procurement is heavily linked to network infrastructure and service development and it's often specialized for these activities.

Another support activity is technology development which supports the value chain activities, such as Research and Development, Process automation, design, and redesign.. Network Infrastructure development and Service development. Network infrastructure development Includes activities associated with designs, development and implementation of network infrastructure. Service Development includes everything from the modification of a large set of possible customer contract terms e.g. development of brand new services e.g. voice mail services. It also includes modification to the company customer interface through modification of procedures, forms and self-service computer interfaces.

Human Resource Management is associated with recruiting, development (education), retention and compensation of employees and managers. Firm Infrastructure includes general management, planning management, legal, finance, accounting, public affairs, quality management, etc. Firm Infrastructure the general management financing and management information system would not be confused with the (core) value network.

2.3 Linkages

Although value activities are the building blocks of competitive advantage, the value chain is not only a collection of independent activities but also rather a collection of interdependent activities. Porter (1998) defines linkages as relationships between the ways one value activity is performed and the cost or performance of another. Another word, value activities are related by linkages within the value chain. Linkages can lead to competitive advantage in two ways: optimization and coordination. Linkages often reflect tradeoffs among the activities to achieve the same overall result, for example, a more costly product design may reduce service costs. A firm must optimize such linkages reflecting its strategy in order to achieve competitive advantage. Another way to competitive advantage in linkages is to coordinate the activities. The ability to coordinate linkages often reduces cost or enhances differentiation (Porter, 1998).

Linkages exist not only within a firm's value chain. There are also called vertical linkages between a firm's value chain and the value chains of suppliers and channels. These linkages are similar to linkages within the firm's value chain. The way supplier or channel activities are performed affects the cost or performance of a firm's activities (and vice versa). The linkages between supplier's and channels' value chains and a firm's value chain provide

opportunities for the firm to enhance its competitive advantage. It's often possible to benefit both the firm and suppliers or channels by influencing the configuration of suppliers' or channels' value chains to jointly optimize the performance of activities or by improving coordination between a firm's and suppliers' or channels' chains. As with linkages within a firm's value chain, exploiting vertical linkages requires information and modern information systems are creating many new opportunities. Recent developments in information systems technology are creating new linkages and increasing the ability to achieve old ones (Porter, 1998).

Though linkages within the value chain are crucial to competitive advantage, they are often subtle and unrecognized. Exploiting linkages usually requires information or information flows that allow optimization or coordination to take place. This, information systems are often vital to gaining competitive advantage from linkages. But given the difficulty of recognizing and managing linkages, the ability to do so often yields a sustainable source of competitive advantage (Porter, 1998).

The value chain can also be focused on the linkage between companies' value chains. Interrelationships between suppliers and buyers of the firm also play an important role in creating competitive advantages. By connecting various activities between the players in the value system, it is possible to optimize and coordinate in a more efficient manner. The channel linkage (between the firms and buyer) can performs activities such as sales and advertisement, where having a good coordination between the parties can reduce cost and increase competitive advantages, in this case, the company products become part of the buyer's value chain.

2.4 Competitive Scope in the Value chain

There are four dimensions of competitive scope that affect the value chain (Porter, 1985). They are segment scope, degree of integration, geographical scope and industry scope. A firm with a broad scope can benefit from performing more activities internally, while a firm with a narrow scope can adapt their value chains to a specific market segment.

In the segment scope, a firm can differentiate their products in order to serve different needs or market segments. Telkom Kenya has managed to segment its market into youth, residential

and SME markets that form the mass market, and the corporate market that caters for. If a firm provides a unique product that it is needed for a specific market segment then it can lead this market and reach a competitive advantage, in this case, differentiation favors narrow scope. A firm can also use the interrelationships between value chains that serve different segments to favor a broad scope (Porter, 1985), that is, a firm that uses different value chains that produce different products but it shares many value activities.

Degree of Integration is the second competitive scope where the division of activities between a firm and its suppliers, channels and buyers is defined by the degree of vertical integration in the value chain (Porter, 1985). A firm that can produce raw material rather than buying from external suppliers may have a better control of the cost in the activities in the value chain. Telkom Kenya in the past had a subsidiary company called GTI that was charged with the responsibility of supplying telephone poles to TKL.

Thirdly the geographic scope is where a firm can share or coordinate value activities in one place to produce a product, but it sells them in different geographical areas. The geographic scope application works well with the France Telkom Group which has a global presence in more than 50 countries in the world. Lastly the Industry scope is where a firm competes with a coordinated strategy in a range of related industries (Porter, 1985). The FT Group competes in offering ICT solutions through the Orange Business Services (OBS), which is an independent business unit within the FT Group.

2.5 The Value System and Value Network

Porter (1985) extends the concept of the value chain; a firm's value chain is part of an interconnected value chains between suppliers and buyers called Value System. The value system includes the value chain of the upstream suppliers and downstream channels and customers.

The total margin available is spread across suppliers, distributors and customers (Recklies, 2001) in the value system. The amount of how much part of this margin is received by each member depends on its market positions and negotiation power (Recklies, 2001). A firm who has higher degree of vertical integration has a better position in coordinate its upstream and downstream activities (therefore get a higher margin), however a company who has less

degree of vertical integration can also get high margins if it can succeed in having agreements between suppliers and partners to achieve better coordination (netMBA.com, 2002-2007)

Value chain and the Five Forces Model of Porter (1980, 1985) have been widely used for more than 30 years. These tools strongly focus on the tangible aspects of the organization and they tend to isolate the organization's activities from its environment (Middendorp, 2005). Moreover, the value that can be extracted from the organization activities is measured in terms of financial value (margin) but ignore the fact that intangible assets such as competencies, internal structures and relationship with the environment are the driving factors behind the financial results (Sveiby, 1997).

New methods have appeared to take into consideration the intangible assets. Value Network Analysis (Allee, 2003) is a "method that combines tools that analyze strategy with insight into complexity of interactions among people" (Middendorp, 2005). This analysis is based on the intangible assets should be considered as negotiable and exchangeable.

Peppar and Rylander (2006) introduced the Network Value Analysis (NVA) method as "a way to analyze competitive ecosystems". They argue that the traditional value chain analysis is inappropriate, since it focuses only in the end product and in the internal firm's activities that generate the product (which are suitable for physical products) and it does not consider the strong co-operative behavior and relationships between the different parties that show today's industries. In the value network concept, "value is co-created by a combination of player in the network". Peppar and Rylander (2006) argue that with this method companies "focus not the company or the industry, but the value creating system itself", that includes the different economic actors: suppliers, partners, allies and customers. Value networks are composed of a set of nodes and links; each node is an autonomous unit that can be managed independently, where services are delivered from one node to another through these links. The key of this model is that it tries to understand how value is created in relationships and then value networks tries to view the relationships as a network of interdependent relationships. Consequently, this method looks at how a firm can create value within the context of the network (Peppar and Rylander, 2006), in order to understand the competitive environment in the network economy. Therefore, firms must build relationships among the different players in the industry so they can cultivate an ecosystem, a set of firms that can co-create value.

According to Peppar and Rylander,(2006) firms that “understand the sources of value in the network and are able to exploit them will be the winners”.

2.6 The added-value chain

According to McPhee and Wheeler (2006), from a traditional value chain perspective, focusing on the internal core activities of a firm is not enough to derive value in today’s firms. Successful firms are now “replacing from an internally focused strategy-development models to alternatives that allow a broader view of the firm a part of the world around it” (McPhee and Wheeler, 2006). In this context, firms should include, as well, the activities that create value through external relationships (McPhee and Wheeler, 2006). McPhee and Wheeler (2006) proposed an added-value chain model where it includes a set of expanded business activities from different business models and a re-definition of value that incorporates brand, reputation, and relationship-based value drivers of the firm. Thus this model encompasses three new ideas: firstly, a new definition of value that includes intangible assets, secondly, it moves from a centric view to view the firms as part of a broader community, and finally, it adds activities that involves cross-functional teams of employees from across several areas. (McPhee and Wheeler, 2006).

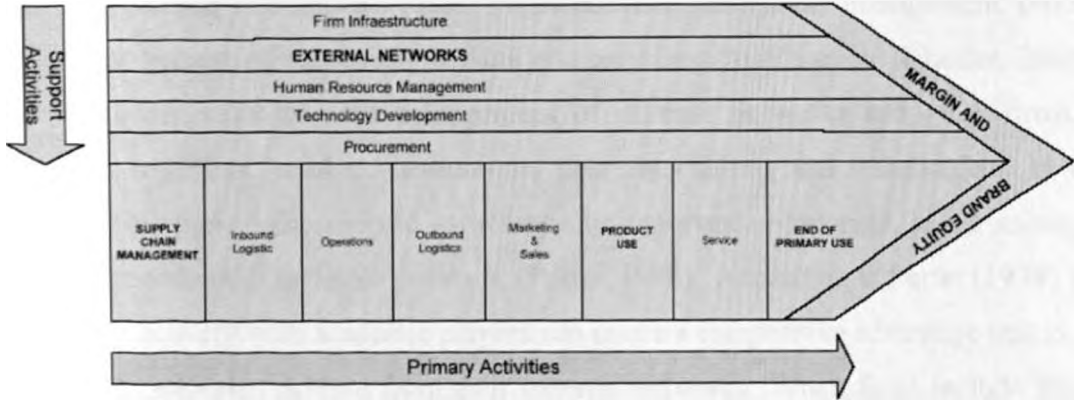


Figure 2: The extended value chain model

Source: McPhee W. and Wheeler, D. (2006), **Making the case for the added-value chain.** Strategy & Leadership. Vol. 34 No. 4, 2006

In the added-value chain model, the definition of value incorporates profit margin and intangible assets like leadership quality, innovate capability, brand equity and competences in strategic-alliance development. This new value definition gives to the firms the ability to

evaluate how their strategy affects both “hard” and “soft” assets of the firms (McPhee and Wheeler, 2006). The added-value chain includes three new primary activities and one new support activities from the original value chain from Porter (1985); they are: Supply Chain Management, Product use, End of Primary Use and External Networks.

As in the Porter’s value chain (1985), the supply chain remains outside the added-value chain. However, it includes the activities that involve the interaction of the firm with suppliers such as product quality, R&D, product development partnerships, and sharing of production knowledge (McPhee and Wheeler, 2006). The idea is to include the customer interaction into the firm’s value chain (not just the responsibility of the sales and service departments as in the traditional value chain). This involves activities related to how customers use the product: managing customer networks, product testing and development and outsourcing (McPhee and Wheeler, 2006). By including product usage intelligence in the value chain (as means of informing product development) (McPhee and Wheeler, 2006), firms can think from a value network perspective and can co-create value with customers (Prahalad and Ramaswamy, 2004).

The added-value chain incorporates the value of capturing some of product’s residual value after the customer is finished with it. These activities are leasing management, product take-back, management of secondary markets and recycling (McPhee and Wheeler, 2006). These sets of activities include the management of external networks and other firms, that is, customer, suppliers, vendors, institutions, peer associations and stakeholders. In corporate strategy, this topic is considered as potentially important component, as for example when firms are members of technology cluster (Porter, 1998). According to Porter (1998) firms that participate actively with academic players can create a competitive advantage that is, building value from activities derived from their external networks. When firms include the analysis into the added-value chain, they can decide how to determine their relationship with external networks that influence most to increase their value proposition; for instance, using the external networks to build value through innovation, knowledge capture, and reputation-building (McPhee and Wheeler, 2006).

2.7 Factors influencing the Value chain activities

Critical Success Factors are “the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual, department or organization. CSFs are the few key areas where “things must go right for the business to flourish and for the manager’s goals to be attained” (Bullen & Rockart, 1981). According to Grunert and Ellegaard (1992), CSFs can be used in 4 different ways: “as a necessary ingredient in a management information system, as a unique characteristic of a company, as a heuristic tool for managers to sharpen their thinking and finally, as a description of the major skills and resources required to be successful in a given market”. In this master thesis, the last view will be used. Thus, KSF in this study is defined the same as in Ghosh, et. al (1998), “as factors which are critical for excellent performance of the company, rather than just survival.

Grunert and Ellegaard (1992) defined Key Success Factors as the skills or resources of a company that provide competitive advantages in value and/or cost in any market. KSF can be distinguished in the degree of how easy competitors can emulate them, that is, in their level of changeability (Grunert and Ellegaard, 1992). Key Success Factors also differ if they are conjunctive or compensatory. The former, are the necessary factors conditions for superior performance and, the latter, are the factors that open up for choices of areas of excellence and hence formation of strategic groups (Grunert and Ellegaard, 1992).

There are several techniques for identifying Key Success Factors, Leidecker and Bruno (1984) proposed the following: environmental scanning, industry structure analysis, industrial expert’s opinions, competitor’s analysis, best practice analysis, assessment of the company’s internal feeling or judgment, intuitive factors and gathered data of profit impact and market strategy. In this master thesis, a mix between internal assessment of a firm and from industrial expert’s opinions will be used. This internal assessment technique focuses into explore what the firm does well and not so well while with the experts’ opinions technique, the KSF are extracted from people who have excellent knowledge and experience in the industry.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The research methodology covers the research design for the study, the data collection method and the data analysis method.

3.2 Research Design

A case study is a method, which entails the analysis of a single case (Bryman and Bell, 2003), or a single organization: Telkom Kenya Ltd. Yin (2003) suggests that a case study is “an empirical inquiry that investigates a phenomenon within its real-life context”. A qualitative research “emphasizes words rather than quantification in the collection and analysis of data” (Bryman and Bell, 2003). From a quality research it can be inducted the relationship between theory and research (Bryman and Bell, 2003). Qualitative methods lead to more in-depth analysis (Estherby-Smith. Et. Al. 2002) and it requires a small sample of data. Therefore personal interview with key persons at Telkom Kenya was considered to be the best alternative.

3.3 Data Collection

For this research, primary data was collected using an interview guide, where the interviewer had a specific list of topics that were covered (Bryman and Bell, 2003). The advantage of this method was that the interviewer had the flexibility to reformulating the questions as a result of the answer of the interviewee (Bryman and Bell, 2003). According to Grunert and Ellegaard (1992), perceived value chain activities can be measured by this type of interview with business decision makers.

The respondents were composed of strategic decision makers in the company, particularly the heads of departments. The target number of respondents to be interviewed was 10 heads of departments, whom comprehensively covered all areas of the business in the organization. The researcher primarily conducted direct, personally administered interview. In situations that the respondents were not available for a direct interview, electronic email response was used, followed by a telephone interview.

3.4. Data Analysis

The case study method is considered to have a broad appeal to management and policy analysts for planning and monitoring purposes. Therefore a content data analysis method was used in this case study. This analysis method assisted in understanding and interpreting the responses from the respondents. An in-depth understanding of the responses from the respondents was also used in the analysis.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter contains the data analysis and research findings. The primary data was collected from ten (10) respondents, comprising heads of departments, senior engineers and product managers. The data from seven (7) respondents was by direct personal interview and three (3) responded by electronic mail followed by telephone interview. The value chain activities identified by the respondents are qualitatively analyzed in-depth to establish which factors influence the value chain activities in the organization. The analysis of the value chain is divided into the primary activities, support activities and factors that influence the value chain activities.

4.2 Value chain Activities

The value chain activities identified by the respondents across the company included managerial infrastructure, finance, Human resources management, technology, procurement, sales and marketing. When these activities have strong linkages new product development and service rollout becomes much faster and efficient. Activities in a value chain are not a collection of autonomous activities, but a structure of interdependent activities connected by linkages within the value chain. Linkages are the relationships between activities. To reduce cost and improve performance Telkom Kenya focused on each value activity as part of activities that were interrelated; the analysis must include both related activities and linkages between activities. There are three types of linkages, internal linkages, vertical linkages, and customer value chain linkages. In our research project we have restricted ourselves to the internal linkages.

4.2.1 Sales and Marketing

The company shows a wide distribution network with a low level automation and point-of-sales intelligence. Through the IT department the company is building in-house tools to ensure customers are served in minimal time at the customer experience centers (CEC's). Currently the marketing capabilities are still low and the company has set out to hire experts from global markets in that field.

Some respondents identified new product development, product awareness campaigns and market research as the key activities in sales and marketing. These activities were aimed to capture the corporate market which currently stands at 70% and the mass market, which stands at 30%. The corporate clients subscribed to corporate reach, ISDN, IP-MPLS, high-speed Internet services, A.T.M links for banks and lately the blackberry bold 9000. The mass market hand voice, orange mobile, fixed plus and Internet everywhere, which was based on the 3G-platform technology.

Some respondents agreed that excellent customer relationship management went a long way into maintaining the existing customers both on the mobile and fixed platforms. This is achieved by having two state of the art call centers. One call center has been outsourced to Kencall, which take 100 calls for the mass market, while the other Call Center run by T.K.L handles landlines and other services. Both call centers handles all customer queries and a Q.O.S department monitors the calls to ensure that there is continuous improvement in service delivery.

Some respondents identified two activities that have customer involvement during product/service development. They included product conceptualization and extensive product testing. The two activities were mainly contracted to market research firms to be able to determine whether the market was ready for certain service. The major market research firms that do research for TKL include Research International, Millward Brown which is usually contracted by France Telkom from its headquarters in France and synovate-steadman group.

The respondents identified community service as another activity in the company. Corporate social responsibility as a major activity of the F.T Group Foundation.

Currently the main activity is to uplift the business image and it's doing so through projects that leverages on ICT. One upcoming project is the automation of antiretroviral logistics in health centers in Nairobi. The project alliance is supposed to demonstrate the value of QUALCOMM EV-DO Rev. A wireless broadband technology as provided through the Telkom Kenya Network to improve patient care by improving the efficiency of the reporting system between health facilities under the supervision of the Nairobi PMO and the LMU. Project assessments indicate that enabling facilities to report electronically according to existing Government of Kenya (GOK) requirements should improve the timeliness, completeness, and accuracy of reports to the LMU and reduce the reporting burden on

facilities. Improving the ability of health workers at ART sites, pharmacists in the district, and the provincial pharmacist to communicate regarding changing policies and trends in ART.

Other initiatives are in education of the girl child and adult literacy programmes. The Tecla Lorupe foundation has strongly come out and seeks to educate the girl child. Promotion of culture through local music started early this year. Emergency related issues through distribution of famine relief food worth 6 million shillings was also done earlier in the year.

On health matters Telkom Kenya announced a partnership with Bloodlink Foundation to support blood drive initiatives across the country with the aim of addressing the dire shortage in Kenya. As part of this partnership, Telkom Kenya will be funding a nation-wide blood donation campaign in universities, sponsorship of the World Blood Donor Day on 14th June, the Africa Society for Blood Transfusion international conference 24-27th June, as well as its own corporate blood drive which will see Telkom Kenya staff in key offices across the country donate their own blood.

The Autism Society of Kenya is another initiative, which the company is involved in by constructing units through which children can learn under good conditions. The is on the path to sponsor future initiative like grass root football and computer for schools project. Through these philanthropic activities, the customer interaction is enhanced and gives a good forum for customers to give feedback on the wide range of product/ service offering. Some respondents identified promotion advertising activities as important to the organization in the last one year the company has embarked on an aggressive advertising campaign through above the line advertising press, TV, Radio and below the line through road shows and a product demonstrations in supermarkets, trade fares and conference.

Majority of the respondents identified price competitiveness as an actively which is meant to counteract the ever increasing substitute products and services. Wireless LLO's are using CDMA technology to offer substitute products and services at lower prices and superior voice quality. With this threat the company has embarked on utilizing its converged platform through service differentiation.

Since the voice service segment is quit competitive companies are now diversifying and moving into data services. Safaricom currently is the market leader on the voice services

followed by Zain while TKL comes in a distant 3rd. TKL has been quite strong on internet service due to the fact that its head monopoly over the internet gateway through Jambonet for many years. The company is seeking to launch IPTV and fax-to –email services in the course of 2010.

4.2.2 Management Infrastructure

The FT group has a better planning and control system and a more appropriate global organizational structure the respondents identified that the overall management of TKL has been taken over by France Telkom. Management carried out the following activities planning systems, management control systems, communication and information systems, organizational structure, corporate culture, leadership capabilities and maintaining the overall corporate image.

The respondents identified certain non-core activities, which were outsourced or subcontracted to external service providers. These activities include civil works, cleaning, catering and security-through a couple of firms like BM, Lavingtone, cornerstone.

The respondents identified development of corporate culture that spans through out the FT Group worldwide. Before privatization TKL had a different culture and a different way of doing things. The FT group has come up with one motto “Together we can do more”.

The respondents identified different partnerships tat the company had entered into and continues to have in order to get closer to the customer and deliver quality services. TKL has made several MOU’s with different solution providers like SST, Copycat, Dimension data, Cisco, computech amongst other firms. Services like blackberry bold, iPhone, Orange mobile corporate, leased line, hosted Internet amongst others is delivered through this MOU’s.

Corporate image was another activity identified by the respondents. The company attaches significant importance to the distinctiveness of the company brand worldwide. The FT Group enhances its corporate image globally through the use of the Orange brand. Any new services rolled out anywhere in the world use the Orange as a brand name to drive the product.

4.2.3 Technology / product development

Respondents here agreed that the activities here included technology selection, timing of new technology introduction, and modes of technology acquisition, horizontal strategy of technology, project selection, evaluation, resource allocation and control, technology organization, human resources, development of new products/solutions.

The respondents agreed that the mode of technology acquisition was done mostly through outsourcing from suppliers. These acquired technologies help the company improve on its core network that consists of the mobile technology and fixed line network. The converged platform came at a time when the level of competition was too high and competing on the voice services was no longer highly profitable. TKL is the only company in the country that has a converged platform that consists of both the fixed network and the wireless network. Integration as an activity was necessary in order to merge the old “POTS” system with the new mobile platform system.

4.2.4 Procurement

The respondents identified the following activities carried out by the sourcing department. They included selection, evaluation and development of suppliers, Quality management of purchase equipment, materials management of purchased equipment, value analysis, price/cost analysis and standardization, procurement organization and managerial infrastructure.

Through the above activities the company has strategic relationships with its key vendors or suppliers. The suppliers facilitate the company with information regarding the latest trend in technology with the hope of doing business with TKL. The company through its SLA's allows suppliers to perform maintenance support and routine checks on equipment that they have supplied. When the company doesn't have the required skillset to maintain the supplied equipment the procurement function in conjunction with IT & N outsources this activity.

Value analysis, price/cost analysis and standardization area activities that procurement carry out before buying any new equipment. Example of equipment include power supply UPS, network equipment, servers, software purchases and training on new technologies by co-

coordinating with the HR department. The bought equipment is maintained at a certain level of standard through the use of Quality Management Practices.

4.2.5 Finance

The respondents here identified capital budgeting, mergers, acquisitions and divestures, Equity management and dividend policy, long-term debt financing, working capital management, pension fund management, Tax management, Risk management, Relationship with financial community, and the financial organization.

4.2.6 Human Resource Management

The respondents indicated that the organization endeavors to recruit the best skilled personnel from the industry. Previously TKL did not have an automated recruitment system. A few months ago the company re-launched its website that included an online recruitment system. The company is working on having a solid reward scheme that compensates the best employees who have excelled. To control the high staff turnover, which is currently at 20%, the company is matching salaries that are awarded by the competitors in the industry. The salaries, allowances and medical cover are benchmarked with offers provided by the leading and best paying organizations in the country and in other Orange locations globally.

The respondent identified performance review and appraisals are carried out annually. Training and development was another key activity in Human Resource Management with a view of succession at various management levels. The firm has adopted a wide span of control at the top, and limited matrix structure with reporting relationships to Orange France. The HRM also carries out activities in labor/employee relations and voice where they interface with the labor Union workers to facilitate dialogue during times of crisis.

4.3 Factors influencing the value chain activities

At the end of each interview, I asked the respondents to describe what are the factors that influence TKL's value chain. The responses are summarized in Table 1.

Table 1: Factors influencing value chain activities in Telkom Kenya extracted from the interviews

Interviewee	Factors that influence Value chain activities
1	Time To Market Cost-optimized platform with new technology through sales and marketing
2	Ability to get fair prices with suppliers by having more than one supplier Excellent coordination with R&D and sourcing department to understand what to buy or develop in-house. Excellent procurement processes
3	Deliver a cost-optimized platform solution through the converged network Stable and well tested product offering
4	Ability to develop, integrate and test complex technologies in short time with a "small" organization Successfully manage to define the boundaries in the value chain where it has its core competence
5	Ability to deliver TTM cost-optimized platforms with new technologies Competent Management Team and R&D people that understand the mobile industry Signed contracts with customers that generate high volumes To go hand-by-hand with standardization organizations.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This research study is to address two objectives:- To determine the activities that constitutes the value chain in Telkom Kenya and to determine the factors influencing the value chain activities in Telkom Kenya. This chapter therefore covers the summary and discussions of the value chain activities in relation to literature review and the conclusions drawn from the analysis. Also presented are limitations of the study, recommendations for further research

5.2 Summary, discussion and conclusion

In telecommunications, explicit activities decomposition models are well established both as the micro level of peer-to-peer communications on and at the industry level in delineating industry actors. In addressing the first objective the results show that the organization increasingly relies on the activities of different functional units in order to create sustainable competitive advantage. The key activities are marketing, sales and contract management, service provisioning, network infrastructure operations, Human resources management and technology.

The findings reveal that marketing responds to price wars and price regulations by launching new tariffs according to its market segments i.e. Youth, residential, SME and corporate markets. Marketing, sales and contract management has been taken seriously by recruiting expert marketers who have the ability of creating demand for the products and services, then inviting potential customers to join the network. Selection of customers through targeting the different market segments has been taken as an important step in marketing the orange brand. Customers who are targeted are then allowed to join the network and the processes for initialization, management and termination of contracts governing service provisioning and charging has been modeled around the FT Group best practices. In Telkom Kenya we have CEC (Customer Experience Centers), online partner portals, among other avenues for managing contracts between the company and its customers. Contracts and contracting activities vary across networks. Greater commitments between mediator and customer leads to more extensive contract and contracting processes. This includes Advertising, Sale of terminal equipment, Subscription (Initiation, monitoring, charge and termination). Qualification for a house loan is more extensive than for a telephone service. Network

promotion differs from sales and marketing in value chain in that selection of customers as important attractions.

Service Provisioning consists of activities associated with establishing, maintaining and terminating links between customers and billing for value received. The links can be synchronous as in telephone service or asynchronous as in email service. Service provisioning depends on the nature of the mediation. Establishing a network or a link, be it a bank transaction or a telephone call, requires some form of feasibility check, which includes classifying the nature of transaction, availability of linking possibility and the eligibility of the customer in making the link. Example Billing requires measuring of customer use of network capacity both in volume and time. Includes Invoicing, Customer Service and manual services.

Network Infrastructure operations Consists of activities associated with maintaining and running a physical and information infrastructure. The activities keep the network in an alert station ready to service customer requests. The specific network infrastructure operation activities depend on the nature of infrastructure used. In telephone and other public utility companies, the key infrastructure is switches or distributional centers. Includes operation and maintenance of switches, lines, terminals, and interconnection with other firms.

Among the support activities of the value network, two distinct but related technology development activities are of special interest; Network Infrastructure development and Service development. Network infrastructure development Includes activities associated with designs, development and implementation of network infrastructure. Service Development includes everything from the modification of a large set of possible customer contract terms e.g. development of brand new services e.g. voice mail services. It also includes modification to the company customer interface through modification of procedures, forms and self-service computer interfaces. Procurement is heavily linked to network infrastructure and service development and it's often specialized for these activities. HRM It's often quite different for infrastructure development and service development relative to primary activities. Firm Infrastructure the general management financing and management information system would not be confused with the (core) value network. The former facilitates operating the company, while the latter is at the heart of value creation for customers. Example IT systems

5.3 Limitations of study

The categories/activities were too broadly defined to incorporate enough detailed content to facilitate the selection of the critical success factors leading to the identification of key strengths and weaknesses of each SBU within Telkom Kenya. The logic of conducting value chain analysis at the organization level was to look at the business in its entirety from a broad perspective. As with the environmental scan the top business managers' care called upon to provide an initial overall assessment of the business position.

The information collected was based on the internal scrutiny of one company, while strategies of a company are mainly determined environment. Some respondents had discomfort with answering certain sensitive questions while in some other instances the respondents didn't understand the questions and the type of responses expected from them, therefore the value chain concept had to be introduced and explained. Time was a constraint to a large extent as some of the respondents were engaged in official duty out of the country, and it took long to respond to the interview guide.

The number of respondents in this research study was too small to be representative of the whole telecommunications industry. The telecom industry's value system is not limited to a simple linear view like the generic view has. A better way to understand the value chain of a telecommunication company is through the use of a value chain network model.

5.4 Recommendations for Further Research

This study was mainly focused from an inside-out approach, that is, the activities were extracted from an internal analysis of Telkom Kenya. It would have been interesting to analyze external factors such as industry analysis, competitor's analysis and benchmarking to get a better view of how competitive is Telkom Kenya's value chain in relation to its competitors. Furthermore, to study the competitors it would have been possible to test the Value chain with more cases from across the telecommunications industry and thus to verify the usefulness of this tool.

Building on Thompson's (1967) typology of long-linked, intensive, and mediating technologies, this paper explores the idea that the value chain, is a distinct generic value

configuration model required to understand and analyze firm-level value creation logic across a broad range of industries and firms. While the long-linked technology delivers value by transforming inputs into products, the intensive technology delivers value by resolving unique customer problems, and the mediating technology delivers value by enabling direct and indirect exchanges between customers. With the identification of alternative value creation technologies, value chain analysis is both sharpened and generalized into what we propose as a value configuration analysis approach to the diagnosis of competitive advantage. With the long-linked technology and the corresponding value chain configuration model as benchmark, the paper reviews the distinctive logic and develops models of the value shop and the value network in terms of primary activity categories, drivers of cost and value, and strategic positioning options

5.5 Recommendations for Policy and Practice

In addressing the objectives, the results show that the factors influencing the value chain include finance, technology, firm infrastructure, sales and marketing .The findings reveal that the media and communities around us are increasingly demanding to know from the organization an account of its social consequences of its activities.

Every organization is comprised of processes and activities that are performed to develop, produce, sell, and distribute its services and products. These activities can be depicted using a value chain. The value chain describes how an organization does what it does (i.e., how it implements its business strategy). Therefore managers need to ask themselves where they can reduce costs in the value chain while keeping service, revenue and credibility constant

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APPENDIX I: INTRODUCTORY LETTER

Otieno Antony Odhiambo,
Faculty of Commerce,
C/o MBA Office,
Department of Business Administration,
University of Nairobi,
P.O. Box 30197,
Nairobi, Kenya
August 29th, 2009

Dear Respondent,

RE: COLLECTION OF SURVEY DATA

I am a postgraduate student at the University of Nairobi, at the faculty of commerce. In order to fulfill the degree requirements, I am undertaking a management research project on the Value chain analysis in Telkom Kenya.

You have been selected to form part of this study. This is to kindly request you to assist me collect the data by filling out the accompanying interview guide, which I will collect from yourself.

The information you provide will be used exclusively for academic purposes. My supervisor and I assure you that the information you give will be treated with strict confidence. At no time will you or your organizations name appear in my report. A copy of the final paper will be availed to you upon request. Your corporation will be highly appreciated. Thank you in advance.

Yours Faithfully,

Otieno Antony Odhiambo

MBA Student

University of Nairobi.

APPENDIX II: INTERVIEW GUIDE

PART 1

GENERAL QUESTIONS

Kindly respond to the following questions in a summarized way

Value Chain

1. From your own perception what is your department's value chain? What activities do you perform?

Value

1. Where do you create more value in your value chain or what is your core value?
2. Are any activities threatened by outsourcing?
3. How do the actors in the industry develop/grow?
4. Value network: how advanced is the Telkom Kenya GSM network? What roles do employees play for TKL in building value?
5. Do you have any contact with actors not directly in front or behind you in the value system?
6. Do you integrate value from other value chains? (Horizontal integration)

Resource Aspect

1. Identify your most important strategic resources.
2. What are your strengths and weaknesses?

Industry aspects

1. What are the prerequisites for survival? (CSF)
2. What are the Key Success Factors for Telkom Kenya? (KSF)

PART II

Kindly respond to the questions based on your department or functional area.

SALES AND MARKETING

1. What do you see as your main needs/opportunities in the Kenyan market?
2. To whom do you target your product or service (large firms, small firms, wholesalers, exporters, retailers, direct to consumers, etc.)? What percentage goes to each?
3. Describe the relationship with your customers. How open are these relations?
4. Describe your offers (for example: total customer solution, deliveries, etc) customized/commodity products?
5. How active are your customers in the different stages of development of new products?
6. How integrated are you and your customers? Are they involved in the service design process?
7. Do you have any significant cooperation with any customers in any activities? If yes, how does this benefit you and the customer?
8. How do you promote and market your products/services?
9. How strong is the market for your products/services right now? Next year?
10. Are some markets (customer groups) better than others in terms of sales and revenue growth? Which ones?
11. Do you ever collaborate with other firms on promotion and/or marketing?
12. Do you have a brochure for customers that describes your firm's capabilities?
13. What methods of advertising are used by the company? Explain.

TECHNOLOGY / PRODUCT DEVELOPMENT

1. What are your major needs/ opportunities in product design or service delivery?
2. What are your products and/or services in order of contribution to gross revenue?
3. What have you done recently to improve your products or services?

4. Please describe your important pieces of services/products (type, age, make, features)
5. What kind of infrastructure could improve your business?
6. Do some of your employees need additional training for emerging technology? In what skills?

MANAGEMENT/ORGANIZATION

1. In the area of organization and management, what are your major needs/opportunities?
2. Who does most of the work in the areas of: general management/supervision, product design, purchasing, shipping of equipment, accounting, marketing, repairs, etc. (owner, employees, or external)?
3. What processes do you subcontract?
4. Do you sometimes collaborate with other firms to produce and deliver customer orders?
5. Which aspects of your business do you intend to change in the next 2 years (equipment, computers, new products, marketing strategy, quality control, management system, worker skills, etc.)?
6. What management skills would you like to strengthen in order to grow your business?

PROCUREMENT

1. What are your major needs/opportunities in the areas of input cost, quality, and availability?
2. Do you have any strategic relationship with suppliers? Explain
3. Who are your *most important suppliers* and what do you buy from each?
4. Describe the relationship with your suppliers. How open are these relations?
5. How active are your suppliers in the different stages of development of new products?

6. Do your suppliers/vendors have a thorough understanding of your business situation?
7. Are there problems in obtaining some important inputs? Explain.
8. Have you ever purchased inputs jointly with other business? Explain.

FINANCE

1. Where do you go when you need money for your business?
2. Where do you source for credit financing? What are the terms?
3. Do you have need for additional financing at the moment? If so, what would it be used for?
4. What sources (formal or informal) have you approached for loans, and what have been the key problems, if any?

POLICY/REGULATION

1. What government policies/regulations benefit your business?
2. What government policies/regulations are obstacles to growing your business?

INFRASTRUCTURE OPERATIONS

1. What are the most important infrastructure constraints affecting your business' growth and profitability (electric supply, crime/corruption, storage, etc.)?
2. What is your company doing about these problems?
3. How does the organization carry out maintenance of switches, lines and terminals?
4. How is interconnection with other operators done? How beneficial is it to the company?

SERVICE PROVISIONING

1. How is the invoicing process carried out?
2. Do you have any strategic relationship with your key customers? How does this impact on customer service?
3. Are there any manual services that the company undertakes?

HUMAN RESOURCE MANAGEMENT

1. How does the HR department carry out recruitment? Is the process been automated?
2. Do you reward innovation and good performance? If so what kind of reward scheme do you own internally for the employees?
3. Does your department ever outsource the recruitment for certain positions? If yes which positions are these and why?
4. What is your benchmark with regards to compensation? Do you compare yourself with other firms in the industry?

PART III

1. What do you think are the strengths of your company locally and/or internationally?
2. What are the main weaknesses of your company?
3. What do you think is the greatest challenge facing your company today?
4. Can you name some business owners in your industry who are leaders –for example, in terms of technology, product design, quality, or marketing?

Thank you.