CONVERGENCE BETWEEN MOBILE TELECOMMUNICATIONS AND FINANCIAL SERVICES
IMPLICATIONS FOR REGULATION OF MOBILE TELECOMMUNICATIONS IN KENYA

BY

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DECLARATION

This thesis is my original work and has not been presented for a degree award in any other university.

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Abbreviations and Acronyms

AFI	-	Alliance for Financial Inclusion
ATM	-	Automated Teller Machine
BPO	-	Business Process Outsourcing
CAT	-	Communications Appeals Tribunal
CBK	-	Central Bank of Kenya
CCK	-	Communications Commission of Kenya
CPC	-	Consumer Protection Council
DFID	-	Department for International Development
EASSY	-	East African Marine System
EU	-	European Union
FIEG	-	Financial Inclusion Experts Group
FISD	-	Financial Institutions Supervision Department
G2P	-	Government to Person
GDP	-	Gross Domestic Product
GSM	-	Global Systems for Mobile Communication
ICT	-	Information and Communication Technologies
IEA	-	Institute of Economic Affairs
ISP	-	Internet Service Provider
ITU	-	International Telecommunications Union
KICA	-	Kenya Information and Communication Act
KEPSA	-	Kenya Private Sector Alliance
KPTC	-	Kenya Posts and Telecommunications Corporation

KSMS	-	Kenya School of Monetary Studies
KTNO	-	Kenya Telecoms Network Owners
KYC	-	Know Your Customer
LION	-	Lower Indian Ocean Network
LSK	-	Law Society of Kenya
MCK	-	Media Council of Kenya
MFI	-	Micro-Finance Institution
MFS	-	Mobile Financial Services
MNO	-	Mobile Network Operator
MTR	-	Mobile Termination Rates
NCC	-	Nigerian Communications Commission
NCS	-	National Communications Secretariat
NGN	-	Next Generation Networks
NPS	-	National Payment System
OECD	-	Organization for Economic Cooperation and Development
OFCOM	-	Office of Communications
OPTA	-	Dutch Independent Telecommunications and Post Regulator
P2B	-	Person to Business
P2P	-	Person to Person
PCK	-	Postal Corporation of Kenya
QoS	-	Quality of Service
SIM	-	Subscriber Identification Module
SMP	-	Significant Market Player

SMS	-	Short Message Service
STK	-	SIM Tool Kit
TEAMS	-	The East African Marine System
TESPOK	-	Telecommunications Service Providers Association of Kenya
TNOF	-	Telecommunications Network Operators Forum
UA	-	Universal Access
UAS	-	Universal Access and Service
US	-	Universal Service
ULF	-	Universal Licensing Framework
USAID	-	United States Agency for International Development
VAS	-	Value Added Service
WTO	-	World Trade Organization

List of Constitutions and Constitutional Instruments

Constitution of Kenya, 2010

List of Kenyan Statutes

Banking Act, Cap. 488

Capital Markets Act, Cap. 485A

Central Bank of Kenya Act, Cap. 499

Competition Act, No. 12 of 2010, Laws of Kenya

Engineers Act, 2011.

Insurance Act, Cap. 487

Kenya Information and Communications Act, Cap. 411A

Law Reform Act, Cap. 26

Law Society of Kenya Act, Cap 17

Micro-Finance Act, Cap. 493D

National Payment Systems Act, No. 39 of 2011

Proceeds of Crime and Anti-Money Laundering Act, No. 9 of 2009

Retirements Benefits Act No. 3 of 1997

State Corporations Act, Cap. 466.

List of Kenyan Regulations and Administrative Procedures

Kenya Communications Regulations, 2001

List of Conventions and International Instruments

Agreement Establishing the World Trade Organization, 1994

Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), 1994

Agreement on Trade Related Investment Measures (TRIMS),

Constitution and Convention of the International Telecommunications Union, 1992

General Agreement on Tarrifs and Trade (GATT) 1994

List of Cases

Anne Kinyua v. *Nyayo Tea Zone Development Corporation & 3 Others* [2012] eKLR

Centre for Rights Education and Awaremess & 7 Others v. *the Attorney-General,* Petition 16 of 2011, in the Hight Court at Nairobi, [eKLR].

Community Advocacy and Awareness Trust and Others v. *Attorney-General* Nairobi Petition No. 243 of 2011 (Unreported)

Consumer Federation of Kenya (COFEK) v. *Attorney-General & 4 Others* [2012] eKLR

Consumer Federation of Kenya v. *the Ministry of Information and Communication and 2 Others* [2013] eKLR Petition No. 563 of 2012.

Dilip Madhukar Kambli v. *Nilesh Vasant Borkar and Ors* 1991(1) CPR 571

Federation of Women Lawyers Kenya (FIDA-K) & 5 others v. *Attorney General & another* [2011] eKLR

Hon. Lenny Kivuti v. *Independent Electoral and Boundaries Commission & the Attorney General,* High Court Nairobi JR Misc. App. No. 94 of 2012 [eKLR]

Kenya Toner and Supplies Limited v. *The Director of Weights and Measures & 2 Others* Petition No. 51 of 2012, High Court at Nairobi [eKLR].

Koinange Mbiu v. *R* (1951) KLR

Kwacha Group of Companies & another v. *Tom Mshindi & 2 others,* Civil Suit No. 319 of 2005, Nairobi, [2011] eKLR.

Media Owners Association v. *Attorney General, the Ministry of Information and Communication and the Communication Commission of Kenya,* Petition No. 244 of 2011.

Murang'a Bar Operators & Another v. *Minister for State for Provincial Administration and Internal Security & 2 Others* [2011] eKLR

Power Technics v. *the Attorney-General & 2 Others,* Petition 178 of 2011, High Court of Kenya at Nairobi

Re The Matter of the Interim Independent Electoral Commission Constitutional Application 2 of 2011, Supreme Court of Kenya [2011] eKLR

Re The Matter of the Interim Independent Electoral Commission Constitutional Application No. 2 of 2011, Supreme Court of Kenya [2011] eKLR

Republic versus Communications Appeals Tribunal & Another Ex Parte Safaricom Limited, Miscellaneous Civil Application 257 of 2010, High Court of Kenya at Nairobi [eKLR].

Rogers v. *United States* 185 U.S. 83 (1902)

Royal Media Services Ltd v. *Attorney General & 2 others* [2013] eKLR.

Trusted Society of Human Rights Alliance v. Attorney General and Other Nairobi Petition 229 of 2012 (Unreported)

United Dominion Trust v. *Kirkwood* [1966] ALL ER

Abstract

The convergence of mobile telecoms services and financial services has complicated the traditional nature of the telecoms business, and raised significant questions regarding new the role of telecoms regulators, policy makers and lawmakers in the business. This thesis explores three closely-related questions. First, what is the impact of the convergence of mobile and financial services on the Kenyan telecommunications sector? Second, do Kenya's telecom regulations recognize inter-sectoral converged services such as mobile financial services, as telecommunications services? Third, what regulatory approach, if any, should telecoms regulators and policy makers adapt, to effectively regulate converged services such as mobile financial services, to promote innovation?

The main aim of the research is to propose a telecoms regulatory framework that promotes innovation and development of mobile financial services, and other converged services, by mobile network operators. I argue that telecommunications regulations should be adapted to anticipate and promote the convergence of telecoms and non-telecoms services. In addition, telecom regulators should be given a broader mandate in regulating converged telecoms service such as mobile financial services.

PROJECT PROPOSAL

A. Background

The convergence of mobile and financial services in Kenya is probably the greatest innovation in the telecommunications sector over the last five years. It has resulted in the development and provision of "mobile financial services" by mobile network operators in Kenya. The term 'mobile financial services' refers to various financial services accessible through the mobile phone. This includes mobile banking and mobile money transfer.

Mobile banking refers to web-based banking services accessible through a cell phone, such as balance enquiries, transfers between bank accounts, and payments.[1] The web-based interface allows bank customers to transact their bank accounts remotely.[2] Mobile money transfer, on the other hand, refers to the transformation of a mobile network operator's wireless network messaging into a Subscriber Identification Module (SIM) based platform for transacting electronic units that are equivalent to money.[3] In contrast to mobile banking services, the payment transactions occur entirely within the Mobile Network Operator's network facility. In this study, I use the term mobile financial services to refer to SIM-based mobile money transfer.

While the development of mobile financial services in Kenya has indeed been celebrated locally and globally, the development of these converged services in Kenya have faced regulatory challenges due to a telecoms regulatory framework that is not sufficiently calibrated to promote the provision of converged mobile and financial services by mobile network operators.

This research examines the convergence of mobile and financial services in Kenya. It discusses the telecoms regulatory issues that have arisen as a result of convergence - the provision of mobile financial services by mobile network operators. The research then examines whether the mobile telecoms regulatory framework adequately regulates, and promotes innovation and further development of these converged services.

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[1] United States Agency for International Development (USAID) and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix," United States Agency for International Development, Washington DC.
[2] *Ibid.*
[3] *Ibid.*

Communications networks have become a key economic and social infrastructure for development in both developed and developing countries, including Kenya.[4] More specifically, the development and diffusion of mobile phone technology in Kenya has had cascading effects on the development of new technologies and availability of services that have traditionally been offered using other non-telecommunications infrastructure.[5]

One of the most prolific developments in ICTs generally, and in mobile telecoms, has been the process of ICTs convergence exhibited in at least four principal levels: network convergence, market convergence, service convergence, and regulatory convergence.[6] These are explained hereunder:

1. Network convergence

This refers to the convergence of network technologies, services and terminal equipment to a single network that is able to facilitate the provision of converged services such as data, television, internet, fixed and mobile voice services, among other services. This has been enabled by the digitization of content (through compression technologies), emergence of Internet Protocol and adoption of high speed broadband. These networks have been referred to as Next Generation Networks (NGN).[7]

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[4] Timothy Waema (2007) "2007 Kenya Telecommunications Sector performance Review: a supply side analysis of policy outcomes," Research ICT Africa, Cape Town.

[5] Wesley Shrum, *et al* (2011) "Mobile Phones and Core Network Growth in Kenya: strengthening the ties," *Social Science Research, Volume 40 Issue 2, March 2011*, pp. 614-625. The authors note that the increased technological access to existing networks, that is, network effect of mobile telephony, in a context of resource scarcity leads to a strengthening of weak ties and the enhancement of core networks among Kenyans.

[6] Timothy Waema, *et al* (2010) "Kenya ICT Sector Performance Review 2009/2010: Towards Evidence-based ICT Policy and Regulation," Volume Two, Policy Paper 10, Research ICT Africa, Cape Town.

[7] Jérôme Bezzina and Mostafa Terrab (2005) "Impacts of New Technologies in Regulatory Regimes: an introduction," in Jerome Bezzina and Bernard Sanchez (eds) *Technological Convergence and Regulation: challenges facing developing Countries*, Communications and Strategies, Special Issue, November 2005.

2. Service Convergence

This has stemmed from network convergence, and the creation of innovative handsets and technologies that allow access to various services such as web-based applications, and the provision of traditional and new value-added services from different devices.[8] For example, mobile telephony in Kenya allows access to various services such as voice services, internet access, various mobile financial services, and other data services through the mobile handset. This convergence, especially with reference to mobile financial services, has had tremendous impact on the socio-economic and political developments in Kenya.[9]

3. Industry or market convergence

Network and service convergence have in turn re-engineered the economic landscape by merging ICTs sectors such as telecoms, broadcasting, media and information technology, which were operating in separate markets.[10] For example, mobile network operators in Kenya are increasingly diversifying into non-voice telephony services such as data provision, as their major revenue streams.[11]

In addition, market convergence has also taken place at the industry level, where the ICTs industry has merged with other industries such as the financial services industry. The best illustration is the provision of mobile financial services such as mobile money transfer, mobile payments, and mobile banking, by way of Safaricom's M-PESA, Airtel's ZAP, Essar Telecom's Yu Cash, and Telcom Orange's Orange Money systems.[12]

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[8] Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience," Interdisciplinary Centre for Law & ICT Katholieke Universiteit Leuven, Belgium.

[9] *Ibid.*

[10] Organization for Economic Cooperation and Development (2008) *Convergence and Next Generation Networks*, Ministerial Background Report prepared for the OECD Ministerial Meeting on the Future of the Internet Economy, Seoul Korea, June 2008, Directorate for Science, Technology and Industry, OECD, available at http://www.oecd.org/internet/interneteconomy/40761101.pdf (last accessed on 2nd August 2012).

[11] Communications Commission of Kenya, 2012, Annual report financial year 2010/11. [online] Available at: http://www.cck.go.ke/resc/publications/annual_reports/CCK_Annual_Report_2011.pdf (last accessed on 8/8/12). See also, See also, Safaricom Limited (2011) *Annual Report and Group Accounts for the Year Ended March 2011*, Safaricom Limited, Nairobi.

[12] Nick Hughes and Suzie Lonie (2007) "M-PESA: Mobile Money for the "Unbanked": turning cellphones into 24-hour tellers in Kenya," *Innovations*, Winter/Spring 2007, Vol. 2, No. 1-2, Pages 63-81.

4. Legislative, institutional and regulatory convergence

The result of network, service and market convergence on the regulatory front has been regulatory overlap, regulatory inertia, arbitrage, and conflict.[13] This has necessitated regulatory convergence. For example, in Kenya, telecommunications, broadcasting, internet service provision, and postal services, which were previously regulated separately, have all been brought under the ambit of the CCK.[14]

Regulatory convergence has also occurred between sectoral regulators. For example, because some of the services offered by Mobile Network Operators such as mobile financial services fall under the financial services sector, telecommunications and financial services regulators and policymakers have had to consider a converged approach to regulating the MNOs in their provision of these cross-sectoral services.[15] The Communications Commission of Kenya (CCK) and the Central Bank of Kenya (CBK) have had to consider how to regulate MNOs in the converged environment.

The process of convergence of Information, Communication, Technologies and Services (ICTS), including media, telecommunications and other related services in Kenya and globally has resulted in the provision of new products such as mobile financial services across mobile telecommunications networks. Some of the mobile financial services provided by mobile network operators in Kenya include Safaricom's M-PESA, Airtel's ZAP, Orange Telkom's Orange Money and Essar Telecom's Yu Cash. These services have delivered basic financial services to the financially excluded urban and rural population, hence bringing unprecedented numbers of the Kenyan population into the formal economy.[16]

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[13] Erwin Alampay (2010) "Mobile banking, mobile money and telecommunication regulations," *eBusiness & eCommerce eJournal* 05/2010.

[14] Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience," *op. cit.*

[15] Rolf H. Weber (2010) "Regulatory framework for mobile financial services," in *Mobile applications of inclusive growth and sustainable development*, Telekom Regulatory Authority of India, New Delhi, India, pp. 87-93.

[16] Alliance for Financial Inclusion. (2010)"Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-Pesa." [online] Available at: http://www.afi-global.org/en/phoca-publications-case-studies (Last accessed on April 22, 2012).

However, on the regulatory front, the provision of mobile financial services primarily by Mobile Network Operators (MNOs) - or convergence of telecoms and financial services - has changed the dynamics and substance of telecoms regulation in Kenya. Consequently, as the converged landscape continues to unravel, legislators, policy makers and regulators have not gained sufficient consensus on the best way to address the traditional telecoms regulatory issues in the converged provision of mobile financial services.

B. Statement of the Problem and Issues Arising

Prior to the development of mobile financial services, convergence in the telecoms sector in Kenya over the last few years was largely intra-sectoral, that is, between various sub-sectors within the ICTS sector.[17] This included the integration of media, broadcasting, and other information technology services within telecommunications services provided by mobile network operators in Kenya.[18] For example, today, Mobile Network Operators compete with other mainstream Internet Service Providers (ISPs) for the internet market.[19] Recent reforms in the telecommunications regulatory framework, including amendments to the Kenya Information and Communications Act, 1998, have attempted to address intra-sectoral ICTS convergence.[20]

Convergence of mobile and financial services in Kenya integrates two separate and traditionally-distinct sectors – the mobile telecoms sector and the financial services sector. The inter-sectoral nature of mobile financial services has therefore upended the capacity of telecoms regulators to police the mobile financial services sub-sector. Financial services regulators, policy makers and researchers such as the Central Bank of Kenya (CBK) and the Ministry of Finance have given commendable attention to the financial services regulatory aspect of mobile financial services.[21] This has resulted in the reform of the financial regulatory framework to accommodate and

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[17] Ben Sihanya with James Otieno Odek (2006) "Regulating and mainstreaming ICT for Kenya's socio-economic development," *op. cit.*

[18] *Ibid.*

[19] Timothy Waema, *et al* (2010) "Kenya ICT Sector Performance Review 2009/2010: Towards Evidence-based ICT Policy and Regulation, " *op. cit.*

[20] Kenya Communications (Amendment) Act, No. 1 of 2009, Laws of Kenya.

[21] Various local and international stakeholders, including the Kenya School for Monetary Studies (KSMS) Alliance for Financial Inclusion (AFI) United States Agency for International Development (USAID) the Brookings Institution, and other institutions have worked closely with the CBK to draft policies, laws, regulations and guidelines for mobile financial services in Kenya. See USAID and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix,"*op. cit.*

regulate mobile financial services, through the enactment of various legislation, including the National Payments Systems Act[22] and the Proceeds of Crime and Anti-Money Laundering Act.[23]

The mobile telecoms regulations, on the other hand, have not been revised to factor in convergence with other non-ICTS sectors. The present regulations do not sufficiently address the provision of mobile financial services by mobile network operators.

It is in this context that the following issues arise, with regard to telecoms regulation of mobile financial services:

(a) The Kenya Information and Communications Act, and its regulations, make reference to "communications services" as the primary subject of regulation. Considering that mobile financial services are not traditional 'communications services', it is not clear how telecoms regulators and policy makers can effectively police converged services such as mobile financial services.[24]

(b) Telecoms regulators and financial services regulators have each, over the years, evolved separate and distinct regulatory rationales and approaches for the respective sectors. Since converged multi-sectoral services such as mobile financial services cut across both telecoms and financial services sectors, it is not clear how telecoms regulators and policy makers can exercise effective and coherent regulation alongside other sectoral regulators such as the Central Bank of Kenya.[25]

(c) Mobile financial services such as MPESA are relatively new and emerging convergence innovations that have surprisingly revolutionized social and economic relations in Kenya.[26] Therefore, telecoms regulators and policy makers are unsure of which regulatory approach to

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[22] Act No. 39 of 2011, Laws of Kenya.

[23] Act No. 9 of 2009.

[24] Section 2 of the Kenya Information and Communications Regulations defines communications as "telecommunications, postal and radio services".

[25] Rolf H. Weber (2010) "Regulatory framework for mobile financial services," *op. cit.* Weber recognizes the distinctiveness of telecom services on one hand, and financial services, on the other. He argues for regulatory cooperation between telecoms and financial regulators, rather than centralized regulation of mobile financial services.

[26] Ndunge Kiiti and Jane Mutinda (2011) "Mobile Money Services and Poverty Reduction: a study of women's groups in rural eastern Kenya," *op. cit.*

adopt in regulating the emergence and development of mobile financial services without stifling innovation and development of these and other converged services.[27]

C. Research Questions

In this research, I propose to address three closely-related research questions:

1. Has the convergence of mobile and financial services changed the traditional nature of communications services offered by mobile network operators?

2. Do Kenya's telecom regulations recognize inter-sectoral converged services such as mobile financial services, as telecommunications services?

3. Which regulatory approach, if any, should telecoms regulators and policy makers adapt, to effectively regulate converged services such as mobile financial services, to promote innovation?

D. Research Objectives

i. Specific Objectives

The objectives of this research are to:

(a) Examine the extent to which Kenya's telecommunications regulations anticipate and regulate the provision of inter-sectoral converged services such as mobile financial services by Mobile Network Operators;

(b) Explore various regulatory frameworks within which Kenya's telecoms regulators and policy makers can regulate mobile financial services, alongside other sectoral regulators such as the Central Bank of Kenya;

(c) Propose a telecoms regulatory framework that promotes innovation and development of mobile financial services, and other converged services, by mobile network operators.

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[27] International Telecommunications Union (2011) "Chairman's Report: 11th Global Symposium for Regulators," Armenia City, Colombia, 21st-23rd September 2011.

ii. General Objectives

While SIM-based mobile financial services provided by mobile network operators are used as a case study for inter-sectoral convergence, the findings of the research should give a pointer to common convergence problems in mobile telecommunications. In addition, the research should propose possible regulatory approaches that promote innovation and development of converged services between the telecoms sector and other sectors.

E. Hypotheses, Assumptions and Arguments

i. Hypotheses

I advance three hypotheses that I intend to explore in my study:

(a) The convergence of mobile and financial services has blurred the distinction between telecommunications and Value Added Network Services (VANS), and changed the definition of telecommunications;

(b) Kenya's telecommunications laws and regulations are ambivalent as to the status of converged services such as mobile financial services, within the definition of "telecommunications services";

(c) Regulation of inter-sectoral converged services such as mobile financial services by telecoms regulators can be achieved by the adoption of principle-based regulation over rule-based regulation.

ii. Assumptions

The assumptions that underlie my research questions and hypothesis are three-fold:

(a) Mobile financial services are Value Added Services under the Kenya Information and Communications Act, hence, under telecom regulators' jurisdiction;

(b) Regulation of converged inter-sectoral services such as mobile and financial services requires a clear regulatory framework;

(c) Mere regulation of telecoms does not guarantee the promotion of innovation in converged telecoms services.

I have arrived at these assumptions from my desk research and documented analysis, detailed later in this proposal.

iii. Arguments

I argue that, in the age of increasing convergence within the ICTS sector, and between the ICTS and other sectors, telecommunications regulations should be configured to anticipate and promote the provision of services other than communications services by mobile network operators, and other ICTS providers, generally. In addition, telecom regulators should be given a broader mandate in regulating converged telecoms service that cross into other sectors such as financial service sectors.

F. Literature review and document analysis

i. Defining the task of regulation

The last 20 years has witnessed a pattern of market liberalization, privatization and regulatory reform in public utilities industry in Kenya and other countries.[28] This has catalyzed an important debate over the nature and role of utilities regulators, especially in the telecommunications sector. This debate continues to gain new and interesting dimensions as the markets unravel new dimensions such as convergence in networks, markets, services and regulators. The emergence of cross-sectoral services such as mobile financial services in Kenya provides a new platform for examining the parameters of telecommunications regulation. It is relevant to the first research question in this research, to the following extent: do regulators such as the CCK have sufficient mandate to regulate emerging hybrid services such as mobile financial services?

[28] Institute of Economic Affairs (2002), "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy", *IEA Research Paper Series No. 2*, Institute of Economic Affairs (IEA), Nairobi.

In 1983, Christopher Hood, in his seminal book entitled *The tools of Government*, suggested that the regulatory activities of government involve far more than legislating or rule-making.[29] Since then, this view has been mainstreamed in recent discourse on the regulation of telecoms in Kenya and globally. For example, the Institute of Economic Affairs (IEA), Kenya, in *The Quest for an Information Society: benchmarking the regulatory framework to usher Kenya into an information era*", have argued that, if Kenya is to develop into an information economy, then the CCK must transcend mere exercise of regulatory authority and show sector leadership. This, according to IEA, entails proactively identifying market challenges, threats, exposing conflicts and challenging norms.

On the other hand, John Buckley in *Telecommunications Regulation* [30], sees regulation as a process of developing, agreeing, setting, evolving and enforcing rules of conduct and engagement, with the aim of encouraging desirable outcomes, or to remedy proven problems. These elements of regulation go above and beyond the prescriptive and sanction-oriented regulation that has characterized the telecommunications and other utilities regulation in Kenya.

However, this proposed approach does not address two key issues. First, how does the state regulator exhibit sector leadership in a liberalized market? Second, does the regulator have requisite tools and resources, in comparison to the market players, to exercise sector leadership? In 1988, a decade into Kenya's experimentation with market liberalization, Absalom Mutere, in *An Analysis of Communication Policies in Kenya*[31], decried the ability of the government to make and implement a strong communications policy, in the face of privatization and liberalization.

Julia Black, in her treatise, *Constructing and Contesting Legitimacy and Accountability in Polycentric Regulatory Regimes*, suggests that regulation is a combination of rules and norms

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[29] Christopher Hood (1983), *The Tools of Government*, Macmillan, London.
[30] John Buckley (2003), *Telecommunications Regulation*, the Institution of Electrical Engineers, London, United Kingdom.
[31] Absalom Mutere (1988), "An Analysis of Communication Policies in Kenya", *Africa Media Review*, Vol. 3 No. 1. 1988.

and some means for their implementation and enforcement, which can be legal or non-legal.[32] This argument has recently been emphasized by Morgan Bronwen & Yeung Karen, in *An Introduction to Law and Regulation, Text and Materials*,[33] where they adopt Hood's, conception of regulation, generally, as encompassing a minimum of three essential elements: standard-setting, information-gathering and behavior-modification.

These arguments essentially cancel out the state-centric nature of regulation that has long dominated regulatory discourse in Kenya and other countries, but which has, over the last 15 years, co-opted non-state actors. Mike Nxele and Thankom Arun (2005), in *Regulatory Impact on the Development of the Telecommunications Sector in East Africa: a case study of Kenya*,[34] also consider the role of the telecommunications regulator in Kenya. They note that the roles defined for regulatory agencies in Kenya have differed depending on the political decision-making process, the political ideological orientations towards reform in general, private sector participation in the economy, and the perceptions of the role of the state in economic affairs. They conclude that telecommunications regulators in Kenya need to become advocates of development, and balance effectively, the private sector driven growth agenda with the national socio-economic agenda.

While changes in the telecommunications sector have indeed required a change in the role of the telecoms regulator, this change ultimately lies with amendment of statutory powers of the regulator. The CCK, for example, derives its powers from section 5(1) of the Kenya Information and Communications Act[35], which spells out its mandate as the licensing and regulation of postal, information and communication services. Section 5(2) further provides that the Commission shall have all the powers necessary for the performance of its licensing and regulatory functions under the Act. In addition, section 5 of the State Corporations Act[36] also

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[32] Julia Black (2008), "Constructing and Contesting Legitimacy and Accountability in Polycentric Regulatory Regimes" 2 *Regulation and Governance* 137.
[33] Morgan Bronwen & Yeung Karen (2007) *Introduction to Law and Regulation*, Cambridge University Press, Cambridge, New York.
[34] Mike Nxele and Thankom Arun (2005), in *Regulatory Impact on the Development of the Telecommunications Sector in East Africa: a case study of Kenya*, Working Paper Series, paper No. 99, Centre on Regulation and Competition, Institute for Development Policy and Management, University of Manchester, Manchester.
[35] Cap. 411A, Laws of Kenya.
[36] Cap. 446, Laws of Kenya.

provides that a State Corporation shall have all the powers necessary or expedient for the performance of its functions.

Hence calls for a more pro-active telecoms regulator should be accompanied by statutory reform, to ensure that the new roles of the regulators are not deemed ultra-vires by the courts.[37]

ii. Modalities of regulation

The second research question in this proposal relates to the best way of adapting telecoms regulations to effectively regulate emerging converged telecoms services. However, before discussing the various regulations, it is important to appreciate the "sphere of regulation" especially in the telecoms sector. Which are the various regulatory actors and tools to be adapted?

The literature discussed above have de-emphasized the role of the state in regulation, and mentioned the role of non-state actors. Several authors have contended that regulation is not merely the action of the State to set prescriptive rules backed by sanctions, and attempted a conceptual understanding of the spheres of regulatory influence. For example, Lessig and others, writing on privacy issues within the information industry, have contributed to this discourse by suggesting frameworks for classifying various sources of regulatory power.

In his ground-breaking book, *Code and Other Laws of Cyberspace*,[38] Lessig captures this composite view of regulation by suggesting the four main regulatory tools or 'modalities', in general terms, as law, social norms, markets and architecture. Sihanya, in his article *Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium*, adopts this methodology. He argues that whether Africa claims the 21st century would largely depend on whether it develops and harnesses the promise and opportunities presented by cyberspace,

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[37] *Ultra vires* literally means ' beyond powers. In the administrative law context, the doctrine connotes two things. First, that a public office has dealt with a matter which lies outside the array of powers conferred on it. Second, that a public office, though acting within the confines of its lawful authority, has failed to adhere to some expressed or implied mandatory procedural requirements. See *Koinange Mbiu vs. R* (1951) KLR.

[38] Lawrence Lessig (1999), *Code and Other Laws of Cyberspace*, Basic Books, New York. See also Lawrence Lessig, (1998), "The New Chicago School", *Journal of Legal Studies*, vol. XXVII (June 1998).

telecommunications, and information technology.[39] Reidenberg, on the other hand, in his article, *Governing Networks and Rule-Making in Cyberspace*,[40] proposes a 'complex mix' of state, business, technical and citizen mechanisms for privacy regulation.

Despite the role of other non-state institutions underscored above in regulation, these writers seem to underscore the role of law (the state) in enabling the proper functioning of the non-state regulators. For example, a State regulator such as the CCK can facilitate participation by other regulatory players by way of co-option. Ben Sihanya, in *Regulating Internet Business in Kenya*[41] has suggested, for example, that the regulator should consist of representatives drawn from a cross-section of society.

While their frameworks slightly, differ, these authors make an important contribution to the understanding of the sphere of influence in regulation. This is particularly critical when examining how the process of mobile and financial service convergence in the telecoms sector has been regulated. The market players, especially Safaricom, have been critical trend-setters in advising and influencing the Communications Commission of Kenya and the Central Bank on how best to police and regulate mobile financial services.

However, an important question in Kenya's context requires to be explored: how can the CCK, in regulating telecoms convergence, harness the benefits of other non-state regulatory frameworks, while maintaining its role as the primary regulator?

iii. Legal Framework for Regulation of Converged Telecoms

The main research question in this proposal relates to the types of regulatory approaches and frameworks required to effectively regulate converged inter-sectoral services, and to promote increased innovation and investments in these services. Therefore, the legal framework within

[39] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," in *Transnational Law & Contemporary Problems*, Vol. 10, No. 2, pp. 583-640.
[40] Joel Reidenberg (1997), 'Governing networks and rule-making in cyberspace', in B. Kahin and C. Nesson (eds.) *Borders in Cyberspace: Information Policy and the Global Information Infrastructure*, The MIT Press, Cambridge, MA.
[41] Ben Sihanya (1997) "Regulating Internet Business in Kenya," in H.R. Mgombelo and M.C.M. Werner (eds) *Telecommunication for Business in Africa*, IOS Press, Amsterdam.

which the state and other non-state regulatory bodies operate is critical to how well regulation responds to, and promotes convergence of mobile and financial services in Kenya.

There are competing frameworks for regulation, and divergent views on how these frameworks can be harnessed to promote innovation and development of convergence in mobile and financial services. Some of these frameworks include: principle-based versus rule-based regulation; ex post and ex ante regulation; state regulation against self-regulation and co-regulation; and fragmented versus converged regulation.

(a) Ex post regulation versus ex ante regulation

Roy Kelly and Nick Devas in *Regulation or Revenue? Implementing Local Government Business License Reform in Kenya*[42] describe ex ante regulation as that requiring prior approval and compliance with minimum standards as a condition for conducting a business. Buckley[43] on the other hand, describes ex ante regulation as one that states, in advance, a detailed and particular rule that a company must obey. Ex post rules contain general principles, and leaves to the regulators and the courts to determine, after the event, whether a breach of the rule has occurred.

Buckley argues that the certainty of ex ante regulation is necessary for building competitive markets, but criticizes it for being vulnerable to being rendered nugatory in a fast-moving high technology industry. On the other hand, he notes that ex-post regulation, typified by various types of fair trading clause, gives regulation its power to react reasonably in unforeseen circumstances.

In a rapidly-changing converged sector such as the telecommunications sector, one of the most significant questions faced by regulators is when to regulate. Indeed, the evolution of mobile financial services in Kenya, which evolution was not anticipated by the Communications Commission of Kenya or the Central Bank, left the two regulators grappling with how best to regulate a new converged service without interfering with its growth. This is the classical

[42] Roy Kelly and Nick Devas (1999) "Regulation or Revenue? Implementing Local Government Business License Reform in Kenya," *Development Discussion Paper No. 723*, Harvard Institute for International Development, Boston, Massachusetts.
[43] John Buckley (2003) *Telecommunications Regulation*, the Institution of Electrical Engineers, London, United Kingdom.

dilemma between ex post and ex ante regulation. This debate is yet to be answered by scholars and practitioners in telecoms regulation in Kenya.

In addition. Kelly and Devas, and also Buckley, do not address how best to enact ex post legislation that meet an important principle in legislative drafting: certainty.

(b) Principle-based versus rule-based telecommunications regulation

A related regulatory framework to the ex-ante and ex-post models is the principle-based versus rule-based regulatory frameworks. Julia Black, in "*Making a Success of Principle-Based Regulation*" describes principles-based regulations as high-level, broadly stated rules or principles to set the standards by which regulated firms must conduct business, in contrast to rule-based regulations characterized by on detailed, prescriptive rules.[44]

However, both rule-based and principle-based regulations serve strategic interests of Government and other telecoms stakeholders, and therefore can be used simultaneously. Therefore, how can the Kenya Government safeguard its ICT development programmes under the Kenya Vision 2030 by rule-based regulation, while promoting telecoms investment by principle-based regulation?[45]

Kenneth Jull and Stephen Schmidt in "Preventing Harm in Telecommunications Regulation"[46] attempts to answer the above question and reconcile the use of ex ante/ex post frameworks alongside principle-based/rule-based frameworks. They make a number of suggestions. First, the most intrusive (ex ante, rule-based) approaches should be reserved for situations where serious harms-whether health, safety or economic - are at issue. Second, principles-based regulation is

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[44] Julia Black (2007) "Making a Success of Principles-based Regulation," *Law & Financial Markets* Rev. 191 at 197.

[45] See Republic of Kenya (2007) "*Kenya Vision 2030: a globally competitive and prosperous Kenya,*" Government Printer, Nairobi. The Vision is to be implemented in five successive Medium-Term Plans (MTPs) under the Ministry of Information and Communications, the first of which runs from 2008 to 2012. The vision of the ICT sector MTP is that "Kenya becomes an information and knowledge based society". Its mission "is to provide information and communication based solutions and ensure the availability of efficient, reliable and affordable information communication services countrywide". The overall sectoral goal of the ICT sector MTP is "to facilitate provision of equitable and affordable quality information and communication services countrywide".

[46] Kenneth Jull and Stephen Schmidt (2009) "Preventing Harm in Telecommunications Regulation: a new matrix of principles and rules within the ex ante vs. ex post debate," *Canadian Business Law Journal*, Vol. 47, pp. 329-362.

advocated in situations where technological and market change can quickly overtake any short-term prescriptive rules.

More significantly, they recommend that the regulatory state should offer multiple models that reflect the different needs and interests at stake within both the ex ante and the ex post paradigms. This is indeed a proper regulatory approach for the liberalized telecoms sector in Kenya, in the context of the Government's Vision 2030. As legislators, policy makers and regulators in Kenya observe how the mobile financial services are deployed and adopted in the market, they should be able to identify regulatory gaps requiring legislation. This is necessary for inspiring confidence in the entire service infrastructure, and promoting new innovation and investment.

This is especially with regard to the definition and classification by telecoms regulations, of converged services offered by mobile network operators as value-added services.

For example, Bangens and Soderberg, in *Mobile Banking – Financial Services for the Unbanked*,[47] have weighed in on the classification debate by warning that rigid classifications of value-added services (which has informed CCK's hand-off approach to mobile financial services), is inadequate to properly police even the traditional operational aspects of telecommunications providers.

They suggest for example, that one future concern for telecom regulator could be where a telecom operator engages in an M-banking venture, and as a result its liquidity situation get strained. The mobile network operator may fail its licensing obligations on the need to maintain financial stability. Njaramba Gichuki (2013) however, argues that the maintenance of financial stability by a provider of mobile financial services is essentially the role of the Central Bank of Kenya under section 7 of the Central Bank of Kenya Act.[48]

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[47] Lennart Bångens, and Bjorn Söderberg (2008) *Mobile Banking –Financial Services for the Unbanked?*, The Swedish Program for ICT in Developing Regions, Reklam & Katalogtryck, Sweden.

[48] See Njaramba Gichuki (2013) *Law of Financial Institutions in Kenya*, Law Africa Publishing (K) Limited, Nairobi. pp. 234-252.

These views put into perspective the diligence that will be required by Kenyan lawmakers and regulators in drafting laws and regulations that withstand, for a reasonable time, the rapid introduction of converged hybrid services into the telecoms market.

(c) State regulation versus self-regulation and co-regulation

The complexities of regulating rapidly changing technological and economic landscapes that are predominantly market-based such as converged mobile and financial services raises a related question: is the state sufficiently equipped to regulate on its own? Each regulatory institution - whether the state, the market, society, or architecture - has a role to play. How then, does the state leverage on these institutions? This is a significant regulatory concern, especially in the context of Article 10 of the Constitution of Kenya 2012. It provides for certain values and principles of governance, including participation, which must inform regulation of telecommunications convergence.

There are three main regulatory models that have been put into play in the ICT sector: state regulation, self-regulation, and co-regulation.[49] State regulation is typified by the traditional prescriptive, sanction-based, command-and-control regulation by statutory agencies.[50] Kenya's ICT regulatory framework under the Kenya Information and Communications Act[51] and the State Corporations Act[52] is essentially State regulation. Self-regulation, on the other hand, entails the specification, administration and enforcement of the regulations by the regulated bodies themselves.[53] The most relevant example of self-regulation under Kenya's ICT regulatory framework is that of the Media Council of Kenya, under the Media Act.[54]

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[49] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.*

[50] Ian Ayres and John Braithwaite (1992) *Responsive Regulation: transcending the deregulation debate*, Oxford University Press, p. 102.

[51] Cap. 411A, Laws of Kenya.

[52] Cap. 466, Laws of Kenya. This Act provides a general framework for the governance and operation of State Corporations in Kenya.

[53] Ian Ayres and John Braithwaite (1992) "Responsive Regulation: transcending the deregulation debate," *op. cit.*

[54] Act No. 3 of 2007, Laws of Kenya.

Co-regulation, involves self-regulation with a statutory element, or with the oversight of a public authority. A good example of Co-regulation is in the legal profession, under the Advocates Act[55] and the Law Society of Kenya Act[56].

Therefore, in regulating converged services such as mobile financial services, which regulatory framework is more preferable to promote innovation and increased investments in telecoms services? Christopher Marsden, in *Internet Co-Regulation and Constitutionalism: towards a more nuanced view*[57] argues that co-regulation results in greater legitimacy of the regulatory process. He, however, raises concerns on the possibilities of judicial review of co-regulatory arrangements, and unconstitutional trade-offs and bargains made in the shadows. These are legitimate debates, where there is no proper legal framework in Kenya for holding accountable private sector contributions to governance.

As a response to the above question, Fabrizzio Cafaggi, in *Rethinking Private Regulation in the European Regulatory Space*,[58] suggests that private regulation is emerging as a complement rather than an alternative to public regulation. Cafaggi notes some problematic issues that affect the legitimacy and efficiency of private regulation: monopolistic private regulation, plurality of regulators, conflict of interest, and the liability regimes in which the regulators operate in. These are concerns that Kenyan polic makers, legislators and regulators must address, to have an optimal inclusive and consultative regulatory framework.

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[55] Cap. 16, Laws of Kenya. Section 53 of the Act establishes the Complaints Commission, which adjudicates on complaints made against aadvocates.

[56] Cap. 18, Laws of Kenya. Section 13 of the Act establishes the Law Society of Kenya Council, which exercises all the powers of the council, including investigating and adjudicating on complaints made against its members.

[57] Christopher Marsden (2011) "Internet Co-Regulation and Constitutionalism: towards a more nuanced view," (August 29, 2011). Available at Ssocial Science Research Network, at http://ssrn.com/abstract=197332 (last accessed on 22/8/12).

[58] Fabrizzio Cafaggi, (2006) "Rethinking Private Regulation in the European Regulatory Space," EUI Working Paper LAW No. 2006/13, European University Institute, Badia Fiesolana.

(d) Regulatory Convergence in telecoms and financial services

In 2005, Ben Sihanya and James Otieno Odek, in *Regulating and Mainstreaming ICT for Kenya's Socio-Economic Development*,[59] faulted the ICT legislation in Kenya for being largely sectoral and neither sufficiently integrated nor comprehensive. They argued that there is regulatory inefficiency in the sector as a result of conflict of interest within regulatory bodies. Since then, the ICT legislation has been amended by the 2008 Kenya Communications (Amendment) Act of 2009.[60] In addition, new converged services such as mobile financial services have been introduced.

However, the challenges posed by Sihanya and Odek still subsist. One of the challenges of product and service convergence within and across sectors is multiple regulation of the service by multiple regulators. In the context of mobile financial services, this problem is accentuated, as it brings together traditionally distinct and powerful financial and telecoms regulators – the Central Bank of Kenya[61] and the Communications Commission of Kenya[62].

The regulation of a single service or product by multiple and operationally distinct regulators such as the CCK and the CBK may have adverse effects in continued development and innovation in converged services such as mobile financial services. This dilemma of multiple regulatory frameworks has been considered by various researchers.

Njaramba Gichuki (2013) in his book *Law of Financial Institutions in Kenya*, makes the case for the regulation of mobile financial services by both the Communications Commission of Kenya and the Central bank of Kenya.[63] He argues that mobile financial services have both telecommunications service aspects under the Kenya Information and Communications Act, and

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[59] Ben Sihanya and James Otieno Odek (2006) "Regulating and Mainstreaming ICT for kenya's Socio-Economic Development" in G. Outa, F. Etta and E. Aligula (Eds) *Mainstreaming ICT: Research Perspectives from Kenya*, Mvule Africa, Nairobi.

[60] Act No. 1 of 2009, Laws of Kenya.

[61] Section 4(2) of the Central Bank of Kenya Act, Cap. 491, Laws of Kenya, provides that the regulatory role of the CBK is to ensure liquidity, solvency and proper functioning of a stable, market-based financial system.

[62] Section 5(1) of the Kenya Information and Communications Act provides that the objects and purpose of the CCK is to license and regulate postal and information and communications services in Kenya.

[63] Njaramba Gichuki (2013) *Law of Financial Institutions in Kenya, op. cit.*

banking service aspects under section 3 of the Banking Act. However, he does not explore the costs of this dual regulation framework to mobile network operators.

William Lehr and Kiessling Thomas (1999) in "*Telecommunication Regulation in the United States and Europe: The Case for Centralized Authority*,"[64] examine the economics of dual regulation and the history of this system in Europe and the US, and suggest that the increased the risk and cost from multiple heterogeneous local regulations will harm incentives for efficient infrastructure investment and service provisioning. Hence strong centralized authority is needed to address these risks and help internalize these externalities. However, Lehr and Thomas fail to take into account the difficulties of central regulation of distinct sectors such as the telecoms and financial sectors by one regulatory authority.

In fact, Jens C. Arnbak (2002), in *Multi-utility Regulation: Yet another convergence*,[65] argues against centralized regulation of mobile and financial services. He argues that the fact that SIM cards of GSM mobile terminals are being upgraded to function simultaneously as credit or debit cards does not necessarily justify a single regulatory authority for telecom and financial services. However, while they have shunned central regulation of these services, they have yet to propose a regulatory framework that competently addresses the telecoms and financial aspects of mobile financial services.

Rolf H. Weber in *Regulatory Framework for Mobile Financial Services*[66] proposes a regulatory solution to this problem. He suggests that the legal framework of mobile financial services should encompass an inter-related regulatory approach which recognizes the distinctive features of telecommunications and financial services requirements. In addition, the regulatory framework should establish and institutionalize co-operation and information sharing between the telecommunications regulator, supervising the provision of value-added services by a mobile network operator, and the banking regulator, supervising the deposit-taking business of the

[64] Lehr William and Thomas Kiessling (1999) "Telecommunication Regulation in the United States and Europe: The Case for Centralized Authority," in S. E. Gillett and I. Vogelsang (Eds.) *Competition, Regulation and Convergence: Trends in Telecommunications Policy Research*, Lawrence Erlbaum Associates, Mahwah, NJ, 1999.

[65] Jens C. Arnbak (2002) "Multi-utility regulation: yet another convergence," in Robin Mansell, Rohan Samarajiva & Amy Mahan (eds.) *Networking Knowledge for Information Societies: Institutions and Intervention*, DUP Science, Delft, p. 144.

[66] Rolf H. Weber (2010) "Regulatory framework for mobile financial services," *op. cit.*

mobile network operator. While there has been informal cooperation and consultation between the CCK and the CBK in policing mobile financial services so far, there is need for a clear and transparent legal framework.

Janet Hernandez, Jeff Bernstein, and Amy Zirkle (2011), in *The Regulatory Landscape for Mobile Banking*[67] also weigh in on the competition aspect of mobile financial service regulation. Despite the title, their article examines the regulation of SIM-based mobile money transfer provided by mobile network operators, rather than web-based mobile banking. They call for regulatory reform that provides a clear framework of cooperation between the telecoms and financial service regulators, and competition authorities. This is critical for the regulation of interconnection, pricing and service bundling aspects of mobile financial services. There is currently no framework for cooperation between the CCK, CBK and the Competition Authority,[68] over converged services such as mobile financial services.

The authors also note that the close relationships between network operators and financial institutions may require at least some level of consultation regarding the nature and timing of decisions in one sector and how such decisions could affect the other. As mobile financials services are increasingly integrated with banking services in Kenya, this nature of consultation becomes crucial.

G. Justification and Significance of the Study

The literature review and documentation analysis above has indeed presented a good framework for discussing regulation of mobile and financial service convergence in the telecoms sector. However, present literature on the subject has not adequately addressed the issues to be explored in this research. For example, the authors that have addressed convergence in the telecommunications sector have concentrated on intra-sectoral convergence and not examined the convergence of ICTS and other sector such as the financial sector.

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[67] Janet Hernandez, Jeff Bernstein, and Amy Zirkle (2011) *The Regulatory Landscape for Mobile Banking* Telecommunications Management Croup Inc., Armenia, Colombia, available at http://reports.tmgtelecom.com/RegLandscapeM-banking/ (last accessed on 6th August 2012).

[68] The Competition Authority is established under the Section 7 of the Competition Act, No. 12 of 2010.

In addition, even though Kenya is one of the few countries to register commercial success in the convergence of mobile and financial services, there is insufficient literature so far examining the subject from a telecommunications perspective. Most of the studies have concentrated on financial service regulatory issues such as licensing of deposit-taking institutions and anti-money laundering measures.

This research aims to contribute to the growing body of research in Kenya and globally on the convergence of mobile and financial services in Kenya, and their effects on regulation of mobile telecoms. The research aims to propose a regulatory framework that promotes innovation in an increasingly converging and changing telecoms service sector.

H. The Conceptual and Theoretical Framework of the Study

In this research, I adopt Buckley's perspective that utilities regulation, especially telecoms regulation, entails developing, agreeing, setting, evolving and enforcing rules of conduct and engagement, with the aim of encouraging desirable outcomes, or to remedy proven problems.[69] I consider these ingredients or processes of telecoms regulation within the context of the principles and values of governance under Article 10 of the Constitution of Kenya, especially democracy, participation of the people, equity, social justice and good governance. As the courts have repeatedly emphasized, these values are the prism through which any governance processes should be examined.[70]

I also adopt Lessig's modalities of regulation, that is, law, social norms, markers and architecture. However, I acknowledge, as Bronwen and Yeung (2007) have argued, that all these modalities are state-centric, that is, they are enveloped within the 'regulatory state'. This is

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[69] John Buckley (2003) *Telecommunications Regulation, op. cit.*

[70] *Hon. Lenny Kivuti* v. *Independent Electoral and Boundaries Commission & the Attorney General*, High Court Nairobi JR Misc. App. No. 94 of 2012 [eKLR]. In this suit, the Petitioners asked the Courts to nullify the IEBC's report on delimitation of electoral boundaries, on grounds that the IEBC did not sufficiently consult the stakeholders, including the public. While the Court ruled in favour of IEBC, it stressed the duty of regulatory agencies to consult relevant stakeholders in exercising their regulatory and statutory duties, as provided under Article 10 of the Constitution of Kenya 2010.

especially in relation to the Kenyan mobile telecommunications sector, which has undergone liberalization by way of legislative restructuring, and whose private sector groups such as the Kenya Telecom Network Operators (KTNO) and Telecommunications Service Providers Association of Kenya (TESPOK) are paying an increasingly important role in regulatory processes.

In addition, the Kenyan telecoms sector has become market-driven as a result of the market liberalization that has allowed new market entrants such Essar Telecoms and Orange Telkom, and fostered market competition. Indeed, increased competition and liberalization of the mobile telecoms sector has encouraged innovation and investments such as the convergence of mobile and financial services in Kenya.

I advance the argument that an institutionalist approach to regulation is the best framework for regulating convergence of mobile and financial services. This framework emphasizes the inter-dependence of the state and non-state actors, in the pursuit of both public benefit and private gain. This is in view of the growing and increasingly crucial and legitimate role that business and other non-state actors such as KTNO, TESPOK, and the Kenya Private Sector Alliance (KEPSA) play in establishing and implementing reforms in telecoms regulation in Kenya.

I. Research Methodology: Design, Methods and Techniques

This is primarily a desk-based research project, which I shall complement with the use of both primary and secondary sources of information.

i. The primary sources of information shall include:

(a) The Constitution of Kenya 2010;
(b) Acts of Parliament of Kenya, including:

- Kenya Information and Communications Act[71];
- State Corporations Act[72];

[71] Cap. 411A, Laws of Kenya.

(c) Ministry of Information and Communications National Information and Communications Technology (ICT) Policy of 2006;
(d) Case law precedents from Kenya and other relevant jurisdictions
(e) Relevant statutes and codes of England, and the United States of America;
(f) International and regional legal instruments

ii. Secondary sources of information shall include:

(a) Books, journal articles and other texts by authoritative authors on telecommunications regulation in Kenya, and generally, including Prof. Ben Sihanya, Prof. Timothy Waema, and Mr. Tony Omwansa; these materials will be sourced predominantly from Innovative Lawyering and Sihanya Mentoring library resources, the University of Nairobi School of Law's library, and my personal collection of texts on telecommunications law and regulation;
(b) The Internet, including online libraries and websites;
(c) Newspaper articles and other media reports;

J. Originality, Contribution and Scope of the Study

i. Originality

Over the last five years, two significant events have occurred in the realm of telecommunications regulation in Kenya. First, the convergence of mobile and financial services, spearheaded by Safaricom in 2007, and its subsequent adoption by other mobile network operators, has unraveled the rationale of telecommunications regulation in Kenya. The rapid changes and new innovations in the mobile financial services over the short period has not given researchers sufficient time to study the impact of convergence of mobile and financial services to the regulation of mobile telecoms in Kenya. Hence no literature sufficiently examines the impact of mobile financial services on telecoms regulation in Kenya.

[72] Cap. 466, Laws of Kenya.

Second, the promulgation of the Constitution of Kenya 2010, in August of that year, completely upended the logic and methodology of regulation, generally, and telecommunications regulation, in particular. Researchers have not yet sufficiently examined how the new constitutional framework affects the regulation of converged mobile and financial services, especially where these services have been ingrained in the political and socio-economic processes of the Kenyan society.

These two contexts therefore make this study original in the said aspects.

ii. Contribution of the study

Currently, many developing countries are introducing mobile financial services as a programme for increasing financial inclusion.[73] The Kenyan experience, especially with Safaricom's M-PESA, is often cited as a blue-print for replicating the successful attributes, and avoiding the pitfalls of such a system.[74] As indicated earlier, few studies have sufficiently tackled the impact of mobile financial services from a telecoms regulation perspective. This study intends to contribute to the growing body of literature on the telecoms reforms necessary for promoting and deepening investment and innovation in mobile financial services.

iii. Scope of the Study

This study restricts the scope of enquiry in three respects. First, it examines MNO-led mobile financial services, and not bank-led, or hybrid models. Second, the study examines the effects of the mobile financial services on telecommunications regulation, and not financial or other regulation.

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[73] In 2011, for example, the number of mobile money initiatives around the world more than doubled, reaching more than 120. See Harshana Kasseeah and Verena Tandrayen-Ragoobur (2012) "Mobile Money in an Emerging Small Island Economy," *ARPN Journal of Science and Technology*, Vol. 2, No. 5, June 2012.

[74] James Bilodeaeau, William Hoffman, and Sjoerd Nikkelen (2011) "Findings from the Mobile Financial Services Development Report," in *The Mobile Financial Services Development Report*, World Economic Forum, Washington, DC, Pp 23-32.

K. Challenges of the Study and Prospects

There are limited studies on telecommunications regulation on Kenya which have been specific o mobile financial services. This limits the scope of secondary resources used in this research to studies done in other jurisdictions that have introduced mobile financial services. In addition, here are limited primary sources, as there is no specific telecoms regulatory framework for mobile financial services. Current policy documents specific to mobile financial services, generated by the Ministry of information and Communication, the CBK and the CCK, including deliberations with industry stakeholders, are done behind closed doors. This limits the scope of documentation analyzed with regard to the regulatory process.

However, as this and other similar studies continue to raise issues and ask questions directed at telecoms policy makers and regulators, so shall the space for research be opened, as the policy makers and regulators respond to these issues.

L. Chapter Outline

i. Chapter One

4. This chapter explores the first research question: h as the convergence of mobile and financial services changed the traditional nature of communications services offered by mobile network operators? It analyses the process of convergence in ICT generally, and telecoms in particular. It describes the convergence of mobile and financial services in Kenya, and the resultant converged service known as "mobile financial services". I argue that convergence of mobile telecoms and financial services has blurred the distinction between traditional voice telecoms services and Value Added Services (VAS).

ii. Chapter Two

This chapter attempts to answer the second research question: do Kenya's telecoms regulations recognize inter-sectoral converged services such as mobile financial services, as telecommunications services? It discusses the policy and regulatory issues and challenges that mobile financial service provision has presented to mobile telecommunications policy, law and regulation. It assesses the adequacy of Kenyan telecommunications law in dealing with these

issues. The hypothesis set forth is that Kenya's telecommunications laws and regulations are ambivalent as to the status of converged services such as mobile financial services, within the definition of 'telecommunications services'.

iii. Chapter Three

In this Chapter, I explore research question three. I explore possible regulatory frameworks that will promote innovation and quality of service in convergence of mobile and financial services in Kenya. The study is based on the hypothesis that regulation of inter-sectoral converged services such as mobile financial services by telecoms regulators can be achieved by the adoption of principle-based regulation over rule-based regulation.

iv. Chapter Four

The chapter contains the conclusion and recommendations of the study. The conclusion highlights the evidence supporting the case for increased regulation of mobile financial services by the telecoms regulators. It also highlights the findings of the study on the adequacy of the present telecoms regulatory framework to progressively regulate mobile financial services and other converged services. It makes necessary recommendations for the reform of the telecoms regulatory framework in Kenya.

CHAPTER ONE

1.0 NATURE AND IMPACT OF CONVERGENCE BETWEEN MOBILE TELECOM AND FINANCIAL SERVICES ON THE TELECOMMUNICATIONS SECTOR IN KENYA

1.1 Introduction

The convergence of mobile telecoms services and financial services has complicated the traditional nature of the telecoms business, and raised significant questions regarding the new role of telecoms regulators, policy makers and lawmakers in the business. This thesis explores three closely-related questions. Has the convergence of mobile and financial services changed the traditional nature of communications services offered by mobile network operators? Second, do Kenya's telecom regulations recognize inter-sectoral converged services such as mobile financial services, as telecommunications services? Third, what regulatory approach, if any, should telecoms regulators and policy makers adapt, to effectively regulate converged services such as mobile financial services, to promote innovation?

This chapter explores the first research question: what is the impact of the convergence of mobile and financial services on the Kenyan telecommunications sector? It analyses the process of convergence in ICT generally, and telecoms in particular. It describes the convergence of mobile and financial services in Kenya, and the resultant converged service known as "mobile financial services". In addition, this chapter maps out the business processes of providing mobile financial services, with the aim of appreciating the roles and functions of various stakeholders in the mobile financial services sector. These stakeholders include regulators, mobile network operators, other market players, the consumers, and the State.

The conclusions drawn from this chapter will assist in answering the second research question (explored in Chapter 2): do Kenya's telecom regulations recognize inter-sectoral converged services such as mobile financial services, as telecommunications services?

Communications networks have become a key economic and social infrastructure for development in both developed and developing countries, including Kenya.[75] More specifically, the development and diffusion of mobile phone technology has had cascading effects in the development of new technologies and availability of services that have traditionally been offered using other non-telecommunications infrastructure.[76]The process of convergence of ICT, media, telecommunications and other services in Kenya and globally has resulted in the provision of new converged products such as mobile financial services across mobile telecommunications networks.

The term 'mobile financial services' refers to various financial services accessible through the mobile phone. This includes mobile banking and mobile money transfer. Mobile banking refers to web-based banking services accessible through a cell phone, such as balance enquiries, transfers between bank accounts, and payments.[77] The web-based interface allows bank customers to transact their bank accounts remotely.[78]

Mobile money transfer, on the other hand, refers to the transformation of a mobile network operator's wireless network messaging into a Subscriber Identification Module (SIM) based platform for transacting electronic units that are equivalent to money.[79] In contrast to mobile banking services, the payment transactions occur entirely within the Mobile Network Operator's network facility. In this study, I use the term 'mobile financial services' to refer to SIM-based mobile money transfer services provided by mobile network operators. I distinguish this dichotomy further under section 1.2.3.1 below.

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[75] Timothy Waema (2007) "2007 Kenya Telecommunications Sector performance Review: a supply side analysis of policy outcomes," Research ICT Africa, Cape Town. See also, Communications Commission of Kenya (2012)*Annual Report Financial Year 2010/11*. at: http://www.cck.go.ke/resc/publications/annual_reports/CCK_Annual_Report_2011.pdf (accessed on 8/8/12). According to the CCK, the Transport and Communications sector recorded a 5.9 percent growth, with the total output value for the sector growing by 9.5 percent to KES 594.6 billion in 2010. The telecommunications industry continued to post considerable growth spearheaded mainly by the mobile telephony segment of the ICT sector.

[76] Wesley Shrum, *et al* (2011) "Mobile Phones and Core Network Growth in Kenya: strengthening the ties,"*Social Science Research, Volume 40 Issue 2, March 2011*, pp. 614-625. The authors note that the increased technological access to existing networks, that is, network effect of mobile telephony, in a context of resource scarcity leads to a strengthening of weak ties and the enhancement of core networks among Kenyans.

[77] United States Agency for International Development (USAID) and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix," United States Agency for International Development, Washington DC.

[78] *Ibid.*

[79] *Ibid.*

Some of the mobile financial services provided by mobile network operators in Kenya include Safaricom's M-PESA, Airtel's ZAP, Telkom Kenya's Orange Money and Essar Telecom's Yu Cash.[80] These services have delivered basic financial services to the financially excluded and even financially sophisticated urban and rural population, hence bringing unprecedented numbers of the Kenyan population into the formal economy.[81]

However, on the regulatory front, the provision of mobile financial services primarily by Mobile Network Operators (MNOs) - or the convergence of telecoms and financial services - has changed the dynamics and substance of telecoms regulation in Kenya. The main question has been whether the mobile financial service segment of an MNO's operations can be regulated by telecom regulators. Consequently, as the converged landscape continues to develop, legislators, policy makers and regulators have not secured sufficient consensus on the best way to address the traditional telecoms regulatory issues in the converged telecoms and financial services environment.[82]

This chapter examines the process and extent of network, market, service and regulatory convergence in the telecommunications sector, and the eventual emergence of mobile financial services.

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[80] Communications Commission of Kenya (2012) *Annual Report Financial Year 2010/11*, *op. cit.*

[81] *Ibid.* Currently, money transfer subscription in Kenya stands at 19 million, which represents 67% of mobile money subscriptions in Kenya. See also,James Bilodeaeau, William Hoffman, Sjoerd Nikkelen (2011) "Findings from the Mobile Financial Services Development Report," in *The Mobile Financial Services Development Report*, World Economic Forum, Washington, DC, Pp 23-32.

[82] See Alliance for Financial Inclusion. (2010) "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-PESA." at http://www.afi-global.org/en/phoca-publications-case-studies (accessed on April 22, 2012). At the inception of M-PESA in Kenya in 2007, Safaricom lobbied the Central Bank of Kenya (CBK) and the Communications Commission of Kenya (CCK) for authorization to provide mobile money transfer services, without a regulatory framework. CCK's reluctance to step in as a primary regulator was probably due to its unfamiliarity with the new converged product. The CBK has hinged on its macro-prudential regulatory mandate under section 3 of the Central Bank of Kenya Act, to issue negative authorization to the provision of mobile financial services by mobile network operators. This is by way of issuance of letters of No Objection.

1.2 The Convergence of ICT and the Emergence of Mobile Financial Services in Kenya

The regulatory issues around the impact of mobile financial services on the telecoms business, as explored in Chapters 2 and 3, are best discussed when put in the context of their role, and the role of ICT generally, in Kenya's political economy. The discussion below captures the growth and increasingly integral role of, ICT in Kenya's development processes.

1.2.1 The role of ICT and their convergence in the Kenyan economy

In 2000, the World Bank posed the question, "Can Africa claim the 21st century?"[83] Ben Sihanya (2000), in his affirmative response, argued that this would largely depend on whether Africa develops and harnesses the promise and opportunities presented by cyberspace, telecommunications, and information technology.[84]Over the last 15 years, Kenya and other African countries have indeed risen to the World Bank's calling. The growth of ICT has cemented their increasingly integral role in the global, regional and national economy.[85] This includes telecommunications, Internet, broadcasting, and other technology and software-related sectors. Indeed, globally, and in Kenya, ICT have become important enablers of renewed and sustainable growth, increasing efficiency and enhancing critical productivity in a knowledge economy age.[86]

The role of ICT in Kenya's socio-economic and political development has further been enhanced by specific technological innovations. This includes the increasing digitization of content, the shift towards Internet Protocol (IP) based networks, the diffusion of high speed broadband Internet access, and the availability of multi-media communication and computing devices.[87]

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[83] World Bank (2000) "Can Africa Claim the 21st Century?," The World Bank, Washington D.C.

[84] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," in *Transnational Law & Contemporary Problems*, Vol. 10, No. 2, pp. 583-640.

[85] Gatana Kariuki (2009) "Growth and Improvement of Information Communication Technology in Kenya," *International Journal of Education and Development using ICT(IJEDICT)* Vol. 5, Issue 2, pp. 146-160. The author notes that ICTs' transformational contributions to economic growth are both direct and indirect. ICTs have the largest beneficial impact in conjunction with other changes, including a new set of ICT skills/training, structural changes within business models and the economy, and institutional and regulatory adjustments. Hence ICTs have to be looked at from a perspective that considers all causes of economic growth and attempts to provide a catalytic environment that uses ICTs to generate economic growth rather than the ICT sector's specific contribution towards GDP.

[86] *Ibid.*

[87] Mandla Msimang (2011) "*Broadband in Kenya: Build it and they will come*," Information for Development Programme, The World Bank; Washington DC.

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Technological innovations, especially digitization, have reduced costs and enhanced the capability of communication networks to support new services and applications. This is especially with regard to the transformation from circuit-based public switched telecommunications networks (PSTN) to packet-based networks using the Internet Protocol and Next Generation Networks. This has led to ICT convergence.[88]

The term "convergence" in the context of ICT, refers to the shift from the traditional "vertical silos" architecture, whereby different communications services were provided through separate networks (for example, fixed telecoms, mobile telecoms, and Internet Protocol). The shift is to a situation in which communications services are accessed and used seamlessly across different networks and provided over multiple platforms in an interactive way.[89]

ICT convergence is exhibited in at least four principal levels: network, service, industry/market, and legislative, institutional or regulatory convergence. I describe them below:

1.2.1.1. Network convergence

Network convergence refers to the convergence of network technologies, services and terminal equipment to a single network that is able to facilitate the provision of converged services such as data, television, Internet, fixed and mobile voice services, among other services.[90] This has been enabled by the digitization of content (through compression technologies), emergence of IP and adoption of high speed broadband. These networks have been referred to as Next Generation Networks (NGN).[91]

Examples of Next Generation Networks (NGNs) in Kenya's telecoms industry include the four fibre optic cable initiatives that have been transformative to Kenya's ICT industry. These are The

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[88] Organization for Economic Cooperation and Development (2008)*Convergence and Next Generation Networks*, Ministerial Background Report prepared for the OECD Ministerial Meeting on the Future of the Internet Economy, Seoul Korea, June 2008, Directorate for Science, Technology and Industry, OECD, at http://www.oecd.org/Internet/Interneteconomy/40761101.pdf (accessed on 2nd August 2012).

[89] *Ibid.*

[90] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.*

[91] Jérôme Bezzina and Mostafa Terrab (2005) "Impacts of New Technologies in Regulatory Regimes: an introduction," in Jerome Bezzina and Bernard Sanchez (eds)*Technological Convergence and Regulation: challenges facing developing Countries*, Communications and Strategies, Special Issue, November 2005.

East African Marine System (TEAMS), East African Submarine System (EASSy), the Lower Indian Ocean Network (LION) and SEACOM African Cable System. Safaricom and Telkom Kenya have acquired equity stakes in TEAMS and EASSy.[92] The introduction of NGNs has enabled the introduction of 3rd Generation (3G) networks, which have enabled service and market convergence, such as mobile financial services.

1.2.1.2. Service Convergence

Service convergence refers to a situation where multiple services use the same medium or network facility.[93] This has stemmed from network convergence, and the creation of innovative handsets and technologies that allow access to various services such as web-based applications, and the provision of traditional and new value-added services from different devices.[94]

For example, mobile telephony in Kenya allows access to various services such as voice services, Internet access, various mobile financial services, and other data services through the mobile handset. This convergence, especially with reference to mobile financial services, has revolutionized social, economic and even political relations in Kenya.[95]

Jenny C. Aker and Isaac M. Mbiti (2010), identify five potential mechanisms through which mobile phones can provide economic benefits to consumers and producers in sub-Saharan Africa. First, mobile phones improve access to and use of information, thereby increasing market efficiency. Second, increased communication should improve firms' productive efficiency by allowing them to better manage their supply chains.

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[92] Mandla Msimang (2011) "*Broadband in Kenya: Build it and they will come*,"*op. cit.* See also AFRICOG (2010) "Unlimited Bandwidth: Governance and Submarine fibre-optic cable initiatives in Kenya," Africa Centre for Open Governance, Nairobi.

[93] Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience,"Interdisciplinary Centre for Law & ICT Katholieke Universiteit Leuven, Belgium. See also, Monica Kerrets (2004)"ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya"*The Southern African Journal of Information and Communication*, Issue No 5, 2004. See also, World Bank (2007) "Regulatory Trends in Service Convergence," Policy Division, Global Information and Communication Technologies department, The World Bank, Washington DC.

[94] World Bank (2007) "Regulatory Trends in Service Convergence,"*op. cit.*

[95] Jenny C. Aker and Isaac M. Mbiti (2010) "Mobile Phones and Economic Development in Africa,"*Journal of Economic Perspectives*, Volume 24, Number 3, Summer 2010, pp. 207–232.

Third, mobile phones create new jobs to address demand for mobile-related services, thereby providing income-generating opportunities in rural and urban areas. Fourth, mobile phones can facilitate communication among social networks in response to shocks, thereby reducing households' exposure to risk. Finally, mobile phone-based applications and development projects - sometimes known as "m-development"-have the potential to facilitate the delivery of financial, agricultural, health, and educational services.[96]

1.2.1.3. Industry or market convergence

Network and service convergence have in turn re-engineered the economic landscape by merging ICT sectors such as telecoms, broadcasting, media and information technology, which were operating in separate markets.[97] For example, mobile network operators in Kenya are increasingly diversifying into non-voice telephony services such as data provision, as their major revenue streams.[98]

In addition, market convergence has also taken place at the sectoral level, where the telecoms sector has merged with other sectors such as the financial services sector. The best illustration is the provision of mobile financial services such as mobile money transfer, mobile payments, and mobile banking, by way of Safaricom's M-PESA, Airtel's ZAP, Essar Telecom's Yu Cash, and Telkom Kenya's Orange Money systems.[99]

1.2.1.4. Legislative, institutional and regulatory convergence

The result of network, service and market convergence on the regulatory front has been regulatory overlap, regulatory inertia, arbitrage, and conflict.[100] Regulatory overlap occurs where, for example, the Communications Commission of Kenya (CCK) and the Central Bank of

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[96] Jenny C. Aker and Isaac M. Mbiti (2010) "Mobile Phones and Economic Development in Africa," *op. cit.*.

[97] See Ben Sihanya with James Otieno Odek (2006)"Regulating and mainstreaming ICT for Kenya's socio-economic development," in G. Outa, F. Etta and E. Aligula (Eds)*Mainstreaming ICT: Research Perspectives from Kenya*, Mvule Africa, Nairobi. The authors have evaluated the adequacy of the regulatory framework of ICT in the context of convergence and proliferation of new technologies. They fault the ICT legislation for being largely sectoral and neither sufficiently integrated nor comprehensive. *op. cit*

[98] Communications Commission of Kenya (2012) *Annual report financial year 2010/11*, *op. cit.* See also, Safaricom Limited (2011) *Annual Report and Group Accounts for the Year Ended March 2011*, Safaricom Limited, Nairobi.

[99] *Ibid.*

[100] Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience,"*op. cit.*

Kenya (CBK) both exercise licensing regulatory jurisdiction over the mobile financial service aspect of mobile network operators. This regulatory overlap results into regulatory conflict, where, for example, each regulator provides conflicting licensing guidelines.[101]

This scenario may precipitate regulatory inertia where one supposedly inferior regulator, such as the Communications Commission of Kenya, is hesitant to become the primary regulator in the face of proactive flexing of regulatory jurisdiction by a supposedly superior regulator such as the Central Bank of Kenya.[102] Innovators may then engage in regulatory arbitrage, or forum shopping, by modeling their products, such as mobile financial services, in a manner that classifies them as falling under the jurisdictional ambit of a reluctant regulator.

It is in this context that regulatory overlap, conflict, inertia and arbitrage have necessitated regulatory convergence. For example, in Kenya, telecommunications, broadcasting, internet service provision, and postal services, which were previously regulated separately, have all been brought under the ambit of the CCK.[103]

Regulatory convergence has also occurred between industry regulators. For example, because some of the services offered by Mobile Network Operators such as mobile financial services fall under the financial services industry, telecommunications and financial services regulators and policymakers have had to consider a converged approach to regulating the MNOs in their provision of these cross-market services. The Communications Commission of Kenya (CCK)[104]

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[101] Central Bank of Kenya licensing guidelines are informed by very different legislative and policy considerations, as compared to Communications Commission of Kenya guidelines. See Chapter 3 for an indepth discussion of the regulatory philosophies of the two regulators.

[102] See Consultative Group to Assist the Poor (2007) "Notes on Regulation of Branchless Banking in Kenya," at http://www.cgap.org/p/site/c/template.rc/1.26.1480/ (accessed on 8/8/12). Before the launch of M-PESA, Safaricom consulted with both the CBK and the CCK over authorization and licensing issues. the CBK consulted with the CCK and agreed that the CBK would be the primary regulator of M-PESA, while the CCK would play a lesser regulatory role. The CBK has hinged on its macro-prudential regulatory mandate under section 3 of the Central Bank of Kenya Act, to issue negative authorization to the provision of mobile financial services by mobile network operators. This is by way of issuance of letters of No Objection.

[103] See Ben Sihanya and James Otieno Odek (2006) "Regulating and mainstreaming ICT for Kenya's socio-economic development," in G. Outa, F. Etta and E. Aligula (Eds) *Mainstreaming ICT: Research Perspectives from Kenya*, Mvule Africa, Nairobi.

[104] Under section 5 of the Kenya Information and Communications Act (Cap. 411A, Laws of Kenya) the CCK is mandated with the licensing and regulation of postal and information and communication services in Kenya.

and the Central Bank of Kenya (CBK)[105] have had to consider how to regulate MNOs in the converged environment.

The following section explores the growth of the mobile telecoms sub-sector and the emergence of mobile financial services in Kenya.

1.2.2 The growth of mobile telecommunications in Kenya

The mobile revolution in Kenya has had significant positive impact on the socio-economic and political spheres.[106] Mobile phone services have been instrumental in connecting individuals and businesses to individuals, businesses, government, information, markets and services.[107]

Mobile phones and related services have evolved from simple communications tools to essential service delivery platforms, as well as market access and transactional portals.[108] From a development perspective, the mobile phone and its related services has become an essential tool for human and economic development, due to its progressively innovative applications and services. For example, according to a recent study by Ndunge and Mutinda (2011), the incomes of Kenyan households using M-PESA have increased by 5-30% since they started mobile banking.[109]

MNOs have continued to motivate economic growth and socio-economic development through the provision of innovative services such as "Mobile Agriculture",[110]"Mobile Health"[111] and

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[105] Section 4(2) of the Central Bank of Kenya Act, Cap. 491, Laws of Kenya, provides that the regulatory role of the CBK is to ensure liquidity, solvency and proper functioning of a stable, market-based financial system.

[106] Jenny C. Aker and Isaac M. Mbiti (2010) "Mobile Phones and Economic Development in Africa,"*Journal of Economic Perspectives,op. cit.*

[107] *Ibid.*

[108] *Ibid.*

[109] Ndunge Kiiti and Jane Mutinda (2011) "Mobile Money Services and Poverty Reduction: a study of women's groups in rural eastern Kenya," *Institute for Money, Technology and Financial Inclusion* Working Paper 2011-2. See also, Harshana Kasseeah and VerenaTandrayen-Ragoobur (2012) "Mobile Money in an Emerging Small Island Economy,"*ARPN Journal of Science and Technology*, Vol. 2, No. 5, June 2012.

[110] Christine Zhenwei Qiang, Siou Chew Kuek, Andrew Dymond and Steve Esselaar (2011) "*Mobile Applications for Agriculture and Rural Development*," ICT Sector Unit, The World Bank: Washington DC.

[111] Sam Wambugu (2011) "Mobile phones to offer health sector the kiss of life," Daily Nation, Saturday April 9, 2011, Nairobi. See also Christine Zhenwei Qiang, Masatake Yamamichi, Vicky Hausman and Daniel Altman (2011) "*Mobile Applications for the Health Sector*," ICT Sector Unit, The World Bank: Washington DC.

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[107] *Ibid.*

[108] *Ibid.*

[109] Ndunge Kiiti and Jane Mutinda (2011) "Mobile Money Services and Poverty Reduction: a study of women's groups in rural eastern Kenya," *Institute for Money, Technology and Financial Inclusion* Working Paper 2011-2. See also, Harshana Kasseeah and VerenaTandrayen-Ragoobur (2012) "Mobile Money in an Emerging Small Island Economy,"*ARPN Journal of Science and Technology*, Vol. 2, No. 5, June 2012.

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[111] Sam Wambugu (2011) "Mobile phones to offer health sector the kiss of life," Daily Nation, Saturday April 9, 2011, Nairobi. See also Christine Zhenwei Qiang, Masatake Yamamichi, Vicky Hausman and Daniel Altman (2011) "*Mobile Applications for the Health Sector*," ICT Sector Unit, The World Bank: Washington DC.

"Mobile Education" programmes.[112] These services have had a significant impact on the telecoms business, and its regulation, as discussed in Chapters 2 and 3. Out of the various innovations rolled out by MNOs perhaps the one outstanding innovation that has evolved from telecommunications convergence is the provision of mobile financial services (MFS). This is explored below.

1.2.3 The Emergence of Mobile Financial Services in Kenya

One of the innovations that have emerged from the various ICT convergence processes and models discussed above is the convergence of mobile telecoms and financial services. This has resulted in the provision of 'mobile financial services' by mobile network operators. This development has been catalyzed by the limited access to financial services. As at 2007, before the introduction and mainstreaming of mobile financial services in Kenya, data from Financial Sector Deepening Kenya (FSD Kenya) indicated that only 19% of adult Kenyans reported having access to a formal, regulated financial institution while over a third (38%) indicated no access to even the most rudimentary form of informal financial service. This left a percentage of more than 80% outside the bracket of the reach of mainstream banking.[113]

Access to formal financial services has been limited for almost half of the world's population, especially in the developing countries. For example, it is estimated that more than 2.5 billion people do not use formal financial services.[114] This is attributed to the lack of infrastructure, information and inadequate customer service associated with traditional banking models.[115] This is especially notable in developing countries like Kenya where the vast majority of the population resides in rural areas.[116]

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[112] *Ibid.*

[113] Financial Sector Deepening Kenya (2007) *Annual Report*, 2007.

[114] James Bilodeaeau, William Hoffman, Sjoerd Nikkelen (2011) "The Seven Pillars of Mobile Financial Services Development," in *The Mobile Financial Services Development Report*, World Economic Forum, Washington, DC, Pp 3-14.

[115] *Ibid.*

[116] According to the 2010 national census, 26,122,722 Kenyans (67.7%) live in the rural areas, while 12,487,375 people (23.3% of the population live in the rural areas.

The use of mobile telephones and related infrastructure to deliver basic financial services to the financially excluded poor in Kenya has therefore provided an unprecedented opportunity.[117] This is due to the high levels of diffusion of mobile telephony – mobile penetration is currently estimated at 74% of the Kenyan population.[118] Despite the introduction of micro-finance institutions (MFIs)[119] and Agent Banking[120] in Kenya as means of improving access to capital, this did not reduce the constraints of accessing financial services.

The nature of mobile financial services provided by MNOs has provided a framework for improving the efficiency of financial services by expanding access and lowering transaction costs. Undoubtedly, the deployment of mobile financial services in Kenya, Uganda, Tanzania, South Africa, Philippines, Brazil, and India has demonstrated the widespread endorsement of the business model at the global level, with Kenya being one of the pioneers.[121]

The development and deployment of mobile financial services has also been boosted by the policy and legislative efforts of global financial and other institutions towards financial inclusion. For example, in 2009, the G-20 Leaders committed to improving access to financial services for the poor.[122] It directed the establishment of a G-20 Financial Inclusion Experts Group (FIEG) to support the safe and sound spread of new modes of financial service delivery capable of reaching the poor.[123]

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[117] James Bilodeaeau, William Hoffman, SjoerdNikkelen (2011) "The Seven Pillars of Mobile Financial Services Development,"*op. cit.*

[118] Communications Commission of Kenya Quarterly Sector Statistics Report 1st Quarter July - September 2011/2012, *op. cit.*

[119] Micro-finance Act, No. 19 of 2006, Laws of Kenya.

[120] The Guidelines on Agent Banking have been issued by the CBK under Section 33(4) of the Banking Act, Cap. 488, Laws of Kenya.

[121] James Bilodeaeau, William Hoffman, and SjoerdNikkelen (2011) "Findings from the Mobile Financial Services Development Report,"*op. cit.*

[122] The G20 is an informal group of 19 countries and the European Union, with representatives of the International Monetary Fund and the World Bank. The finance ministers and central bank governors began meeting in 1999, at the suggestion of the Group of Seven (G7) finance ministers from the leading industrialized nations in response to the global financial crisis of 1997-99. Member countries include: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, the United States and the European Union.

[123] James Bilodeaeau, William Hoffman, and SjoerdNikkelen (2011) "Findings from the Mobile Financial Services Development Report,"*op. cit.*

There is yet no consensus at the international, regional or national levels, on the definition of mobile financial services. However, the term 'mobile financial services' is commonly used to cover a broad range of financial activities that consumers engage in or access using their mobile phones.[124] They can be classified into three: mobile banking, mobile money transfer, and mobile payments.[125]

Mobile banking refers to banking financial services provided or delivered through the Internet, and performed on a mobile phone. These include balance enquiries, transfers between accounts, and payments.[126]The gradual transformation of the Kenyan economy into an information-driven economy has compelled the banking industry in Kenya to integrate technology in its service delivery. The need for convenient ways of accessing financial resources beyond the conventional norms has seen the recurrent expansion and modernization of banking patterns.[127]

In the past, banks tended to increase their branches in the country in order to increase its coverage and stay competitive. For example, between 2005 and 2008, Kenya has experienced a period of significant bank branch expansion with a 46 percent increase in three years from a total of 581 branches in 2006 to 849 branches in 2008.[128]However, the new trend is to improve service delivery and harness technology to serve customers better, thereby increasing revenue.[129] It is in this context that mobile banking has been adopted by most banks in Kenya.

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[124] Caroline Boyd and Katy Jacob (2007) "Mobile Financial Services and the Under-banked: opportunities and challenges for m-banking and m-payments," The Center for Financial Services Innovation, Chicago.

[125] Erwin Alampay (2010) "Mobile banking, mobile money and telecommunication regulations," *eBusiness&eCommerceeJournal* 05/2010.

[126] Alliance for Financial Inclusion (, " Mobile Financial Services: regulatory approaches to enable access,"*op. cit.* However, under the Central Bank of Kenya Prudential Guidelines 2013, issued under Section 33(1) of the Central Bank of Kenya Act, the term "mobile banking" is used in two senses: first, telephone or internet banking using the mobile phone device; and second, banking services offered in outlets outside of the registered/designated physical bank branches.

[127] Tuuli Koivu (2002) "Do efficient banking sectors accelerate economic growth in transition countries?," Discussion Paper No. 14 of 2002, Bank of Finland Institute for Economies in Transition (BOFIT) Helsinki, Finland.

[128] Central Bank of Kenya (2009)*Annual Report 2009*, Nairobi.

[129] Michael King (2012) "*Is mobile banking breaking the tyranny of distance to bank infrastructure? Evidence from Kenya*," Institute for International Integration Studies (IIIS) Discussion Paper No. 412/October 2012, Trinity College, Dublin. The author argues that the rapid expansion in mobile banking in sub-Saharan Africa can help achieve greater financial inclusion by bringing increasingly sophisticated and lower cost services to rural communities, beginning with saving and transaction services. The spread of mobile banking offers developing countries such as Kenya the tantalizing prospect of increases in financial inclusion without the need for branch expansion. He suggests that it is possible that low income countries could leapfrog branch centred banking into

Mobile money transfer, on the other hand, refers to services that connect consumers financially through mobile phones, by converting cash into virtual (electronic) money that can be sent through the service provider from one person to another using a mobile phone.[130] Mobile money allows for any mobile phone subscriber – whether banked or unbanked – to deposit value into their mobile account, send value via a simple handset to another mobile subscriber, and allow the recipient to turn that value back into cash easily and cheaply.[131] As discussed in detail below, the design of the mobile money transfer system is a deliberate attempt to remove mobile money transfer from the definition of banking services such as money transfer.[132] This design is significant, as discussed in Chapters 2 and 3, on the choice of the primary regulator of these money transfer services.

Lastly, mobile payments also refer to the use of a mobile phone to make a payment. This usually involves creating electronic money to serve as the source from which and to which value is transferred.[133] There are three types of mobile payments. The first type is the person-to-person (P2P) transfer, also known as mobile money transfer. This is the most common type of mobile payment in Kenya.[134]The second type is the person-to-business (P2B) transfers, which entail the payment of bills, purchases for goods and services, and purchases of airtime.The third type, government-to-person (G2P) transfers, is where state entity makes payments such as salaries and social benefits transfers to individuals.[135] In essence, mobile payments are a form of mobile money transfer service described above.

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mobile banking, in similar fashion to their leapfrog over landline telecommunication infrastructure straight to mobile technology.

[130] See Frost and Sullivan (2009) "Mobile Money Transfer Services in East Africa," Frost & Sullivan, London.

[131] *Ibid.*

[132] See Section 2 of the Banking Act, on the definition of banking business.

[133] Alliance for Financial Inclusion, "Mobile Financial Services: regulatory approaches to enable access" *op. cit.*

[134] Isaac Mbiti and David N. Weil (2011) "Mobile Banking: the impact of M-PESA in Kenya,"*NBER Working Paper Series, Working Paper 17129*, National Bureau of Economic Research, Cambridge. The author notes that secure and inexpensive mobile money payment systems such as M-PESA are leading to enormous changes in the organization of economic activity, family relations, and risk management and mitigation, among other things. A decade ago, family members in different parts of Kenya had a very limited scope of communicating with relatives in distant parts of the country, and they faced even greater difficulties in sending or receiving remittances. Now, in many cases, appeals for assistance and the availability of resources can be communicated, and money can be transferred almost instantaneously.

[135] Republic of Kenya (2012) "*Kenya Social Protection Sector Review, June 2012*," Ministry of State for Planning, National Development and Vision 2030, Government Printer, Nairobi. Social protection programmes run by the government of Kenya are increasingly leveraging advances in information communication technology (ICT) to

1.2.3.1 Mobile Financial Services Models

The process of service convergence in Kenya has resulted in the creation of various business models for the provision of the mobile financial services described above. As indicated earlier in the study, the term 'mobile financial services' has been used by other authors generally to refer to various financial services accessible through the mobile phone handset. This study uses the term to refer to Subscriber Identification Module (SIM)-based mobile money transfer services offered by mobile network operators.

This thesis uses the following three-pronged typology of mobile financial service models to distinguish the role of mobile network operators in Kenya in providing mobile financial services: bank model, mobile network operator (MNO) model, and hybrid model.

1.2.3.1.1. Bank Model

This is a pure bank model whereby the bank, or any other licensed financial services institution such a micro-finance institution (MFI), is the main institution licensed to provide mobile financial services under the Banking Act.[136] This model is distinguished by the fact that clients, or recipients of the mobile financial service, are required by the Central Bank of Kenya Prudential Guidelines to have a bank account. The mobile financial services provided are mobile banking services such as balance inquiry, transfers between accounts, and payments.[137]

These services are accessed through the Internet or through a cell phone based system where the cell phone company provides menu based communications services in partnership with a bank. However, neither the mobile network operator nor the cell phone company, is involved in any underlying financial transactions, all of which pass through the client's bank account and for

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enhance their efficiency and overall performance. At present, 29 percent of safety net benefits are channelled through banks, 6 percent through banking agents, and 4 percent through e-wallet. The increasing use of these systems will make it significantly easier to exercise fiduciary oversight over the payment process. Others are experimenting with the use of mobile network platforms to transfer money, which eliminates many of the costs that beneficiaries currently incur when collecting their payments. See also, HarshanaKasseeah and VerenaTandrayen-Ragoobur (2012) "Mobile Money in an Emerging Small Island Economy,"*op. cit.*

[136] Banks and other financial institutions providing mobile financial services are licensed by the Central Bank of Kenya under sections 4 and 5 of the Banking Act.

[137] USAID and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix,"*op. cit.*

which the bank assumes responsibility, as provided under the Banking Act and the Central Bank of Kenya Prudential Guidelines 2013.[138]

1.2.3.1.2. Mobile Network Operator Model

In this model, a mobile service provider transforms its wireless network messaging functionality into a Subscriber Identification Module (SIM) based platform for providing mobile financial services as Value Added Services (VAS) under its telecommunications license.[139] The SIM-based service enables its subscribers to transfer funds and make payments in the form of electronic money to each other, which transactions are settled through the MNO's established agent network.[140] In contrast to mobile banking services, the payment transactions occur entirely within the MNO's network, and do not require the service user to have a bank account.[141]This is the model that Safaricom, Airtel, Telkom Kenya and Essar Telecom have adopted, as a means of circumventing the regulatory and compliance requirements for mobile banking under the Banking Act and the Central Bank of Kenya Prudential Guidelines and other regulations.[142]

The funds in transit - paid in by the remitter but not yet withdrawn by the recipient, are in principle on deposit in a separate trust account with one or more banks and are therefore not deposits in the context of banking business.[143]Mobile network operators make use of the banking

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[138] *Ibid.* Courts have since settled the issue of risk assumption between banks and their customers. In the Indian case of *Dilip Madhukar Kambli v. Nilesh Vasant Borkar and Ors* 1991(1) CPR 571, the Court held that the banker is supposed to safeguard the interest of the depositors when his amount is entrusted to the custody of the Bank and the Bank is liable to return the amount with interest. In the absence of any directions from the customer, no banker can unilaterally and arbitrarily transfer the money of a depositor from his account and deposit in the account of another customer. This amounts to deficiency in service by the bank.

[139] Section 2 of the Kenya Communications Regulations, 2001, defines "Value Added Services" as such services as may be available over a telecommunications system in addition to voice telephony service. Under the Unified Licensing Framework (discussed in detail in Chapter 2) provision of Value-added Services falls under the telecommunications license.

[140] Electronic money is an innovation of Safaricom, and is not regulated by either the Central Bank of Kenya or the Communications Commission of Kenya. Parliament is yet to enact a substantive Electronic Transactions law. Section 83C of the Kenya Information and Communications Act, however, gives the Communications Commission of Kenya the regulatory jurisdiction over electronic transactions.

[141] USAID and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix,"*op. cit.*

[142] Consultative Group to Assist the Poor (2007) "Notes on Regulation of Branchless Banking in Kenya," at http://www.cgap.org/p/site/c/template.rc/1.26.1480/ (accessed on 8/8/12).

[143] *Ibid.* The Central Bank of Kenya has, as part of its risk management regulations, required mobile network operators to hold its trust accounts in more than one bank. This came hot on the heels of The Kenyan banking community expressed concern that M-PESA could not meet the risk management requirements associated with a large payment system network; and that it was dangerous for any institution to operate on that scale outside of regulation.

facilities, in the form of trust accounts. This requirement is part of the authorization and licensing conditions spelt out by the Central Bank of Kenya[144]

The MNO only executes client payment instructions and does not perform the credit evaluation and risk management function of a bank. The Mobile network operator model of mobile financial services is different from the mobile banking model in three significant aspects. First, cash exchanged for electronic value are not repaid on terms and remains in control of the customer at all times. To offer M-PESA services the agent must deposit a float of cash upfront in an M-PESA account, held by a local bank. As such there is no credit risk to either the customer or the mobile network operator.[145]

Second, customer funds are not on-lent in the pursuit of other business or interest income. All funds are to be maintained in a pooled trust account at a reputable bank, and cannot be accessed by the mobile network operator to fund its business. Hence, there is no intermediation, which is a key part of the deposit taking definition.[146] Third, no interest is paid on customer deposits, or received by the mobile network operator on the float. This is a further factor which indicates that the e-value created is not in fact a deposit.[147]

Therefore, these services arguably do not constitute "banking business" as defined under Section 2 of the Banking Act.[148] Therefore, they do not require the level of regulatory oversight needed for deposits that are used to fund lending.[149] The depository bank has no involvement in or responsibility for payments through the MNO system. Mobile banking has relatively high costs of a bank account opening (minimum balance, service charges, full Know-Your-Customer

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[144] *Ibid.*

[145] Alliance for Financial Inclusion. (2010). "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-PESA." *op. cit.*

[146] *Ibid.*

[147] *Ibid.*

[148] Under section 2 of the Banking Act, Cap.488, Laws of Kenya, banking business means the accepting from the public of money on deposit, or current account, or the employing of this money by lending, investment or in any other manner for the account and at the risk of the person so employing the money. Hence banks are from the onset licensed to provide various financial deposit and transfer services, under different technologies. See *United Dominions Trust v. Kirkwood*(1966) All ER.

[149] See generally, the Central Bank of Kenya Prudential Guidelines on capital adequacy, liquidity management, proceeds of crime and money laundering, consumer protection, etc., issued under section 33(4) of the Banking Act.

(KYC) requirements, and travel time to a branch), compared to the easy, low cost and increasingly universal access to cell phone services.

The MNO model is therefore highly effective in bringing informal cash transactions into a form of formal financial system, expanding access to financial services.[150]

1.2.3.1.3. Hybrid Model

Since the inception of mobile financial services by MNOs, there has been increased competition between the banks and MNOs in the provision of mobile banking and mobile money transfer services respectively.[151] In addition, there has also been competition within the banking industry, and also between the mobile network operators on the other hand.[152] This has resulted in innovative integration of mobile banking and mobile money transfer and payment services, so as to add value to the services offered by banks to their banking customers, and MNOs to their subscribers.

This integration has resulted onto the evolution of a hybrid type of mobile financial service model. In this model, banks, MNOs and/or other third parties partner to offer mobile financial services that combine mobile banking services and mobile money transfer services. The various types of integration are aimed at fulfilling certain business objectives.

The strategic objectives of mobile network operators includes churn reductions and, to a lesser degree, increase in ARPU, customer acquisition and market differentiation.[153] On the other hand,

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[150] James Bilodeaeau, William Hoffman, and Sjoerd Nikkelen (2011) "Findings from the Mobile Financial Services Development Report,"*op. cit*

[151] See Alliance for Financial Inclusion. (2010). "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-PESA." *op. cit.*

[152] Institute of Economic Affairs (2011) "The State of Competition Report: mobile money transfer, agricultural bulk storage and milling, and the media sectors in Kenya,"*IEA Research Paper Series No.1/2011*, Institute of Economic Affairs (IEA) Nairobi. The authors note that both the MNOs and banks have shortcomings. On the one hand, MNOs do not have expertise in banking and in most cases are not allowed to undertake banking business. On the other hand, the reach out costs to the rural areas by banks is very expensive. This has compelled cooperation between MNOs and banks, and spawned a model that brings the two to cooperate: the MNO-bank model.

[153] Under the Competition Act of 2010, these business models should be regulated by the Competition Authority. The implications of mobile financial services on competition are discussed in detail in Chapter 2.

the banks' main motives are outreach expansion, customer acquisition, cost reduction and traffic diversion from bank branches.[154]

This integration has resulted into the evolution of a hybrid type of mobile financial service model. In this model, banks, MNOs and/or other third parties partner to offer mobile financial services that combine mobile b-anking services and mobile money transfer services. Such hybrid models are mobile network operator based money transfer services that handle payments internally with cash in/out through the MNO's agent network, yet link to formal banking services including savings and loans such as Safaricom's M-KOPA and M-Shwari,[155] and insurance.[156] This is done in partnership with a regulated financial institution by enabling communications with the bank and transfers between the user's SIM-based mobile money transfer account (e-wallet) and accounts at the bank.[157] Most mobile financial services are hybrid, drawing on the relative strengths of the partners involved.

In essence, the mobile financial service models described above are a continuum, captured in table 1 below:[158]

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[154]AiazeMitha (2011) "The transformative role of Mobile Financial Services and the role of German Development Cooperation,"*Deutsche GesellschaftfürInternationaleZusammenarbeit (GIZ)*Eschborn.

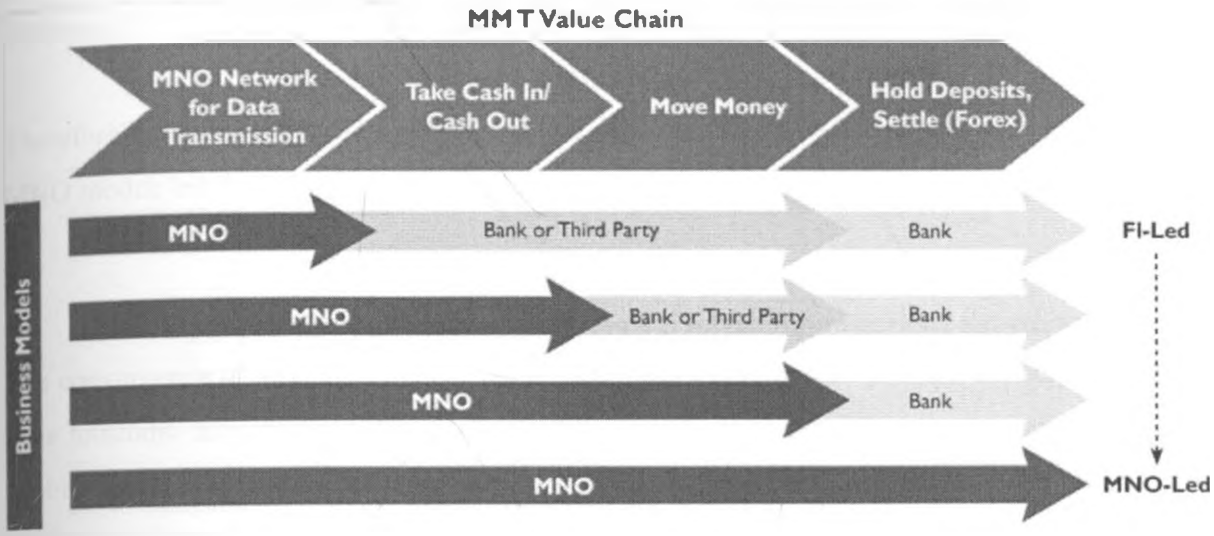
[155]Safaricom partnered with M-KOPA Kenya Ltd in October 2012 to launch a credit sale, pay-as-you-go solar lighting solution. Targeted at the low-income segment, which would otherwise not access the same credit line from banks, this service, dubbed M-KOPA, provides a flexible, affordable financing plan through the M-PESA platform for ordinary people to own assets that are basic and essential in their lives. Safaricom also launched M-Shwari in November 2012, a revolutionary banking service for its M-PESA customers, in partnership with Commercial Bank of Africa. CBA has held the M-PESA money transfer trust account since its inception and is the major channel through which agents replenish their e-money reserves. M-Shwari allows customers to save and borrow money through the mobile phone while at the same time earning interest on the money saved. The service is paperless and eliminates visits to a bank branch.

[156]Christine ZhenweiQiang, Siou Chew Kuek, Andrew Dymond and Steve Esselaar(2011) "*Mobile Applications for Agridulture and Rural Development*,"*op. cit.* Mobile applications for agriculture and rural development (m-ARD apps) have expanded access to finance and insurance products in rural areas.

[157]USAID and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix,"*op. cit.*

[158] International Telecommunications Union (2012) "Trends in Telecommunication Reform 2012: smart regulation in a broadband world," International Telecommunication Union, Geneva, Switserland.

Table 1: Mobile money transfer value chain



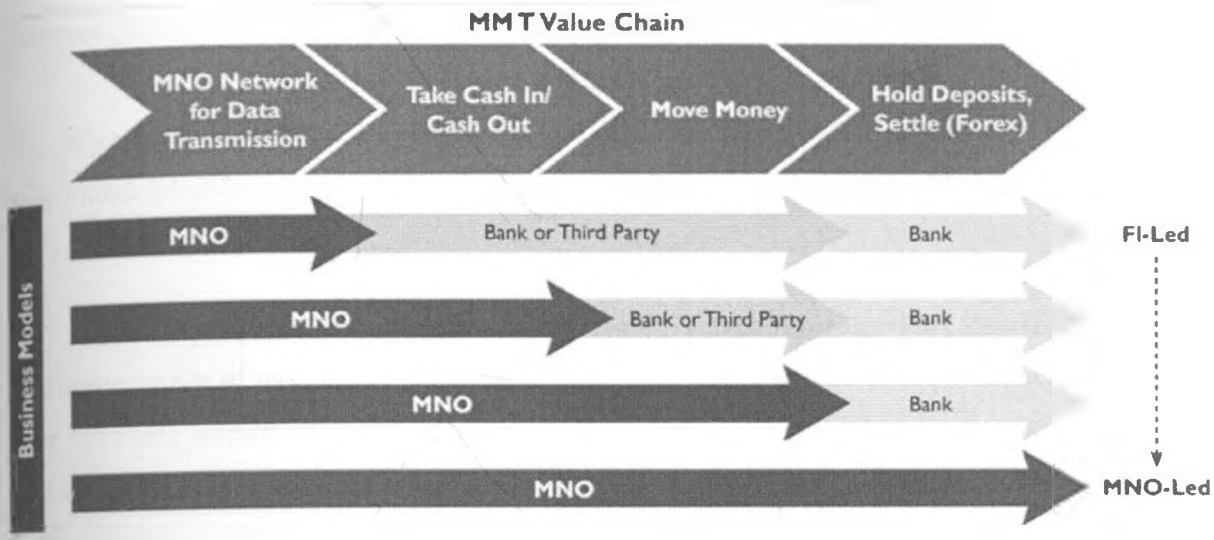
In Kenya, mobile financial services such as M-PESA, ZAP, Orange Money and Yu Cash, offered by mobile telecommunications companies were originally under the pure mobile network operator (MNO) model described above.[159]

However, increased integration of some of these mobile money services with mobile banking services has created hybrid models. Data from the Central Bank of Kenya shows that Kshs. 1.117 trillion changed hands through mobile phone money transfers helped largely by increased interface between commercial banks and the cash remittance services of mobile network operators. CBK said the increase in mobile money transfers in 2013 was fuelled by a high number of consumers moving money in their bank accounts using mobile phones.[160] Some of the notable hybrid mobile money transfer solutions launched since the introduction of mobile financial services include: Safaricom's Mkesho and Mobicash, Orange Telkom's Orange money, Essar Telecom's Yu-cash, Elma, Pesa-Pap, Pesa-Connect among others.[161]

Nevertheless, because the main service infrastructure for the services remain the telecommunications infrastructure, the MNOs have continued to be the main stakeholders in the

[159] USAID and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix,"*op. cit.*
[160] David Mugwe and Mark Okuttah (2012) "Mobile money transfers reach Sh1trn as banks, telcos link up" Business Daily, Sunday March 31, 2013, Nairobi.
[161] Central Bank of Kenya (2010) "Bank Supervision Annual Report 2010,"*op. cit.*

Table 1: Mobile money transfer value chain



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[160] David Mugwe and Mark Okuttah (2012) "Mobile money transfers reach Sh1trn as banks, telcos link up" Business Daily, Sunday March 31, 2013, Nairobi.
[161] Central Bank of Kenya (2010) "Bank Supervision Annual Report 2010,"*op. cit.*

provision of these mobile financial services offered as telecommunications Value Added Services (VAS).

Therefore the mobile financial services model considered by this research is predominantly the MNO model, but factoring in the increasing integration of mobile banking characteristics.

1.3 The Impact of Mobile Financial Services on Telecommunications Services

The convergence of mobile and financial services, and the provision of these converged services over telecoms infrastructure has fundamentally transformed the telecoms business in Kenya. Mobile network operators have further diversified their revenue streams from voice and data services, to financial services.[162] For example, Safaricom's M-PESA has become so integral to the network operator's entire business model, considering that revenue from its mobile financial services account for up to 13% of its annual revenue.[163] The increasing profitability of mobile financial services to the entire enterprise has prompted mobile network operators in Kenya to intensify their financial and marketing resources in innovations aimed at growing their market share.

It is in this context that a second impact of the introduction of mobile financial services is exhibited in the telecoms business. Kenyan mobile network operators are increasingly integrating their mobile financial services with the other voice and non-voice telecoms services such as data services, offered by the operators.[164] This is by way of service bundling.[165] For example, when a customer purchases a Safaricom mobile telephone line, he or she is offered a SIM-based M-PESA account.[166] In addition, the subscriber can buy voice credit, and data bundles using M-PESA.[167] This service integration has significant implications with regard to the state of

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[162] David Cracknell (2012) "Policy Innovations to Improve Access to Financial Services in Developing Countries," Centre for Global Development, Washipgton DC.

[163] Safaricom Limited (2012) *Annual Report and Group Accounts for the Year Ended March 2012, op. cit.* The size of M-PESA's revenue is significant when Safaricom's business model, as a market leader, is put in the perspective of prohibited market practices under the Competition Act, 2011. These issues are discussed in detail in in Chapter 2.

[164] Michael Klein and Colin Mayer (2011) "Mobile Banking and Financial Inclusion: the regulatory lessons," Policy Research Working Paper 5664, The World Bank, Washington DC.

[165] See the definition of restrictive trade practices under section 21 of the Competition Act, 2011.

[166] Michael Klein and Colin Mayer (2011) "Mobile Banking and Financial Inclusion: the regulatory lessons,"*op. cit.*

[167] *Ibid.*

competition in the telecoms sector, and its regulation under the Kenya Information and Communications Act, and the Competition Act, 2011.[168]

1.4 Conclusion

This chapter has explored the first research question: has the convergence of mobile and financial services changed the traditional nature of communications services offered by mobile network operators? The hypothesis that has undergirded the study is that the convergence of mobile and financial services has blurred the distinction between telecommunications and Value Added Network Services (VANS), and changed the definition of telecommunications.

In this effort, the chapter has analysed the process of convergence in ICT generally, and telecoms in particular. It has described the convergence of mobile and financial services in Kenya, and the resultant converged service known as "mobile financial services". In addition, it has mapped out the business processes of providing mobile financial services, with the aim of appreciating the roles and functions of various stakeholders in the mobile financial services sector. These stakeholders include regulators, mobile network operators, other market players, the consumers, and the State. The main aim of this discourse has been to determine whether mobile financial services are financial services to be regulated by the Central Bank of Kenya, or telecoms services, to be regulated by the Communications Commission of Kenya.

As discussed in section 1.2.3 above, the design of mobile financial services by mobile network operators in Kenya has removed it from the ambit of banking business as defined under Section 2 of the Banking Act.[169] However, the Central Bank of Kenya has become the primary regulator of mobile financial services in Kenya. On the other hand, the Communications Commission of Kenya, the body designated by the Kenya Information and Communications Act as the primary regulator of mobile network operators, has taken a secondary role in regulating mobile financial services.

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[168] These issues are explored in detail in Chapter 2.

[169] Alliance for Financial Inclusion. (2010). "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-PESA." *op. cit.*

However, the architecture of the operations of mobile financial services, as described above, show that mobile network operators in Kenya have crossed the threshold of carriers of financial information, to providers of a financial service. This raises important regulatory issues, with regard to the role of the telecoms regulators in the provision of mobile financial services.

Therefore, Kenyan regulators and policy makers such as the Central Bank of Kenya and the Communications Commission of Kenya have still had to grapple with the question of whether, under the M-PESA model, telecoms service providers remain mere carriers of financial information under the Kenya Information and Communications Act, payment service providers under the National Payment Systems Act, or have become providers of a financial service under the Banking Act.[170] This question is significant, since it determines the extent to which telecoms laws and policies impact on converged mobile and financial services.

Chapter 2 attempts to answer this question by exploring the second research question: whether Kenya's telecoms regulations recognized inter-sectoral converged services such as mobile financial services, as telecommunications services. It analyses the impact of the emergence of mobile and financial service convergence on specific issues in telecommunications regulation. These are: licensing and authorization, competition, interconnection and interoperability, universal access and service, and quality of service.

[170] Zorayda Ruth B. Andam and Christian Gerard P. Castillo, *Regulating Communications in a Converging Environment: technology, markets and dilemmas*, Philippine Law Journal, Vol. 79, (Oct. 2004) p. 392. See also, Rob Frieden (2002)*Wither Convergence: Legal, Regulatory, and Trade Opportunism in Telecommunications*, 18 Santa Clara Computer & High Tech. L.J. 171.

CHAPTER TWO

2.0 THE IMPACT OF CONVERGENCE OF MOBILE TELECOMS AND FINANCIAL SERVICES ON REGULATION OF MOBILE TELECOMMUNICATIONS

2.1 Introduction

Chapter 1 has discussed the nature and process of network, market, service and regulatory convergence in ICT generally.[171] It has also discussed convergence specific to telecommunications, and how it has transformed the nature of telecommunications service provision.[172] It has traced the emergence of mobile financial service provision by Kenyan Mobile Network Operators (MNOs), and outlined the mechanics of these services.[173] Chapter 1 has appreciated the significant impact that mobile financial services have had on mobile telecommunications business.[174] This background is necessary for exploring the impact that the convergence of mobile and financial services has had on telecommunications policy, law and regulation.

This chapter picks up the discourse from here, and attempts to answer the second research question: do Kenya's telecoms regulations recognize inter-sectoral converged services such as mobile financial services, as telecommunications services? It discusses the policy and regulatory issues and challenges that mobile financial service provision has presented to mobile telecommunications policy, law and regulation. It assesses the adequacy of Kenyan telecommunications law in dealing with these issues.

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[171] See Section 1.2.1 of Chapter 1 below.

[172] For a concise description of network, market, service and regulatory convergence of ICTs, see Gatana Kariuki (2009) "Growth and Improvement of Information Communication Technology in Kenya,"*op. cit.* See also, Organization for Economic Cooperation and Development (2008)*Convergence and Next Generation Networks*, *op. cit.*

[173] For a detailed review of the workings of M-Pesa, see Mercy W. Buku and Michael W. Meredith (2013) "Safaricom and M-pesa in Kenya: financial inclusion and financial integrity,"*Washington Journal of Law, Technology & Arts Volume 8, Issue 3*, pp. 375-400. See also, Jenny C. Aker and Isaac M. Mbiti (2010) "Mobile Phones and Economic Development in Africa,"*op. cit.*

[174] There are at least two types of impact. First, mobile financial services have diversified the revenue streams of MNOs, especially Safaricom, from the predominant source, voice and data. Second, Kenyan mobile network operators are increasingly integrating their mobile financial services with the other voice and non-voice telecoms services such as data services, offered by the operators. See Safaricom Limited (2012) *Annual Report and Group Accounts for the Year Ended March 2012*, *op. cit.* See also, Michael Klein and Colin Mayer (2011) "Mobile Banking and Financial Inclusion: the regulatory lessons," Policy Research Working Paper 5664, The World Bank, Washington DC.

hypothesis set forth is that Kenya's telecommunications laws and regulations are ambivalent
) the status of converged services such as mobile financial services, within the definition of
communications services'. The framework for discussion is structured around the following
telecommunications regulatory issues: authorization and licensing; interconnection and
roperability; competition; universal access and service; and quality of service (QoS).[175]

Role of Telecommunications Law in Regulation of Mobile Financial Services

Kenya, the debate on regulation of mobile financial services has focused more on the
quacy or otherwise of the financial services regulations enforced by the Central Bank of
ya (CBK).[176] Little debate has centred on the role of the Communications Commission of
ya (CCK). This is despite the fact that mobile financial services such as M-PESA are
sified by the Kenya Information and Communications Act of 1998 as Value Added Services
S) in the context of telecoms, and therefore also regulated under the Act. In addition, as
ussed in section 1.2.3.1(d) in Chapter 1, mobile financial services are modeled into
ntially electronic transactions regulated by the CCK.[177]

ddition, regulatory reforms as a result of ICT convergence has focused on convergence
in various ICT sub-sectors, and not between ICT and other non-ICT sectors, such as
ncial services sectors.[178] The increasing convergence between telecom and financial services
challenged the present debate on regulatory reforms in the telecoms sector. It is in this
ext that the following section examines the impact of mobile financial services on the

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ie Kenya Information and Communications Act of 1998 places emphasis on the regulation of these issues, in
ion to spectrum use and management.

chard Duncombe & Richard Boateng (2009) "Mobile Phones and Financial Services in Developing Countries: a
w of concepts, methods, issues, evidence and future research directions,"*Working Paper Series No. 37*, Centre
Development Informatics, Institute for Development Policy and Management, SED, University of Manchester,
chester.

art VIA of the Kenya Information and Communications Act makes provision for the recognition of electronic
actions in Kenya. Mobile Money transfer is essentially an electronic transaction. However, on the banking
, there has been greater progress in the regulation of mobile financial services. Parliament has enacted the
onal Payment Systems Act, No. 39 of 2011. In addition, the Central Bank of Kenya has come up with Draft
ulation for the Provision of Electronic Retail Transfers. Value Added Services under the Kenya Information and
munications Act are provided for in Section 2 of the Kenya Communications Regulations, 2001.

or example, Kenya's 2006 ICT policy does not anticipate inter-sectoral convergence. In addition, as discussed
nsively in Chapter 3, the Kenya Information and Communications Act also fails to anticipate inter-sectoral
ergence. See Republic of Kenya (2006)*National Information and Communications Technology (ICT) Policy*,
istry of Information and Communications, Government Printer.

traditional issues in mobile telecommunications regulation. These include licensing and authorization, interoperability and interconnection, competition, universal service access, quality of service, tariff regulation and numbering.

2.3 Authorization and Licensing of Mobile Telecoms Business

Authorization and licensing of telecommunications service providers is a core function of the Communications Commission of Kenya. Section 5 of the Kenya Information and Communications Act, defines the main function of the CCK as the licensing and regulation of postal, information and communications services. In addition, section 25 of the Act makes elaborate provisions for the licensing of telecommunications services.[179]

Authorization is a tool of regulation which an undertaking needs to acquire in order to participate in a regulated market such as the telecommunications sector, where the undertaking provides public services.[180] Licensing is a specific type of authorization which permits a telecommunications provider to provide specific equipment, networks, and/or services, provided the undertaking satisfies certain conditions and requirements.[181]

2.3.1. The rationale for authorization and licensing in telecoms regulation

The regulatory power of licensing in the telecommunications sector in Kenya and globally has legal, economic and social underpinnings. Its main objective is to balance public and private interests by controlling the benefits and disadvantages of a telecommunications market.[182]This is especially where telecommunications services in Kenya such as mobile telephony and related

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[179] Cap. 411A, Laws of Kenya.

[180] The Kenyan courts have also underscored the importance of the state's regulatory activity in form of licensing. In the case of *Murang'a Bar Operators & Another v Minister for State for Provincial Administration and Internal Security & 2 Others* [2011] eKLR, the Applicants contested the constitutionality of legislation providing for licensing the sale of liquor. The Courts held that, even in the absence of a proper licensing framework, the State cannot just let certain activity such as sale of liquor go unregulated. See also, John Buckley (2003)*Telecommunications Regulation, Op. cit.*

[181] Ian Walden and John Angel (2005)*Telecommunications Law and Regulation*, Oxford University Press, Oxford.

[182] Monica Kerrets (2004)"ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*op. cit.* The Courts have also appreciated the nature of telecommunications services as public goods. For example, in *Observer Publications Limited v Campbell Mickey Mathew and Others* (2001) 10 B.H.R.C. 252, a casefrom the Commonwealth Caribbean, which dealt with constitutional provisions relating to freedom of expression similar to those of the Constitution of Kenya of 1969, the Privy Council held that *"The airwaves are public property whose use has to be regulated and rationed in the general interest."*

services have become so crucial for social, economic and even political inclusion, to more than half of Kenya's population.[183]

The CCK realizes this objective by exercising the powers of selecting applicants, withdrawing licences, and imposing conditions on licencees and applicants.[184] Specific objectives of authorization and licensing include revenue collection,[185] regulation of market entry, market liberalization, public notification, quality of service control, and regulatory enforcement. Other objectives include allocation of scarce resources[186] and vesting of proprietary rights.[187]

Indeed, the constitutional and statutory authority of the Communications Commission of Kenya (CCK) to licence telecommunications service providers has been challenged in many instances, especially by Royal Media Services (RMS), a radio and television broadcaster, over the last 12 years. The constitutionality of its licensing powers have been questioned, against the freedoms of speech, expression, and the media, currently enshrined in Articles 33 and 34 of the Constitution of Kenya. The High Court of Kenya has recently re-emphasized the important constitutional and statutory regulatory role of the CCK in telecommunications, undertaken through its licensing powers.[188]

The convergence between various aspects of ICT and non-ICT services with telecoms services has challenged the traditional framework for authorization and licensing in Kenya. Kenya's telecom regulatory framework has been criticized for hindering, rather than being indifferent, to

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[183] Jenny C. Aker and Isaac M. Mbiti (2010) "Mobile Phones and Economic Development in Africa,"*Journal of Economic Perspectives,op. cit.*

[184] Licensing powers are vested and operationalized by sections 5 and 25 of the Kenyan Information and Communications Act, Cap. 411A, Laws of Kenya.

[185] CCK's total estimated income for the year 2012/2013 is Kshs. 6.22 billion. See Communications Commission of Kenya, (2013)*Annual report financial year 2011/12*, Nairobi.

[186] In *Red Lion Broadcasting Co. v FCC* 395 US 367 (1969)the US Supreme Court underscored the nature of telecom frequencies as scarce resources.

[187] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*. The author, in his analysis of the licensing procedure in the broadcasting arena in Kenya, argues that licensing allocation should be based on an applicant's ability to deliver services.

[188] The High Court, in *Royal Media Services Ltd v Attorney General & 2 others* [2013] eKLR, was faced with the question whether CCK's regulatory powers of licensing infringed on freedoms of speech, expression and the media under articles 33 and 34 of the Constitution. It held that Article 34 does not exclude regulation of electronic media and in fact contemplates licencing procedures that,*"are necessary to regulate the airwaves and other forms of signal distribution."*

convergence.[189] This is because the context of convergence and liberalization of ICT and other related sectors requires an authorization and licensing framework that encourages growth of new applications and services.[190] This is only achieved with licensing frameworks that have simple procedures, are flexible enough to promote market and technological development, and encourage competition through flexible market entry.[191]

The convergence between mobile and financial services in the telecoms sector in Kenya raises important issues with regard to the licensing of mobile financial services and other converged telecoms services. I address these issues below, in the context of the ability of the authorization and licensing framework to promote innovation and development of converged mobile financial services.

2.3.1.1. Specific versus general authorizations and licenses

The emergence of converged telecoms services such as mobile financial services has challenged the ability of the licensing regulations to allow for the provision of non-traditional telecoms services by mobile network operators in Kenya.[192] Traditionally, most licences issued by CCK to telecommunications service providers were technology-specific and service-specific licences. This means that a licencee was authorized to provide a particular type of service over a specific type of network.[193] Indeed, in the past, authorization and licensing of mobile network operators in Kenya was done on the basis of distinct technologies and services they offered.[194]

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[189] Monica Kerrets (2004)"ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*Op. cit.* The author argues that [before the enactment of the 2008 Kenya Communications (Amendment) Act] in the Kenyan context, the issue is not first and foremost that of convergence but of whether the regulatory system itself hinders convergence. She notes that the major concern therefore is that the regulatory barriers constrict the materialization of the potential economic and social benefits of competition and ICT.

[190] *Ibid.*

[191] I discuss preferred regulatory frameworks for convergence later in Chapter 3. For optimal telecom regulatory frameworks for telecom convergence, see Ben Sihanya and James Otieno Odek (2006) "Regulating and mainstreaming ICT for Kenya's socio-economic development,"*op. cit.* See also, James Prieger (2000) "Regulation, Innovation, and the Introduction of New Telecommunications Services," Working Papers 00-8, University of California at Davis, Department of Economics.

[192] The Kenya Information and Communications (Licensing and Quality of Service) Regulations, 2010, provide an elaborate framework for the licensing of telecommunications services.

[193] Colin Blackman and Lara Srivastava (2010)*Telecommunications Regulation Handbook*, The World Bank, Washington DC.

[194] Communications Commission of Kenya (2009)*Annual report financial year 2008/09*, at http://www.cck.go.ke/resc/publications/annual_reports/CCK_Annual_Report_2008_2009.pdf (accessed on 8/8/12).

ICT convergence and the emergence of such services as mobile financial services rendered the technological and service oriented licensing approach untenable.[195] For example, the introduction of fiber-optic cables and Third Generation (3G) spectrum in Kenya allowed MNOs to provide internet services which were traditionally the market preserve of ISPs, through the mobile phone handset.[196] Hence MNOs would have required separate licences to provide internet services and mobile telecom services.

Consequently, in 2008, the CCK adopted a Unified Licensing Framework (ULF) as a mechanism of harnessing the emerging technological opportunities as well as addressing the emerging regulatory challenges of convergence. This framework is based on the principle of technology neutrality and service neutrality that allows any form of communications infrastructure to be used to provide any type of communications service.[197] Mobile financial services such as M-PESA, ZAP, Orange and Yu Cash are therefore treated as Value Added Services (VAS) offered under the unitary telecommunications licence.[198]

ICT industry analysts have lauded the introduction of ULF in Kenya. They have credited it for the simplified licensing procedures, development of new applications, and increased penetration and availability of mobile internet, as well as increased infrastructure investment.[199]The ULF is conducive to the development and further innovation in mobile financial services and other converged services. However, as discussed further below, the Kenya Information and Communications Act is not clear on whether mobile financial services are communications services or Value Added Services, or none of the foregoing. This has had implications on the other areas of mobile telecoms regulation other than licensing.

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[195] The need to promote innovation and new investment in the ICT and related sectors, and to create a competitive ICT economy within the region, prompted the CCK to introduce ULF. After delays and discussions with the operators and the public, ULF became effective from late 2008 after the Ministry of Information and Communication issued new policy guidelines. See Timothy Waema, Catherine Adeya, and Margaret Ndung'u (2010)*Kenya ICT Sector Performance Review 2009/2010: Towards Evidence-based ICT Policy and Regulation,op. cit.*

[196]Mandla Msimang (2011)*Broadband in Kenya: build it and they will come, op. cit.*

[197] Communications Commission of Kenya (2009)*Annual report financial year 2008/09, op. cit.* See also, Stella Ndemo and Mwende Njiraini (2009) "Enabling NGN Regulatory Ecosystem for a Developing Country: Kenya," Communications Commission of Kenya, Nairobi.

[198] Section 2 of the Kenya Communications Regulations, 2001, defines "Value Added Services" as such services as may be available over a telecommunications system in addition to voice telephony service.

[199] Timothy Waema, Catherine Adeya, and Margaret Ndung'u (2010)*Kenya ICT Sector Performance Review 2009/2010: Towards Evidence-based ICT Policy and Regulation,op. cit.*

2.3.1.2. Licensing fees

Ben Sihanya (2000) has argued that license fees should not be dispositive.[200] License fees should reflect the services that are being provided by the regulator to the licensee.[201] These services include processing of compliance issues, advise on investment opportunities, monitoring and enforcement of regulations, and dispute resolution.[202]

The CCK's total estimated income for the year 2012/2013 is Kshs. 6.22 billion, while its operating expenditure for the year 2012/2013 is estimated at Kshs. 1.89 billion.[203]The CCK uses authorization and licensing as a revenue collection tool, as provided under section 25 of the Kenya Information and Communications Act.[204] It levies fees and penalties to finance its regulatory and administrative duties in the sector, and also to enforce regulations.

The Kenya Information and Communications (Licensing and Quality of Service) Regulations, 2010,[205] provides for licensing based on market structure. It provides for licence application fees of Kshs. 10,000/=, initial operating licence fees of Kshs. 15,000,000/=, and an annual operating fee of 0.5% of Annual Gross Turnover or KShs. 5 million, whichever is higher. There is also an access fee for frequency spectrum based on a bid/assessed price for specific frequency spectrum Exclusive utilisation.[206]

The CCK telecommunications licensing fees policy affects the provision of mobile financial services at two levels. First, as has been argued by the Kenya Telecom Network Operators (KTNO), the licence fees are too high, considering the reduced earnings of mobile service providers, occasioned by price wars.[207]

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[200] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.*

[201] *Ibid.*

[202] *Ibid.*

[203] Communications Commission of Kenya, (2013)*Annual report financial year 2011/12*, Nairobi.

[204] Section 25(3)(d) of the Kenya Information and Communications Act empowers the CCK to levy fees against applicants for licences granted under the Act.

[205] Kenya Information and Communications Act, Cap. 411A of 1998.

[206] *Ibid.*

[207] Emmanuel Were, Mwaura Kimani and Christine Mungai (2012) "Short of cash, Orange, Yu, Airtel, struggle to crack Kenya market" *The East African* (Nairobi)Saturday August 11, 2012. See also, Mark Okuttah (2012) "CCK Board Split over Telcos' Appeal to Lower Licence Fees,"*Business Daily* (Nairobi) Thursday January 5, 2012.

Second, the fees levied by the CCK for the issuance of 3G licences, on which provision of mobile financial services is hinged, are considered by some MNOs and even Information Ministry officials to be punitive and uncompetitive.[208] For example, in 2010, Safaricom sued the Communications Appeals Tribunal and the Minister for Information and Communication alleging fee discrimination in the issuance of a 3G license.[209] They argued that their main competitors, Airtel, had been charged significantly lower fees for a 3G license, and therefore had financial advantages in the market.

Aside from the criticism towards CCK over uncompetitive and non-uniform levying of 3G licence fees, such huge licensing fees have also been criticized on the grounds that they may render telecommunications service providers insolvent. This is especially when the licensees are rendered irrelevant by rapidly changing technology, before the licensees can recoup their investments.[210] These reasons may make mobile financial service providers reluctant to invest in new and improved networks and to adopt a wait-and-see attitude.[211]

While there are no direct and specific fees levied by the CCK on provision of mobile financial services, there is need for the regulators to examine whether the general fees under the Unified Licensing Framework are excessive.[212]This should be in a bid to ascertain whether these fees undermine the ability of MNOs to reinvest their profits into other innovations and developments in the era of converging technologies and services.[213]

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[208]Mark Okuttah (2011) "CCK to issue joint 4G licence in bid to lower Internet costs,"*Daily Nation* (Nairobi) Wednesday August 24, 2011.

[209]*Republic v. Communications Appeals Tribunal & Another* Ex-Parte*Safaricom Limited*, Miscellaneous Civil Application 257 of 2010, High Court of Kenya at Nairobi [eKLR].

[210]Ian Walden and John Angel (2005)*Telecommunications Law and Regulation*, *op. cit.*

[211]Deloitte (2011) "Mobile Telephony and Taxation in Kenya,"*op. cit.* See also, Emmanuel Were, Mwaura Kimani and Christine Mungai (2012) "Short of cash, Orange, Yu, Airtel, struggle to crack Kenya market" *The East African* (Nairobi)Saturday August 11, 2012.

[212]Mark Okuttah (2011) "CCK to issue joint 4G licence in bid to lower Internet costs,"*op. cit.*

[213]Deloitte (2011) "Mobile Telephony and Taxation in Kenya,"*op. cit.*According to the report, of particular concern to MNOs' investment in the country's network are custom duties applying to the network inputs required for the operation of mobile network, and spectrum fees. These are set in a way that may discourage investment, as fees increase with the number of sites set up by MNOs.

2.3.1.3. Regulation of market entry and market structure

Licensing is also a tool for regulating market entry, for instance, to regulate competition.[214] The use of licensing as a market regulation tool can give the incumbents the incentive to increase investments in innovations and improve their telecommunications infrastructure. MNOs increase investments in new infrastructure and innovative services with the optimism of recouping their investments in a sub-optimal market.[215]

For example, the CCK's policy of initially restricting the market structure to a duopoly of Safaricom and Kencell (now Airtel) encouraged the two Mobile Network Operators, especially Safaricom, to plough back a lot of their profits into infrastructure investments and rollout of new and innovative services such as M-PESA.[216] This allowed the development of the mobile financial services by the market players.[217]

Indeed, studies by Bilodeaeau, Hoffman, and Nikkelen (2011) show that competitiveness of the financial services and telecommunication markets does not necessarily assure high adoption rates. They contend that, in fact, countries with high mobile financial service adoption levels, for example Kenya, Tanzania, and Ghana are not characterized by highly competitive markets.[218]

With the opening up of the market to two additional players, Telkom Kenya[219] and Essar,[220] the market dynamics have changed. This has driven Safaricom, the dominant market player, to be

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[214] Statutory frameworks for competition, especially by way of licensing, are integral to the realization of the freedoms of speech, expression and the media, under Articles 33 and 34 of the Constitution. In *Cable and Wireless (Dominica) Limited v Marpin Telecoms* (2000) 9 B.H.R.C 486, the court concluded that a person's freedom to communicate ideas and information through telecommunications could be threatened by the grant of a statutory monopoly.

[215] Ivan Mortimer-Schutts (2007) "The Regulatory Implications of Mobile and Financial Services Convergence," in *The Transformational Potential of M-Transactions: moving the debate forward*, The Policy paper Series No. 6, July 2007.

[216] The courts have rendered market-restriction regulatory policies as an impediment to freedoms of speech, expression and the media. For example, in the case of *Observer Publications Limited v Campbell Mickey Mathew and Others* (2001) 10 B.H.R.C. 252, the Court held that freedom of expression includes freedom to disseminate information and ideas by broadcast and that denial of a broadcasting licence through administrative procrastination was totally unjustified. The Court went further and held that a broadcasting licence could only be refused on grounds consistent with the Constitution.

[217] See James Bilodeaeau, William Hoffman, and Sjoerd Nikkelen (2011) "Findings from the Mobile Financial Services Development Report,"*op. cit.*

[218] *Ibid.*

[219] Communications Commission of Kenya (2010)*Annual report financial year 2008/09*, *op. cit.* In September 2008, Telkom Kenya, a company co-owned by France Telecom (51% shareholding) and the Government of Kenya (49%

nore careful in its infrastructure investments, as its market shrinks.[221] Hence there is need for the CK to carefully wield its licensing powers in a manner that promotes competition, but also uarantees the growth of the telecoms sector.[222] Competition is discussed more broadly further elow.

.4 Interconnection and Interoperability

nterconnection, from a telecommunications perspective, refers to the physical and logical inking of telecommunication networks used by the same or different service licencees. This inking is in order to allow the users of one licencee to communicate with the users of the same r another licencee or to access services provided by another licencee.[223]

For example, interconnection of mobile network operator infrastructure allows subscribers of Safaricom to call, text, and receive calls and texts from Airtel network subscribers. nteroperability, on the other hand, means the ability of communication systems, units or lements to provide services and to accept services from other systems, units or forces, and to se the services exchanged to enable them operate effectively together.[224]

For example, interoperability of Safaricom's and Airtel's mobile financial service platforms would allow subscribers of M-PESA to send and receive money from ZAP, respectively.

This section examines the interconnection and interoperability issues that the convergence of mobile and financial services raises, and whether the telecoms regulations have sufficiently addressed these issues.

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shareholding) launched its Orange Mobile brand by building the GSM 900 and 1800 MHz network to reach 3,501 ransceivers by end of the financial year.

[220] *Ibid.* In November 2008, Essar Telecoms, a multi-national conglomerate, also launched the "yu" brand with the rollout of GSM 900 and 1800 MHz band network to reach 1,107 transceivers by June 2009.

[221] PricewaterhouseCoopers (2012) "Telecoms in Africa: innovative and inspiring,"*Communications Review*, Volume 17, No. 1, PricewaterhouseCoopers, New York.

[222] Mike Nxele and Thankom Arun (2005) "Regulatory Impact on the Development of the Telecommunications Sector in East Africa: a case study of Kenya,"*Working Paper Series, paper No. 99*,Centre on Regulation and Competition, Institute for Development Policy and Management, University of Manchester, Manchester.

[223] Section 2 of the Kenya Information and Communications (Interconnection and Provision of Fixed Links, Access and Facilities) Regulations, 2010.

[224] Section 2 of the Kenya Information and Communications (Interconnection and Provision of Fixed Links, Access and Facilities) Regulations, 2010.

2.4.1. The rationale for regulation of interconnection and interoperability

Interconnection and inter-operability in telecommunications is justified by at least three reasons. First, interconnection of different telecommunications service providers is justified from a consumer benefit perspective, in that the bigger a communications network is, the better it is for a customer, or subscriber.[225] This is because the customer can reach a large number of people without having to own two or more communication lines.[226] Secondly, interconnection allows valuable network externalities to be captured, and avoids inefficient deployment of duplicative or inefficiently-sized networks.[227] This protects the environment, and conserves resources for other infrastructure innovations.[228]

Facilities sharing, which is a related concept to interconnection, in the mobile telecoms sector in Kenya is increasingly being exhibited by way of tower-sharing and infrastructure sharing arrangements. For example, in August 2011, Safaricom and Telkom Kenya announced that they were entering a tower-sharing deal with each other. This was in a bid to reduce capital and operational expenses in the competitive sector that has seen voice revenues shrink.[229] A month earlier, Nokia Siemens Network (NSN) had also announced that it would start building telecoms infrastructure for leasing to mobile phone operators as it battles competition from Chinese firms Huawei and ZTE.[230]These moves have sparked a debate within the telecoms sector on whether the sector regulator should legislate on interconnection, infrastructure sharing and an open access policy.[231]

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[225] Bede Chukwudiebube Opata (2011) "Transplantation and Evolution of Legal Regulation of Interconnection Arrangements in The Nigerian Telecommunications Sector,"*International Journal of Communications Law and Policy*, Issue 14, Summer 2011.

[226] John Buckley (2003)*Telecommunications Regulation, op. cit.*

[227] Ivan Mortimer-Schutts (2007) "The Regulatory Implications of Mobile and Financial Services Convergence,"*op. cit.*

[228] Colin Blackman and Lara Srivastava (2010)*Telecommunications Regulation Handbook*, The World Bank, Washington DC, at pp. 129.

[229] Mark Okuttah (2011) "Mobile firms enter into leaseback agreements to cut costs" *Business Daily* (Nairobi)Thursday, August 11, 2011.

[230] Mark Okuttah (2011) "Nokia takes on Huawei and ZTE with leasing plan" *Business Daily* (Nairobi)Wednesday, July 27, 2011.

[231] Joshua Goldstein (2008) "Embracing 'Open Access' in East Africa: A common internet infrastructure policy agenda for human security and economic development,"*Journal of Public and International Affairs 19*, pp. 139-150. The author noted that governments and incumbent telecom companies in East Africa are unmotivated to change this status quo because they currently form a cartel that profits from the rent-seeking activities of limited competition and closed access. See also, Mark Okuttah (2013) "Telcos lock horns over sharing of infrastructure" *Business Daily* (Nairobi)Wednesday, May 22, 2013.

Third, interconnection promotes competition in the market.[232] In market structures where there is one dominant MNO new subscribers tend to prefer that significant market player (SMP) over other lesser players.Safaricom, which boasts a 65% market share, has benefitted from this new subscriber pattern.[233] This is because subscribers derive the benefit of connecting to a wider number of people at once.[234] This is called the "network effect," which subsequently breeds market monopolies.[235] Hence competition is encouraged when a new entrant's customers can receive traffic from or originate traffic to any other user within a marketplace. Competition is also encouraged when a new entrant can supply network services to a wider population of customers than the limited number who are directly connected as its own customers.[236]

The incentives for inter-connection often depend on the market structure. For example, in a startup market, where networks are small and not interconnected, competing firms have a strong incentive to interconnect so as to stimulate market growth.[237] However, where the market is asymmetrical, with one dominant MNO, such as Safaricom, then it shall not have the incentive to connect with new market entrants, as interconnection shall lead to loss of dominant market share [238] The first mover in the market shall feel that the subsequent market entrants only want to have a "free-ride" on the incumbent's investments.[239]

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[232] William H. Melody (1997) "Interconnection: cornerstone of competition," in W. Melody (ed.)*Telecom Reform: Principles, Policies and Regulatory Practices*, Technical University of Denmark, Lyngby, pp. 441-450.

[233] Communications Commission of Kenya (2012)*Annual report financial year 2010/11, op. cit.*

[234] Bede ChukwudiebubeOpata (2011) "Transplantation and Evolution of Legal Regulation of Interconnection Arrangements in The Nigerian Telecommunications Sector,"*op. cit.*The author notes that this might be beneficial to sector incumbents at the onset of liberalisation, as they have all existing subscribers, but prohibitive of new entry.

[235] Ivan Mortimer-Schutts (2007) "The Regulatory Implications of Mobile and Financial Services Convergence,"*op. cit.*

[236] *Ibid.*

[237] *Ibid.*

[238] Mike Nxele and Thankom Arun (2005) "Regulatory Impact on the Development of the Telecommunications Sector in East Africa: a case study of Kenya,"*op. cit.* The author notes that profit motives of dominant market players may be in conflict with socio-economic and development goals, hence the need for regulation of such telecoms aspects as interconnection.

[239] Ivan Mortimer-Schutts (2007) "The Regulatory Implications of Mobile and Financial Services Convergence,"*op. cit.* See also, United Nations Conference on Trade and Development (2012)*Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations*, United Nations, Switzerland.

The right of interconnection has been reaffirmed in determinations by the CCK. These *Interconnection Determination No. 1 of 2010 – Dispute Between Essar Telecom Kenya Limited and Air Touch Connections Limited.*

It is in this context that the discourse on interconnection and inter-operability of communications services has shifted focus to telecoms value added services (VAS) such as mobile financial services networks in Kenya. Two issues stand out. First, should there be regulation of interconnection and interoperability of VAS such as mobile financial services, in telecoms services? Second, do interconnection and interoperability regulatory aspects of VAS fall within the jurisdiction of telecoms regulators or general competition authorities?

It is argued, for example, by the United Nations Conference on Trade and Development (UNCTAD), that interconnection in these mobile financial service platforms is necessary for fostering wider competition in the mobile telecoms and mobile financial services sub-sectors in East Africa.[240] Therefore interconnection and interoperability in VAS is a telecoms rather than a general competition regulatory issue.

There is virtually no interconnection of mobile financial service platforms between Safaricom's M-PESA, Airtel's ZAP, Telkom Kenya's Orange Money and Essar Telecom's Yu Cash.[241] The only form of interconnection is an offline form of interconnection, whereby an M-PESA account holder, for example, can send money to a subscriber of another Mobile Network Operator.[242] The other subscriber receives a Short Message Service code on his/her phone, which code he/she is supposed to present to an M-PESA agent. Upon presentment, the M-PESA agent gives the subscriber physical cash, and then deducts the e-float from the M-PESA account holder.[243]

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[240] United Nations Conference on Trade and Development (2012)*Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations*, *op. cit.*

[241] *Ibid.*

[242] William Jack and Tavneet Suri (2011) "*Mobile Money: the economics of M-Pesa*,"*op. cit.*

[243] *Ibid.*

There are at least three levels of interconnection that can be realized in mobile financial systems in Kenya: platform interconnection, agent interoperability, and customer-level inter-operability.[244] I briefly explore them below.

2.4.2. Platform Interconnection in Mobile Financial Services

Platform interconnection refers to a situation whereby a mobile financial service platform such as M-PESA can permit the transfer of funds from an M-PESA mobile account to the mobile account of another service provider, e.g. ZAP, Orange Money and Yu Cash, in as much the same way as the two subscribers can exchange cash. The recipient of the e-float can then cash-out the money from his own MNO's network of agents.[245] Currently, there is no platform interconnection in Kenya.[246]Other mobile financial service systems in other jurisdictions, such as South Africa's WIZZIT, have operationalized interoperability[247]

As argued above, a first mover in the mobile financial services market may feel that the subsequent market entrants only want to have a "free-ride" on the incumbent's investments.[248] Indeed, this has been exhibited in Safaricom's un-enthusiastic response to Airtel's public calls for the Communications Commission of Kenya to allow other firms to connect to Safaricom's M-PESA platform.[249] It has also been exhibited by the allegations levied by Porting Access Kenya, the firm licensed by CCK to implement Mobile Number Portability (MNP), Airtel and

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[244] Consultative Group to Assist the Poor "Interoperability and Related Issues in Branchless Banking: A framework," at www.cgap.org/gm/document-1.9.56025/CGAP_interoperability_Presentation.pdf (accessed on 8/8/12).

[245] *Ibid.*

[246] *Ibid.*

[247] Octavio Groppa and Fernando Curi (2012) "Mobile Money Regulation: Kenya, Ecuador and Brazil Compared," Universidad Católica, Argentina. The authors note, however, that, when the system is based in the interoperability of the payments between operators, as it is the case of Wizzit in South Africa, new opportunities arise, but also risks multiply, making necessary the existence of supervising authorities. The risk here is the non-cooperation between brokers in order to build a wide base interoperable net.

[248] Ivan Mortimer-Schutts (2007) "The Regulatory Implications of Mobile and Financial Services Convergence,"*op. cit.* See also, United Nations Conference on Trade and Development (2012)*Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations*, United Nations, Switzerland.

[249] David Ochami (2011) "State acts to fix mobile phone wars,"*East African Standard* (Nairobi) Thursday February 24, 2011. In February 2011, the Managing Director of Airtel Kenya, Mr. Renee Mezza, publicly called for Safaricom to allow its competitors to interconnect with the M-Pesa platform.

other competitors and consumers, against Safaricom over refusal to effect number portability.[250] In fact, 7 subscribers to Safaricom's telecom services sued Safaricom over delayed processing of their number portability requests.[251]

2.4.3. Agent Interoperability in Mobile Financial Services

Agent interoperability, on the other hand, refers to the ability of the subscriber of one Mobile Network Operator to use the agent of another provider for cash-in and cash-out services related to that customers account.[252] Where agents are non-exclusive, it deepens financial inclusion by making available a vast network of agents or access points to a larger number of customers in an area.[253] In fact, all the market players in the mobile financial service sector in Kenya, including the regulators, agree that a mobile financial services system requires a ubiquitous network of cash-in/cash-out agents, if it is to succeed.[254]

However, all the Mobile Network Operators in Kenya have so far restricted their agents to serve only transactions originating from their networks.[255] Their reluctance stems from their need to protect their customer base, business model, and unique mobile financial service products, until such a time that they have recouped the high initial investment costs.[256] It has been argued, for example, that Safaricom is acting in an anti-competitive manner by using the first mover

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[250] Mark Okuttah (2011) "Court gags Porting Access in row with Safaricom," *Business Daily* (Nairobi) Tuesday May 10, 2011.

[251] Mark Okuttah (2011) "Consumers sue Safaricom over number transfers," *Business Daily* (Nairobi) Wednesday, May 25, 2011. In a case filed at the High Court on May 11, Alex Gakuru, Humphrey Atuti, Brian Kimani, Alice Njoki, Joseph Mwangi, Mwaura Dennis and Jackson Enonda sought damages for loss of business and an order directing Safaricom to activate their ported numbers without hindrance. The case set the stage for class action suits against service providers as consumers begin to exercise their rights to reasonable quality of services under Article 46 of the new Constitution.

[252] Neil Davidson and Paul Leishman The case for interoperability: Assessing the value that the interconnection of mobile money services would create for customers and operators," *Mobile Money for the Unbanked, Annual Report*, 2012, GSMA, London.

[253] United Nations Conference on Trade and Development (2012) *Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations*," *op. cit.*

[254] Brookings Institution (2012)*Mobile Financial Services and Financial Inclusion*, Brookings Institution, Washington DC.

[255] *Ibid.*

[256] *Ibid.*

advantage it enjoyed to tie up the supply of potential cash merchants, thereby exercising a monopoly and limiting competition.[257]This is by way of exclusive M-PESA agent agreements.[258]

2.4.4. Customer Level Interoperability in Mobile Financial Services

The third level of interconnection is customer level interoperability, which can be explored at two levels. The first scenario is where, for example, M-PESA customers can access their accounts through any Safaricom Subscriber Identification Module (SIM), on Safaricom's network. The second scenario is where customers can access accounts of different MNOs. This level of inter-operability has also not been operationalized in Kenya.[259]

The challenge for telecoms policy makers and regulators in Kenya is whether and when interconnection and interoperability should be regulated.[260] On the one hand, competing mobile financial service mechanisms lead to an increase in friction in retail payments, which in turn reduces the economic growth potential of mobile financial services.[261] The justification for regulation is that interconnection and interoperability will encourage fair competition and innovative market growth in the mobile telecoms sector.[262] On the other hand, industry regulators such as the Central Bank of Kenya (CBK) caution that mandated interoperability is a strike at the proprietary rights of the MNOs, and that challenging those rights risks destroying the mobile financial services market.[263]

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[257] Michael Tarrazi and Paul Breloff (2011) "Regulating Banking Agents," Focus Note No. 68 of 2011, Consultative Group to Assist the Poor at http://www.cgap.org/gm/document-1.9.50419/FN68.pdf (accessed on 15/8/12).

[258] Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," United States Agency for International Development, Washington. Agent level interoperability is particularly important, since Safaricom controls over 40,000 agents across the country and insists that they remain exclusive to Safaricom when it comes to mobile money. The number of small businesses that are qualified and able to be successful mobile money agents is understandably limited, particularly in rural areas, and being able to control those points to the exclusion of other players is of concern to many in the sector.

[259] *Ibid.*

[260] *Ibid.* The author notes that according to the Government of Kenya, it is not whether, but when, interoperability should be mandated by way of regulation. The Ministry of Finance, for example, has commissioned a payments system interoperability study.

[261] Brookings Institution (2012)*Mobile Financial Services and Financial Inclusion, op. cit.* See also, James Bilodeaeau, William Hoffman, and SjoerdNikkelen (2011) "Findings from the Mobile Financial Services Development Report,"*op. cit.*

[262] James Bilodeaeau, William Hoffman, and SjoerdNikkelen (2011) "Findings from the Mobile Financial Services Development Report,"*op. cit.*

[263] Balancing Act Africa (2011) "CBK Rules Out Shared Infrastructure in Mobile Money," Balancing Act Africa, 17 March 2011 at http://www.balancingact--- africa.com/news/en/issue---no---546/web---and-- mobile---data/cbk---rules---out--- shared/en (accessed on 22/8/12).

The Kenya Information and Communications (Interconnection and Provision of Fixed Links, Access and Facilities) Regulations 2010[264]mandate interconnection and interoperability. The regulations provide for the right of service providers to interconnect on, and to make use of other facilities providers' services and infrastructure.[265] Indeed, the right of interconnection has been reaffirmed in numerous determinations by the CCK. For example, in *Interconnection Determination No. 1 of 2010 – Dispute Between Essar Telecom Kenya Limited and Air Touch Connections Limited*, the Communications Commission of Kenya denied the Respondent the right to revoke interconnection by the Complainant into its network, since there was no valid reason for the revocation.

In addition, in the *Ruling on the appeal by KenCell Communications Limited over interconnection rates for payphones in the matter between KenCell and Telkom Kenya Limited*, dated 31st October 2001, the Commission of Kenya declared that it has jurisdiction to compel parties to reach interconnection agreements, by setting base interconnection rates to aid negotiations. These determinations show that the Communications Commission of Kenya has consistently promoted interconnection and interoperability in communications network facilities. However, none of the determinations from either the CCK or the Communications Appeals Tribunal have so far touched on interconnection and interoperability of telecoms VAS, such as mobile financial services.

Therefore, the regulation of interconnection and interoperability in communications networks has not resulted in the interconnection and interoperability between network VAS such as Safaricom's M-PESA, Airtel's Zap, Telkom Kenya's Orange Money and Essar Telecom's Yu Cash.

This industry scenario persists despite calls for interconnection and interoperability of mobile money platforms by Airtel and Telkom Kenya. In February 2011, the then Managing Director of Airtel Kenya, Rene Meza, called for a seamless withdrawal mobile money transfer service,

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[264] Kenya Information and Communications Act, Cap. 411A, Laws of Kenya.

[265] The right of interconnection has been reaffirmed in determinations by the CCK. See *Interconnection Determination No. 1 of 2010 – Dispute Between Essar Telecom Kenya Limited and Air Touch Connections Limited.*

through sharing of Safaricom's M-PESA platform.[266]Safaricom responded by arguing that this was likely to kill innovation in the money transfer industry, as subscribers may not receive money sent to them instantly.[267] Consequently, on 22nd February 2011, Prime Minister Raila Odinga formed a Task Force to, among other terms of reference, examine and make recommendations on competition and interconnection issues in the mobile money transfer market in Kenya.[268]

In June 2011, the Task Force, comprising representatives from the Central Bank of Kenya (CBK), the Communications Commission of Kenya (CCK), the Prime Minister's office, and Mobile Network Operators (MNOs), released its report. The Task Force recommended that mobile firms should create a seamless mobile money transfer system regulated by the Central Bank of Kenya.[269] However, the Task Force was categorical that Mobile Network Operators should not be compelled to share their respective mobile financial services cash-in/cash-out agents.[270]

Interestingly, the CBK Governor, Prof. Njuguna Ndung'u, who was represented in the Task Force, later criticized the Task Force proposal.[271] While admitting that interoperability would help reduce costs, the governor warned that the blind adoption of infrastructure sharing would stifle innovation and growth in the sector.[272] He argued that mobile financial service innovations need to be safeguarded and their proprietary rights respected.[273] His comments on the need to respect proprietary rights of mobile financial services systems have since found an opportunity to be interrogated at the judicial level.

In December 2012, Faulu Kenya, a microfinance institution, filed a suit against Safaricom, accusing it of copyright infringement in the development of the virtual banking platform M-

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[266]David Ochami (2011) "State acts to fix mobile phone wars,"*East African Standard* (Nairobi) Thursday February 24, 2011.
[267]*Ibid.*
[268]*Ibid.*
[269] Mark Okuttah (2011) "Kenya: telecommunications companies tasked to set up shared cash transfer platform,"*Business Daily* (Nairobi) June 15, 2011.
[270]*Ibid.*
[271] Balancing Act Africa (2011) "CBK Rules Out Shared Infrastructure in Mobile Money,"*op cit.*
[272]*Ibid.*
[273]*Ibid.*

Shwari.[274] Faulu Kenya sought court orders stop Safaricom from operating *M-Shwari* – a partnership between the telco and Commercial Bank of Africa (CBA) – claiming it was similar to Faulu's *Kopa Chapaa* service operated by Airtel Kenya since 2011, after securing approvals from Central Bank of Kenya.[275] Safaricom denied the claims saying it not only fully owns the product but reads ill-intentions in the allegations. It sought to clarify that *M-Shwari* is a banking product of the Commercial Bank of Africa, and authorized as such by the Central Bank of Kenya.[276] The Case is yet to be resolved by the courts.

Absence of regulatory action on interconnection and interoperability of mobile financial services platforms, despite presence of interconnection regulations, can be attributed to the fact that CCK has largely surrendered regulation of mobile financial services to the CBK.[277] It argues that these services do not fall within its mandate, and that the role of the CCK is merely to facilitate access to these services.[278]

I argue otherwise – that CCK has the mandate to regulate interconnection and interoperability of mobile finance services – for three reasons. First, mobile financial services, ingeniously designed to fall outside the ambit of banking services, are essentially electronic transactions. These transactions fall within the jurisdiction of the Communications Commission of Kenya, as provided under section 83C of the Kenya Information and Communications Act.[279] Second, mobile financial services are Value Added Services (defined under the Kenya Information and

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[274] Duncan Miriri & David Holmes (2012) "Safaricom faces court challenge over banking service," *Reuters* (Nairobi) Thursday, December 13, 2012.

[275] *Ibid.*

[276] Mugambi Mutegi (2012) "Safaricom hits back at Faulu over M-Shwari ownership" *Business Daily* (Nairobi) Thursday, December 13, 2012.

[277] Sultana, Rasheda (2009) "Mobile Banking: Overview of regulatory framework in emerging markets," 4th Communication Policy Research, South Conference, Negombo, Sri Lanka, at http://ssrn.com/abstract=1554160 (accessed on 17/6/12). The Communications Commission of Kenya has provided, in its license to mobile network operators, that the primary regulator for mobile financial services offered by the licensees shall be the Central Bank of Kenya.

[278] International Telecommunications Union (2011)*Chairman's Report: 11th Global Symposium for Regulators*, Armenia City, Colombia, 21st-23rd September 2011, [Online] available at http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR11/pdf/GSR11_Chairmanreport_en.pdf (last accessed on 15/8/12).

[279] Section 83C of the Kenya Information and Communications Act gives the Communications Commission of Kenya the mandate to, inter alia,develop sound frameworks to minimize the incidence of forged electronic records and fraud in electronic commerce and other electronic transactions.

Communications Regulations) offered within CCK's uniform Licensing Framework, and therefore fall under its regulatory mandate.[280]

Third, CCK has a wide mandate to regulate competition in commercial services connected with telecommunications services in Kenya. This is provided by section 23(2)(b) of the Kenya Information and Communications Act.[281] This mandate therefore extends to mobile financial services, because these services have been thoroughly integrated into the voice and data service provision. Mobile financial services are in fact used by Mobile Network Operators to differentiate their product from the competitors and reduce churn.[282] I discuss this point much further below.

Ben Sihanya (2000) argues that efficient regulation in the context of ICT is one which facilitates capital accumulation and protects proprietary rights such as intellectual property (IP). It also ensures that investors recoup their investments, while protecting and serving public interest.[283] This is a complex balancing act. There is need for special regulation of interconnection, because general competition laws are not adequate to regulate complex telecoms interconnection issues.[284]

However, the challenge is on how to balance the access and interconnection rights of MNOs on one side, and the need to incentivize market incumbents to invest in innovation. The incentives should assure MNOs that interconnection regulations will not force them to allow new market entrants access to their networks without those entrants bearing any risks or costs involved. This calls for a robust technology transfer and licensing framework for the converged telecoms sector.[285] They should also assure Mobile Network Operators that interconnection will not be

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[280] Section 2 of the Kenya Information and Communications Regulations, 2001.

[281] Section 23(2)(b) of the Kenya Information and Communications Act provides that the Commission shall "maintain and promote effective competition between persons engaged in commercial activities connected with telecommunication services in Kenya in order to ensure efficiency and economy in the provision of such services and to promote research and development in relation thereto".

[282] Brookings Institution (2012)*Mobile Financial Services and Financial Inclusion*, *Op. cit.*

[283] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium." *op. cit.*

[284] William H. Melody (1997) "Interconnection: cornerstone of competition,"*op. cit.*

[285] See generally, Ben Sihanya (2005) "Technology transfer in the development process in Kenya: issues in regulation and competition law," LLM research paper for the University of Warwick. See also, Ben Sihanya &Osita

mandated before the incumbents recoup their investments. Luckily, the nature of the conversation started by the Central Bank of Kenya seems to appreciate these important issues.[286]

2.5 Competition

Competition has become an important feature in the telecommunications market in Kenya and globally. This is especially after the accession by Kenya and many other countries to the World Trade Organization (WTO) Basic Telecommunications Agreement of 1987, committing to market access.[287] This is primarily because of the benefits accruing to consumers. Competition pushes telecoms service providers to be efficient, innovative and customer focused in order to thrive and survive in the market.[288] Effects of competition include lower prices, higher productivity, increased innovation in services, and greater connectivity.[289]

The overall aim of the Communication Commission of Kenya's competition policy is to achieve sustainable competition. This is where competition occurs on a level playing field and consumers and operators are not subject to anti-competitive practices.[290] Some of these practices include predatory pricing, margin squeeze, discriminatory pricing, product bundling (linked sales), exclusive dealing arrangements, cross-subsidy, control of essential intellectual property, and information sharing.[291]

Ogbu (2003) *On technology transfer: TRIPS leaves Africa in the cold* study under African Technology Policy Studies Network (ATPS) Technology Brief (Nairobi) (December 2003).

[286] Balancing Act Africa (2011) "CBK Rules Out Shared Infrastructure in Mobile Money,"*op cit.*

[287] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.* The WTO's instruments such as Articles II and III of the Trade Related Investment Measures (TRIMs) and the Trade Related Aspects of Intellectual Property and Services (TRIPS) emphasize that cyberspace and infotainment business ought to be liberalized.

[288] *Ibid.*

[289] Muriuki Mureithi (2001) "Evolution of telecommunications policy reforms in East Africa: Setting new policy strategies to anchor benefits of policy reforms,"*The SouthernAfrican Journal of Information and Communication,* Issue No. 3. The author notes that when the East African governments took note of the benefits and effects of competition on telecommunications markets, there was a deliberate policy for a gradual rather than sudden liberalization of the telecoms markets.

[290] See sections 23 and section 84Q of the Kenya Information and Communications Act.

[291] Section 84S of the Kenya Information and Communications Act lists down conduct that is deemed to be anti-competitive under the Act.

The nature of competition in the mobile financial services sector in Kenya has increasingly come under debate.[292] This is especially with the licensing of two additional MNOs - Orange Telkom and Essar Telecom – into the Safaricom-Airtel duopoly.[293] As at March 2012, Safaricom, being the first mover in both the voice and mobile financial services market, accounted for close to 15 million of the 19 million mobile money transfer subscribers in all networks in Kenya.[294]

Competition in the telecoms sector is regulated by two major pieces of legislation. The main statute is the Competition Act,[295] which establishes and mandates the Competition Authority to regulate competition generally, in the economy. The Kenya Information and Communications Act also establishes the Communications Commission of Kenya, and gives it regulatory powers over competition in the ICT sector.[296]

The convergence of mobile telecoms and financial services has created new challenges to the regulatory framework for competition in telecoms in Kenya. This is because mobile financial services have been integrated into the mainstream telecoms services, and have changed the traditional business model of MNOs.[297] These challenges include interconnection, exclusive dealing agreements, cross-subsidy, number portability, product bundling, and mergers and acquisitions. While some of these challenges have been discussed separately in this paper, they are briefly discussed below.

2.5.1 Interconnection and interoperability of mobile financial service platforms

As discussed in the previous section, interconnection and interoperability are essential for promoting fair and sustainable competition in markets where there is a dominant market

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[292] Muriuki Mureithi (2011) "State of Competition in Mobile Telephony: mobile money transfer (MMT) services in Kenya" in *The State of Competition Report: mobile money transfer, agricultural bulk storage and milling, and the media sectors in Kenya*, IEA Research Paper Series No. 1/2011,Institute of Economic Affairs, Nairobi.

[293] Hellen Nyambura Mwaura (2010) "Kenya Telecom Price War Bad for Sector: government official,"*Reuters Africa*, Thursday September 9, 2010.

[294] Safaricom Limited (2012) *Annual Report and Group Accounts for the Year Ended March 2012*, *op. cit.*

[295] Act No. 12 of 2010, Laws of Kenya.

[296] See sections 23, and 84R of the Kenya Information and Communications Act, and section 4 of the Kenya Information and Communications (Fair Competition and Equality Of Treatment) Regulations, 2010.

[297] Muriuki Mureithi (2011) "State of Competition in Mobile Telephony: mobile money transfer (MMT) services in Kenya" *op. cit.*

player.[298] Where the market players have not interconnected voluntarily, competition regulations should provide a framework for compelling interconnection and interoperability.[299] In absence of competition regulations encouraging or mandating interconnection, the network effect will result in increasing market share for Safaricom and Airtel, the bigger market players.[300]

Hence, as argued above, there is need for the CCK to make use of the Kenya Information and Communications Act (Fair Competition and Equality of Treatment) Regulations 2010, to regulate competition in such networked economies.[301] It should also make use of the Kenya Information and Communications Act (Interconnection and Provision of Fixed Links, Access and Facilities) Regulations 2010, to mandate interconnection and interoperability of mobile finance systems, platforms and agents. This will promote fair and sustainable competition in the mobile financial services sector.[302]

2.5.2 Exclusive dealing agreements

Telecommunications providers can use exclusive dealing agreements of various kinds to unfairly disadvantage competitors.[303] In mobile financial services, these agreements include agency agreements between Mobile Network Operators and financial services agents, and also other institutions such as banks.[304]This is because, much like telecoms networks, agent payment networks are the essence of connectivity in mobile service provision.[305] Hence network externalities also apply to mobile financial service payment networks.[306]

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[298] See section 2.4 above. See also, World Bank (2012) *Information and Communications for Development 2012: maximizing mobile*, The World Bank, Washington DC.

[299] See section 2.4.1 above. See also, Brookings Institution (2012)*Mobile Financial Services and Financial Inclusion, op. cit.*

[300] George Houpis and James Bellis (2007)"The Regulatory Implications of Mobile and Financial Services Convergence,"*op. cit.*

[301] See sections 23, and 84R of the Kenya Information and Communications Act, and section 4 of the Kenya Information and Communications (Fair Competition And Equality Of Treatment) Regulations, 2010.

[302] United Nations Conference on Trade and Development (2012)*Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations, op. cit*

[303] John Buckley (2003)*Telecommunications Regulation, op. cit.*

[304] Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," *op. cit.*

[305] Michael Klein and Colin Mayer (2011) "Mobile Baking and Financial Inclusion: the regulatory lessons," Policy Research Working Paper 5664, The World Bank, Washington DC.

[306] *Ibid.* The authors argue that a money transfer service that services only two small villages is of lesser interest than one that connects all major towns and villages. They contend that it may also be possible that a larger network has lower unit cost per service provided. Both network effects on value and cost of service mean that networks have to some degree naturally monopoly characteristics.

Currently, all Mobile Network Operators in Kenya practice agent exclusivity with their cash in/cash out agents.[307] However, partnerships between Mobile Network Operators and banks do not seem to be restricted or exclusive.[308] The government, through the Prime Minister's Task Force, has stated its reluctance to regulate exclusive agency agreements.[309] However, Safaricom's competitors, especially Airtel, and other international organizations with interest in the financial services for the poor, such as the United States Agency for International Development (USAID), and United Nations Conference on Trade and Development (UNCTAD) have argued that the practice of MNOs restricting their cash-in/cash-out money transfer agents from offering similar services for competitors, is anti-competitive.[310]

A potential area of CCK's interest would be regulation of agency agreements between Mobile Network Operators. This would be by banning or regulating exclusivity of service, agency or partnerships between the mobile financial service stakeholders. This would help increase competition between the market players, and foster productivity and innovation in mobile financial services.

2.5.3 Cross-subsidy, service bundling and predatory pricing:

The rapid growth of mobile financial services in Kenya has thoroughly transformed the business models of Kenyan MNOs.[311] The provision of converged mobile and financial services can be used, especially by dominant market players such as Safaricom, to bring down churn rates.[312] This can be done by a combination of cross-subsidy, service bundling and tariff fixing practices.

Cross-subsidizing in this context refers to where an MNO that is profitable as a whole uses profits from its mobile financial services to offset predatory pricing losses from its voice

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[307] James Bilodeaeau, William Hoffman, Sjoerd Nikkelen (2011) "The Seven Pillars of Mobile Financial Services Development,"*op. cit.* This helps them provide an experience that inspires trust. See Michael Klein and Colin Mayer (2011) "Mobile Baking and Financial Inclusion: the regulatory lessons,"*op. cit.*

[308] *Ibid.*

[309] Mark Okuttah (2011) "Kenya: telecommunications companies tasked to set up shared cash transfer platform,"*op. cit.*

[310] See Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," *op. cit.* The author underscores the role of the limited cash agents in rural areas, currently monopolized by Safaricom. See also, United Nations Conference on Trade and Development (2012)*Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations*, *op. cit.*

[311] Muriuki Mureithi (2011) "State of Competition in Mobile Telephony: mobile money transfer (MMT) services in Kenya" *op. cit.*

[312] Brookings Institution (2012) "Mobile Financial Services and Financial Inclusion,"*op. cit.*

telephony business segment.[313] Conversely, the MNO can offer bundled mobile financial services at very low or no costs, as a means of tying down their voice subscribers. While these figures do not necessarily betray the practice of cross-subsidizing, Safaricom's financial results released in May 2011 are indicative of the role of mobile financial services in revenue growth.[314]

While its voice revenue growth was almost flat at Kshs. 63.5 billion compared to Kshs. 63.4 billion in 2010, Safaricom's overall revenue increased by 12.9% year over year to Kshs. 94.83 billion.[315] This was because of the voice revenue reduction offset by growth in the fixed/mobile data and M-PESA growth.[316] It is instructive to note that the reduction in voice revenue was precipitated by the reduction of Mobile Termination Rates (MTR) at the behest of CCK.[317]

Service bundling, on the other hand, refers to the combination of services or products by a Mobile Network Operator.[318] An example is where a subscriber for Safaricom's mobile telecommunications services is automatically offered a Subscriber Identification Module (SIM)-based M-PESA account. All Mobile Network Operators in Kenya have bundled their voice services with mobile financial services.[319] Service bundling therefore makes it easier and possible for a mobile financial services provider to practise predatory pricing, and subsidize his/her losses from the former's profits.

In fact, industry analysts have suggested that, despite number portability, the only reason why Safaricom mobile service subscribers have not moved to other cheaper MNOs with better Quality of Service, such as Airtel, is because the M-PESA service is bundled with Safaricom's voice and other date services.[320]

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[313] A large company with horizontal or vertical integration may be profitable as a whole while having less profitable and even loss-making products in its portfolio. Where this takes place, cross-subsidy is said to exist, where the profits on some items pay for the costs of others. See John Buckley (2003)*Telecommunications Regulation*, *op. cit.*

[314] Safaricom Limited (2011) *Annual Report and Group Accounts for the Year Ended March 2011*, *op. cit.*

[315] *Ibid.*

[316] *Ibid.*

[317] Aaron Thuo and Charles Kihungi (2011) "Mobile Termination (MTR) Mobile Number Portability (MNP) and Cost of Internet in Kenya as at July 2011," Consumer Federation of Kenya (COFEK) Nairobi.

[318] John Buckley (2003)*Telecommunications Regulation*, *op. cit.*

[319] Michael Klein and Colin Mayer (2011) "Mobile Baking and Financial Inclusion: the regulatory lessons,"*op. cit.*

[320] Aaron Thuo and Charles Kihungi (2011) "Mobile Termination (MTR) Mobile Number Portability (MNP) and Cost of Internet in Kenya as at July 2011,"*op. cit.*

Mobile Network Operators in Kenya are increasingly innovating and creating converged services.[321] This includes various partnerships with financial and non-financial institutions, such as Safaricom's M-Shwari, and Airtel's *KopaKopa*.[322]There is need to regulate cross-subsidizing, service bundling and predatory pricing, so as to promote fair competition in the Kenyan market.[323] This is critical for the mobile financial services market.[324] As mentioned earlier, MNOs, by virtue of providing a Subscriber Identification Module (SIM)-based mobile money platform, and by preventing interconnection and interoperability of the platforms, practice service bundling.[325] This presents an opportunity for cross-subsidizing and predatory pricing. Fortunately, telecoms regulations have attempted to regulate the said practices.

Section 10 of the Kenya Information and Communications Act(Fair Competition and Equality of Treatment) Regulations, 2010, requires MNOs to maintain separate books of account for each service as may be prescribed by the CCK from time to time.[326] It also prohibits the MNOs from cross-subsidizing the prices for any service they offer in the market with revenue from the sale of communication systems and services.[327] This is a sufficient safeguard against cross-subsidy. In addition, the Kenya Information and Communications Act Tariff Regulations 2010 also empower the CCK to regulate tariffs set by MNOs, to prevent tariff charges that may distort competition, for example predatory pricing.[328]

The CCK Competition Guidelines, 2011, address service bundling as "tying." Clause 5.4.2.5 of the Guidelines provides as follows:

> "A dominant licencee must not require a customer to purchase any other service or equipment as a condition for purchasing a specific communication service. In addition, a dominant licencee may abuse its dominant position where it requires a customer that purchases a communication

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[321] Humphrey Liloba (2012) "Kenya's mobile money transfers continue to grow,"*East African Business Week* (Nairobi) Saturday, 14 July 2012.

[322] David Mugwe and Mark Okuttah (2012) "Mobile money transfers reach Shs. 1 trillion as banks, telcos link up" *Business Daily* (Nairobi)Thursday November 12, 2012. According to the report, data from the Central Bank of Kenya shows that Sh1.117 trillion changed hands through mobile phone money transfers helped largely by increased interface between commercial banks and the cash remittance services of mobile telephone services firms.

[323] Michael Klein and Colin Mayer (2011) "Mobile Baking and Financial Inclusion: the regulatory lessons," *op. cit.*

[324] *Ibid.*

[325] See sections 2.4 and 2.5.2 above.

[326] Mobile Network Operators separately report the revenues for their various business segments, including voice, data and mobile financial services. See Safaricom Limited (2012) *Annual Report and Group Accounts for the Year Ended March 2012*, *op. cit.*

[327] *Ibid.*

[328] See section 4(3) of the Kenya Information and Communications Act Tariff Regulations 2010.

service that is not subject to effective competition to purchase other services or equipment, especially if those services or equipment are subject to a greater degree of competition. Such requirements, even if offered as an option, may foreclosure competition in a significant portion of an otherwise competitive market."[329]

However, the CCK has not used these provisions to address service bundling of mobile financial services.[330] The general and specific competition laws that govern telecommunications can also be used to regulate bundling, where it is used as an anti-competitive practice.[331] This means that the CCK should give the said provisions purposive interpretation over service bundling, or enact specific legislation touching on service bundling for converged services or even mobile financial services. Alternatively, the CCK could cooperate with general competition regulators such as the Competition Authority, in effectively regulating competition in mobile financial services.[332]

2.5.4 Mobile Number Portability

This is a network feature that enables consumers to retain their telephone numbers whenever they decide to change service providers.[333]In the absence of Mobile Number Portability, subscribers have to give up their number and must adopt a new one when they switch mobile network operators.[334] As a result, subscribers face switching costs associated with informing people about changing their number, printing new business cards, missing valuable calls from

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[329] Communications Commission of Kenya (2011)*Competition Guidelines*, at http://www.cck.go.ke/links/consultations/current_consultations/Competition_Guidelines.pdf (accessed on 27/8/12).

[330] The Central Bank of Kenya, the primary regulator of mobile financial services in Kenya, sees mobile financial service unbundling as a strike at the proprietary rights of the respective mobile network operators. Balancing Act Africa (2011) "CBK rules out shared infrastructure in mobile money,"*op cit.*

[331] Section 21(1) and (3)(e) (g) and (i) of the Competition Act provides wide definitions of restrictive trade practices that include service bundling, predatory pricing, and cross-subsidizing, which are banned under the Act, unless exempted under section 25 of the Act. The Competition authority can use this provision to regulate competition in the mobile financial service sector.

[332] Jeremy Mitchell (1997) "Converging Communications, Fragmented Regulation and Consumer Needs," in W. Melody (ed.)*Telecom Reform: Principles, Policies and Regulatory Practices*, 441-450. I discuss regulatory cooperation more broadly later in Chapter three.

[333] OsuolaleAbdramon, Tiamiyu andOmenogo Veronica Mejabi (2013) "Evaluation of Subscriber Attitude to Mobile Number Portability Implementation in Nigeria" *Journal of Emerging Trends in Computing and Information Sciences*, Vol. 4, No. 4 April 2013. See also, Communications Commission of Kenya (2011)Procedures and Guidelines for the Provision of Mobile Number Portability Services in Kenya, at http://www.cck.go.ke/licensing/numbering/downloads/Procedures_and_Guidelines.pdf (accessed on 25/8/12).

[334] Mohammad Zainuddin, D.Baswaraj, and SareddyDeepthi (2012) "Mobile Number Portability In India" *International Journal of Advances in Computing and Information Technology*, July 2012.

people that do not have the new number, etc.[335] This explains Kenyans' peculiar habits of owning multiple Subscriber Identification Modules (SIMs) and handsets.[336]

Mobile Number Portability (MNP) enhances consumer convenience and promotes competition in the telecommunications sector, as churn rates go up.[337] CCK-regulated MNP was introduced in Kenya in 2011, as a way of leveling the playing field for new entrants in the mobile telecommunications market.[338]However, the process of MNP implementation was mired by accusations between Porting Access and Airtel, on the one hand, and Safaricom, on the other hand, accusing each other of sabotaging the process.[339] In addition, Mobile Number Portability emerged as a consumer rights issue, as Safaricom was sued by seven of its network subscribers, for delaying their number migration to another network.[340]

So how has the emergence of mobile financial services affected the MNP aspect of competition? There is evidence that despite the initial overwhelming support by mobile services subscribers for MNP, the porting process lost impetus.[341]This occurred when subscribers realized that portability meant that they would have to lose their mobile money transfer services facilities provided by their original MNO.[342]

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[335] *Ibid.*

[336] Amy Wesolowski, Nathan Eagle, Abdisalan M. Noor, Robert W. Snow, and Caroline O. Buckee (2012) "Heterogeneous Mobile Phone Ownership and Usage Patterns in Kenya," *PLoS ONE 7(4)*: e35319. doi:10.1371/journal.pone.0035319 at http://www.plosone.org/article/info:doi/10.1371/journal.pone.0035319 (accessed on 17/6/13).

[337] World Bank (2012)*Information and Communications for Development 2012: maximizing mobile, op. cit.*Mobile network subscribers or users do not care about the mobile network brand but instead whether it has the fastest speed, best coverage, cheapest prices, highest quality, or biggest subsidy for popular handsets. Prepaid users, in particular, have little brand loyalty, with high rates of churn in markets where mobile number portability is a regulatory obligation.

[338] Communications Commission of Kenya (2011)Procedures and Guidelines for the Provision of Mobile Number Portability Services in Kenya,*op. cit.*Section 6(e) of the Kenya Information and Communication (Numbering) Regulations, 2010, provides that the CCK's numbering and address plan may set out rules which may include the portability of assigned numbers and addresses.

[339] Mark Okuttah (2011) "Court gags Porting Access in row with Safaricom," *op. cit.*

[340] Mark Okuttah (2011) "Consumers sue Safaricom over number transfers," *op. cit.* In a case filed at the High Court on May 11, Alex Gakuru, Humphrey Atuti, Brian Kimani, Alice Njoki, Joseph Mwangi, Mwaura Dennis and Jackson Enonda sought damages for loss of business and an order directing Safaricom to activate their ported numbers without hindrance.

[341] Aaron Thuo and Charles Kihungi (2011) "Mobile Termination (MTR) Mobile Number Portability (MNP) and Cost of Internet in Kenya as at July 2011,"*op. cit.*

[342] *Ibid.*

This means that despite the mandatory institution of mobile number portability in the Kenyan mobile telecoms sector, its benefits cannot be realized unless interconnection and interoperability of mobile money transfer services is operationalized.[343] Therefore, there is need for interconnection to be mandated or encouraged, which will further spur competition, innovation and creativity in the mobile financial services sub-sector.

2.6 Universal Access and Service

From a telecommunications perspective, universal access and service refer to the objectives and policies that a government implements to ensure that all its citizens have access to the benefits of modern communications infrastructure and services.[344] This access should be regardless of region or location, socio-economic status, ethnicity, gender, disability, or any other factor. Articles 10 and 38 of the Constitution of Kenya 2010, for example, provides benchmarks for service delivery in Kenya[345]

The Kenya Information and Communications Act Universal Access and Service Regulations, 2010, define universal service as "access of one hundred percent by a designated population that is reasonably able to *privately* subscribe to and use particular communication systems and services of a specified quality on an individual, household or institutional basis including, among others, to the provision of public voice telephony, Internet access, or other services by which people access efficient, affordable and modern communications systems and services."[346]

The regulations also define Universal Access as access of one hundred percent by a designated population that can obtain, at the minimum, public access to quality and affordable communication systems and services.[347]

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[343] *Ibid.*
[344] International Telecommunications Union (2012) "Universal Access and Service," in ICT Regulation Toolkit, International Telecoomunications Union, Geneva at www.ictregulationtoolkit.org (accessed on 8/8/12).
[345] *Ibid.* Article 10 and 38 of the Constitution of Kenya also provide constitutional parameters for service delivery in Kenya. While Article 10 requires that government laws and policies should take into account equality and equity, Article 38 requires that government policies and programmes should be based on non-discrimination. See *John Kabui Mwai & 3 Others v. Kenya National Examination Council & 2 Others* [2011] Eklr.
[346] Section 2 of the Kenya Information and Communication (Universal Access and Service) Regulations.
[347] *Ibid.*

Universal Service and universal access to telecommunications are distinct. Universal service refers to service at the individual or household level, for example, a mobile phone in each home.[348] Universal access, on the other hand, refers to a publicly shared level of service, for example, community or "*simu-ya-jamii*" payphones in Kenya.[349]

In the context of Kenya, CCK's vision of Universal Access is:

> "quality communication services that are accessible, available, and affordable and that lead to enhanced and sustainable rural communications development".[350]

The corresponding mission statement is:

> "to provide an enabling environment and intervention for the development and implementation of communication infrastructure and services in rural and under-served areas".[351]

With the growing evidence that information and communication technologies drive economic growth, the debate on universal access and service policies is shifting from access to basic voice services toward national broadband coverage.[352] It is also shifting to secondary aspects of telecoms such as converged services.[353]

2.6.1. The rationale for regulation of universal access and service

The rationale for universal access and service policies in telecommunications are at least three-fold. First, telecommunications, and ICT generally, are social and economic enablers. They are increasingly used in all sectors of the Kenyan economy[354] and have become critical for social, economic and political inclusion.[355] The Kenyan government, through its various long-term and

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[348] Colin Blackman and Lara Srivastava (2010)*Telecommunications Regulation Handbook*, The World Bank, Washington DC.

[349] The concept "*simu-ya-jamii*" is a Swahili phrase for community phones.

[350] Communications Commission of Kenya, "Final Report: Universal access strategic plan and implementation guidelines," [online] available at http://www.cck.go.ke/services/universal_access/downloads/FinalUAreport.pdf (last accessed on 20/8/12).

[351] *Ibid.*

[352] World Bank (2009) *Information and Communications for Development 2009: Extending reach and increasing impact*, The World Bank, Washington DC.

[353] *Ibid.*

[354] Gatana Kariuki (2009) "Growth and Improvement of Information Communication Technology in Kenya,"*op. cit.*

[355] James Bilodeaeau, William Hoffman, and Sjoerd Nikkelen (2011) "Findings from the Mobile Financial Services Development Report,"*op. cit.*

short term development plans such as the Kenya Vision 2030, and its Medium Term Plan (2008-2012), respectively, has endeavored to transform the agricultural economy into a knowledge economy.[356] The ICT sector has therefor been earmarked as a significant engine of economic growth.[357]

Second, market forces cannot eliminate the market gaps left by suppliers of telecommunications services.[358] This is because, despite liberalization and reform in the telecoms sector in Kenya, service providers still face challenging market conditions. These include rugged geographic terrain, poor infrastructure, low population densities, and poverty.[359]

Third, the supply and demand forces in telecommunications increases the importance of universal access and services. The more ICT are used, the more there is a dependence upon them, which in turn makes it more essential that all Kenyan citizens have access to ICT.[360] Recent e-government initiatives, business-to-business (B2B), business-to-person (B2P) and person-to-person (P2P) ICT networks have ingrained the use of ICT in day-to-day lives of majority of Kenyans.[361] The emergence of mobile telephony in Kenya, and the subsequent emergence of converged services such as mobile financial services, for example, has made access to a mobile phone in both urban and rural areas an important socio-economic goal for Kenyans.[362]

Regulators and policy makers in many jurisdictions have acknowledged that services to be included in the scope of universal access and service will change as technology and society change.[363] For example, in 2002, the European Union (EU) included such a requirement in the

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[356] Republic of Kenya (2007)*Kenya Vision 2030: a globally competitive and prosperous Kenya*, Government Printer, Nairobi.

[357] *Ibid.*

[358] Colin Blackman and Lara Srivastava (2010)*Telecommunications Regulation Handbook*, The World Bank, Washington DC.

[359] Sammy Kirui and Godfrey Muhatia (2005) "Universal Access: the Kenyan experience," in Florence Etta and Laurent Elder (Eds.,) *At the Crossroads: ICT Policy Making in East Africa*, East Africa Educational Publishers, Nairobi, pp. 84-99.

[360] Colin Blackman and Lara Srivastava (2010)*Telecommunications Regulation Handbook*, *op. cit.*

[361] Gatana Kariuki (2009) "Growth and Improvement of Information Communication Technology in Kenya,"*op. cit.* Amy Wesolowski, Nathan Eagle, Abdisalan M. Noor, Robert W. Snow, and Caroline O. Buckee (2012) "Heterogeneous Mobile Phone Ownership and Usage Patterns in Kenya," *op. cit.* See also, Timothy Waema, *et al* (2010)*Kenya ICT Sector Performance Review 2009/2010: Towards Evidence-based ICT Policy and Regulation*,*op. cit.*

[362] Colin Blackman and Lara Srivastava (2010)*Telecommunications Regulation Handbook*, *op. cit.*

EU Universal Service Directive. It stated that the scope of universal service (US) obligations should be reviewed every three years, taking into account social, commercial and technological conditions.[364] It also required that, in order to be included in the scope of a universal access and service policy, a service has to satisfy two tests. First, it must be essential for social inclusion. Second, normal commercial forces must not be able to make the service available for all.[365]

It is in this context that the introduction of mobile financial services by Mobile Network Operators has focused attention on whether Kenya's universal access and services regulations adequately address convergence issues.[366] How has the provision of mobile financial services by Mobile Network Operators affected the use of mobile telecommunications in Kenya?[367] Consequently, how does this affect universal access and service obligations of Mobile Network Operators?[368]

The KICA Universal Access and Service Regulations[369] define universal access and service to include "communication systems and services". Based on the CCK's interpretation of the Act and the regulations, this definition leaves out other value-added services offered by telecommunication providers, such as mobile financial services.[370] The CCK has interpreted these regulations to mean that universal access and service requirements do not apply to mobile financial services of MNOs, and that these services fall within the ambit of the Central Bank of Kenya.[371]

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[364] Mira Burri Nenova (2007) "The New Concept of Universal Service in a Digital Networked Communications Environment," *I/S: A Journal of Law and Policy for the Information Society*, Volume 3, Issue 1, pp. 11-145.

[365] See Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive) [online] available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:108:0051:0051:EN:PDF (last accessed on 27/8/12).

[366] Enrico Calandro, and Mpho Moyo (2010) "Is the Universal Access Fund in Africa Creating an Enabling Environment for ICT Infrastructure Investment in Rural and Perceived Uneconomic Areas?" Policy Brief No. 1, Research ICT Africa, Cape Town.

[367] I have addressed these issues earlier in Section 1.3 of Chapter 1.

[368] Erwin Alampay (2010) "Mobile banking, mobile money and telecommunication regulations," *op. cit.* The author suggests that if e-money/banking services, for instance, would require 3-G services, this could become a barrier from the perspective of universal access to this type of service.

[369] Kenya Information and Communications Act, Cap 411A.

[370] International Telecommunications Union (2011)*Chairman's Report: 11th Global Symposium for Regulators, Armenia City, Colombia, 21st-23rd September 2011*, *op. cit.*

[371] Interview with Japheth Odhiambo, Legal Officer, Communications Commission of Kenya, 2nd March 2012, Nairobi.

The CCK's position can be disputed on two grounds. First, as supported by the EU Universal Service Directive inclusion test above,[372] mobile financial services, especially mobile money transfer, are bundled services (with the voice and data telecoms services) that have become very important for social and economic inclusion in Kenya.[373] The rapid growth and penetration of mobile telephony in Kenya (currently at 74%)[374]shows the importance of mobile communication in the country.

In addition, the consequent integration of converged mobile and financial services (whose subscribers number almost half the Kenyan population)[375] in daily social and economic life, have made mobile financial services integral for individual and communal socio-economic development in Kenya.[376] Hence, applying the EU Universal Service Directive criteria for revising the scope of universal access and service, mobile financial services would be rational inclusions into services under Universal Access and Service policies in Kenya.

Second, the money transfer systems are ingeniously designed to remove them from the ambit of banking business, and to keep them under communications services.[377] This has been done through the creation of electronic money, or e-float, which is a unit equivalent of money deposited, transferred or withdrawn.[378] The CBK and the CCK are in consensus on this point.[379] Hence mobile financial services, essentially being electronic transactions, fall within the CCK's universal access and service obligations.[380]

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[372] Colin Blackman and Lara Srivastava (2010)*Telecommunications Regulation Handbook*, *op. cit.*

[373] Ndunge Kiiti and Jane Mutinda (2011) "Mobile Money Services and Poverty Reduction: a study of women's groups in rural eastern Kenya," *op. cit.* See also, See also, James Bilodeaeau, William Hoffman, Sjoerd Nikkelen (2011) "Findings from the Mobile Financial Services Development Report,"*op. cit.*

[374] Communications Commission of Kenya (2012) "Quarterly Sector Statistics Report, 3rd Quarter, January-March 2011/2012," *op. cit.*

[375] Ibid.

[376] Ndunge Kiiti and Jane Mutinda (2011) "Mobile Money Services and Poverty Reduction: a study of women's groups in rural eastern Kenya," *op. cit.*

[377] I have discussed this earlier in section 1.2.3.1 in Chapter 1. See also, Alliance for Financial Inclusion. (2010). "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-PESA." *op. cit.*See also, Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," *op. cit.*

[378] Alliance for Financial Inclusion. (2010) "Enabling Mobile Money Transfer: The Central Bank of Kenya's treatment of M-Pesa," *op. cit.*

[379] Ibid.

[380] See Section 83C of the Kenya Information and Communications Act, Cap 411A.

From this perspective, there are a number of universal access and service concerns that are raised by the provision of mobile financial services in Kenya. These are the extent of mobile network operator agent network coverage, provision of technology-agnostic services, design of user-friendly interfaces, and interconnection and interoperability. These are discussed below.

2.6.2 Extent of MNO agent network coverage

The key point of contact between mobile financial service consumers and MNOs is the network of cash in/cash out agents.[381] Mobile financial services are essential telecommunications value-added services, especially for the financially excluded in the rural areas.[382] However, the mobile financial service agent network has followed the familiar pattern of densely populated areas in Kenya.[383] To this extent, one of the Universal Access and Service obligations for Mobile Network Operators providing mobile financial services should be progressive expansion and servicing of mobile financial service networks to rural areas.

2.6.3 Provision of technology-agnostic mobile financial services

Aside from extensive agent network coverage, another cornerstone for access to mobile financial services, especially for the poor, is the mobile phone device. The service platform for mobile financial services is essentially Subscriber Identification Module (SIM)-based.[384] However, other systems such as in the case of the Philippines are based on Short Message Service (SMS) traffic, or USSD protocols.[385] For the mainstream SIM-based systems, it is important to ensure that both the rich and poor, and also technologically literate and illiterate people, can access mobile financial services from any kind of mobile telephone device, including the most basic handset.[386]

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[381] Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," *op. cit.*

[382] Ndunge Kiiti and Jane Mutinda (2011) "Mobile Money Services and Poverty Reduction: a study of women's groups in rural eastern Kenya," *Op. cit.*

[383] Sammy Kirui and Godfrey Muhatia (2005) "Universal Access: the Kenyan experience," *op. cit.* Mobile operators have met their targets, they have concentrated their operations in urban areas and along major highways ignoring high cost areas.

[384] Erwin Alampay (2010) "Mobile banking, mobile money and telecommunication regulations," *op. cit.*

[385] *Ibid.*

[386] Erwin Alampay (2010) "Mobile banking, mobile money and telecommunication regulations," *Op. cit.*

In line with this vision for financial inclusion, all the mobile service providers in Kenya have made use of the simplest SIM-based platforms that can work with low-end telephones.[387] For example, during the conceptualization and pilot phase of Safaricom in 2005, one of the guiding principles of the project was that the technology must work across all types of handsets, even the simplest ones.[388] Hence the pioneers of the project decided on an SMS system using a platform built on the STK platform (SIM toolkit) for setting up user menus.[389]

With the increasing development of Next Generation Networks in Kenya, for example, the introduction of 4G networks,[390] MNOs may be tempted to further integrate with banks, to offer mobile financial services using internet-enabled mobile phone browsers. This could become a barrier to universal service in the provision of mobile financial services.[391] Therefore, to enable the access of the mobile financial services to cell phone users, the Mobile Network Operatorss should be mandated by access and service regulations to deploy network and SIM-based systems and infrastructure that can work in all types of phones – both high end (smart) phones and phones running on basic technology.[392]

2.6.4 Design of user-friendly interfaces and subscriber-friendly registration procedures

The main aim of the deployment of mobile financial services in Kenya is to promote financial inclusion, especially among the rural and under-developed communities.[393] It is therefore important that, to foster universal access and service, the Mobile Network Operators should provide simple and user-friendly SIM based menus and interfaces that can be used by the unskilled.[394] In addition, the procedures for registering money transfer accounts should not be as

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[387] Lenart Bangens and Bjorn Söderberg (2008)*Mobile Banking –Financial Services for the Unbanked?*, The Swedish Program for ICT in Developing Regions, Reklam & Katalogtryck, Sweden.

[388] Nick Hughes and Suzie Lonie (2007) "M-PESA: Mobile Money for the "Unbanked" turning cellphones into 24-hour tellers in Kenya," *op. cit.*

[389] Lenart Bangens and Bjorn Söderberg (2008)*Mobile Banking –Financial Services for the Unbanked?*,*op. cit.*

[390] Mark Okuttah (2011) "CCK to issue joint 4G licence in bid to lower Internet costs,"*op. cit.*

[391] Erwin Alampay (2010) "Mobile banking, mobile money and telecommunication regulations," *Op. cit.*

[392] Some researchers on mobile money issues have also argued for the design of user-friendly interfaces and consumer education, from a business ethics perspective. See, for example, Donatus Mathenge Githui (2011) "Mobile Money Transfer in Kenya: An Ethical Perspective,"*Research Journal of Finance and Accounting,* Vol 2, No 2, 2011.

[393] Nick Hughes and Suzie Lonie (2007) "M-PESA: Mobile Money for the "Unbanked" turning cellphones into 24-hour tellers in Kenya," *op. cit.* See also, James Bilodeaeau, William Hoffman, Sjoerd Nikkelen (2011) "The Seven Pillars of Mobile Financial Services Development,"*op. cit.*

[394] Nick Hughes and Suzie Lonie (2007) "M-PESA: Mobile Money for the "Unbanked" turning cellphones into 24-hour tellers in Kenya," *op. cit*

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[394] Nick Hughes and Suzie Lonie (2007) "M-PESA: Mobile Money for the "Unbanked" turning cellphones into 24-hour tellers in Kenya," *op. cit*

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[387] Lenart Bangens and Bjorn Söderberg (2008)*Mobile Banking –Financial Services for the Unbanked?*, The Swedish Program for ICT in Developing Regions, Reklam & Katalogtryck, Sweden.

[388] Nick Hughes and Suzie Lonie (2007) "M-PESA: Mobile Money for the "Unbanked" turning cellphones into 24-hour tellers in Kenya," *op. cit.*

[389] Lenart Bangens and Bjorn Söderberg (2008)*Mobile Banking –Financial Services for the Unbanked?*,*op. cit.*

[390] Mark Okuttah (2011) "CCK to issue joint 4G licence in bid to lower Internet costs,"*op. cit.*

[391] Erwin Alampay (2010) "Mobile banking, mobile money and telecommunication regulations," *Op. cit.*

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[393] Nick Hughes and Suzie Lonie (2007) "M-PESA: Mobile Money for the "Unbanked" turning cellphones into 24-hour tellers in Kenya," *op. cit.* See also, James Bilodeaeau, William Hoffman, Sjoerd Nikkelen (2011) "The Seven Pillars of Mobile Financial Services Development,"*op. cit.*

[394] Nick Hughes and Suzie Lonie (2007) "M-PESA: Mobile Money for the "Unbanked" turning cellphones into 24-hour tellers in Kenya," *op. cit*

demanding as those of opening accounts in licensed banks.[395] This is because the ease of using these services determines their uptake.[396]

Presently, the process of being registered as a mobile financial service subscriber in Kenya is simple, for all the four Mobile Network Operators. It requires an official form of identification for example, the national identification (ID) card held by all Kenyans, or a passport, but no other validation documents that are typically necessary when a bank account is opened.[397] This has promoted the uptake of mobile financial services in the rural areas where communities may not have other additional documentation that may be required by banks.[398]

2.6.5 Interconnection and interoperability of mobile financial service platforms

Universal access and service regulations should also encourage or mandate interconnection and interoperability of mobile financial services of different Mobile Network Operators.[399] As discussed in sections 2.4 and 2.5.2 above, this will certainly foster greater access to the users.

Increased innovations and continuing convergence in telecoms and other sectors will continue to up-end the universal access and service obligations with relation to mobile financial services and other converged services.[400] There is therefore need for the CCK and other telecommunications policymakers to monitor emerging value-added services with a financial component offered by MNOs. They will also be expected to clarify their responsibilities for regulating converged value-added services. In addition, despite the fact that the main responsibilities may rest on financial regulators, telecoms regulators and policy makers will be expected to demonstrate a level of leadership and dialogue on providing universal access and service guidelines for mobile financial service providers.

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[395] See generally, the Central Bank of Kenya Prudential Guidelines on capital adequacy, liquidity management, proceeds of crime and money laundering, consumer protection, etc., issued under section 33(4) of the Banking Act.

[396] Isaiah Lule, Tonny Kerage Omwansa, and Timothy Waema (2012) "Application of Technology Acceptance Model (TAM) in M-Banking Adoption in Kenya".*International Journal of Computing and ICT Research*, Vol. 6 Issue 1, pp. 31-43.

[397] James Bilodeaeau, William Hoffman, Sjoerd Nikkelen (2011) "The Seven Pillars of Mobile Financial Services Development,"*op. cit.* Also, see generally, the Central Bank of Kenya Prudential Guidelines on capital adequacy, liquidity management, proceeds of crime and money laundering, consumer protection, etc., issued under section 33(4) of the Banking Act.

[398] William Jack and Tavneet Suri (2011) "*Mobile Money: the economics of M-Pesa*,"*Op. cit.*

[399] For an understanding of the linkage between universal access and service, and interconnection and interoperability, see generally, Milton L. Mueller (2007) *Universal Service: Competition, Interconnection, and Monopoly in the Making of the American Telephone System* MIT Press, Cambridge, MA.

[400] Mira Burri Nenova (2007) "The New Concept of Universal Service in a Digital Networked Communications Environment," *op. cit.*

2.7 Quality of Service (QoS) of mobile financial services

In Kenya's liberalized telecommunications sector, competition is considered one of the main tools for fostering innovation, fair pricing, and promoting high quality of telecommunications services.[401] The objective to keep down churn rates in a competitive market is seen as an incentive for the provision of high quality services. This explains the frequent offers and promotions launched especially by Safaricom and Airtel, in order to attract and retain subscribers.[402]

However, the telecoms markets in Kenya are not "perfect." This is especially because two market players – Safaricom and Orange Telkom - have been declared significant market players (SMPs) by the CCK.[403] There is therefore need to implement a system for monitoring and reporting Quality of Service (QoS) of mobile telecommunications services so that consumers can be provided with sufficient information to make informed choices in the market.

2.7.1. Rationale for regulation of Quality of Service (QoS)

At least three arguments can be advanced for QoS regulation. First, Mobile Network Operators tend to trade off price for quality. The industry is already regulated by the CCK with regard to price setting.[404] Hence, unless regulated, MNOs will use quality as a cost-adjustment mechanism. If quality is not regulated, it is expected that QoS will get worse.[405]This is especially true where, in the present fiercely competitive mobile telecoms market in Kenya, voice service revenue has dropped sharply. Airtel, Telkom Kenya and Essar are yet to register profitability, and hence have

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[401] Muriuki Mureithi (2001) "Evolution of telecommunications policy reforms in East Africa: Setting new policy strategies to anchor benefits of policy reforms,"*op. cit.* See also, Mike Nxele and Thankom Arun (2005)*Regulatory Impact on the Development of the Telecommunications Sector in East Africa: a case study of Kenya*, *op. cit.*

[402] Brookings Institution (2012)*Mobile Financial Services and Financial Inclusion*, *Op. cit.* See also, Aaron Thuo and Charles Kihungi (2011) "Mobile Termination (MTR) Mobile Number Portability (MNP) and Cost of Internet in Kenya as at July 2011,"*Op. cit.* They argue that mobile number portability was undermined by the lack of interconnection and interoperability of the M-Pesa platform with other mobile financial service platforms. Hence currently, Safaricom's main strategy to lower churn rates is to maintain the proprietary exclusivity of M-Pesa.

[403] Communications Commission of Kenya (2011) *Competition Guidelines*, *op. cit.*

[404] See the Kenya Information and Communications (Tariff) Regulations, 2010. The CCK has also regulated Mobile Termination Rates (MTR) among MNOs.

[405] Claire Milne (1997) "Regulating Quality of Service," in W. Melody (ed.) in W. Melody (ed.)*Telecom Reform: Principles, Policies and Regulatory Practices*, 441, Technical University of Denmark, Lyngby.

exhausted their cash reserves. This has implications on infrastructure investments to improve network quality[406]

Second, in asymmetrical markets with dominant Mobile Network Operators, such as Kenya, the service providers may tend to be insensitive to their customers' quality preferences, especially for such essential public services.[407] This is probably because of the network effect, where subscribers in a dominant network weigh the poor quality of service against the advantages of being connected to a larger number of people.[408] The network effect has been exhibited by the reluctance of Safaricom's subscribers to migrate their numbers to networks with better Qos such as Airtel. This is because of the perceived inconvenience caused by having to abandon one's M-PESA account.[409]

Third, even where there is fair competition in a symmetrical telecoms market, there is a strong view that published, comparable QoS indicators are essential for assisting customers to make informed choices in the market, and to foster further competition.[410]

QoS in the mobile telecoms sub-sector in Kenya has gradually improved. Initially, in the years 2001-2003, when the early market entrants – Safaricom and Kencell – sought to grow their markets through rapid expansion, their QoS scores were very low.[411] The main issue, especially for Safaricom, was network congestion, low call completion rates and frequent call drops.[412] However, heavy infrastructure investments, network expansions and upgrades in the years ahead saw an improvement in QoS.[413]

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[406] Emmanuel Were, Mwaura Kimani and Christine Mungai (2012) "Short of cash, Orange, Yu, Airtel, struggle to crack Kenya market" *op. cit.*

[407] Muriuki Mureithi (2001) "Evolution of telecommunications policy reforms in East Africa: Setting new policy strategies to anchor benefits of policy reforms,"*op. cit.* The author notes that in uncompetitive markets, the MNO tends to be sluggish and indifferent to consumers.

[408] Ivan Mortimer-Schutts (2007) "The Regulatory Implications of Mobile and Financial Services Convergence,"*op. cit.*

[409] Aaron Thuo and Charles Kihungi (2011) "Mobile Termination (MTR) Mobile Number Portability (MNP) and Cost of Internet in Kenya as at July 2011,"*op. cit.*

[410] Claire Milne (1997) "Regulating Quality of Service,"*op. cit.*

[411] Mike Nxele and ThankomArun (2005)*Regulatory Impact on the Development of the Telecommunications Sector in East Africa: a case study of Kenya*, *op. cit.*

[412] *Ibid*

[413] *Ibid.*

Hence, in the context of converged mobile and financial services, QoS regulation is essential. The Kenya Information and Communication Act(Licensing and Quality of Service) Regulations 2010[414] provide a framework for the monitoring and reporting of Quality of Service (QoS) of GSM operators licenced by CCK. The measurement and evaluation criteria, or key performance indicators are contained in the Kenya Gazette Notice no. 11382 of 2008.[415] They include completed calls, failed calls, call setup success rate, call success rate, dropped calls and blocked calls. They also include speech quality, call handover success rate, call setup time and network availability. The figure below shows the MNOs' compliance with Quality of Service Parameters in the year 2010/2011.[416]

Table 2: Mobile Operators' Compliance with Quality of Service parameters, Year : 2010/2011

lubile Operators' Compliance with Quality of Service parameters, Year : 2010/2011

QoS Parameter	(2012/13) Targets	2009/10 to 2011/12 Targets	Safaricom Limited		Airtel Networks Kenya Limited (Airtel)		Essar Telecoms Kenya Limited (Yu)		Telkom Kenya Limited	
			Achieved	Status	Achieved	Status	Achieved	Status	Achieved	Status
Completed calls	95%	90%	89.00	N/C	89.78	N/C	89.92	N/C	38.50	N/C
Call set up success rate	95%	90%	91.67	C	90.02	C	90.14	C	41.36	N/C
Dropped calls	2%	2%	1.34	C	1.79	C	1.30	C	1.91	C
Blocked calls	5%	10%	8.39	C	9.97	C	9.87	C	58.75	N/C
Speech Quality (MOS Values)	<13.5 sec	95% of samples > 2.7	84.23	N/C	87.47	N/C	71.64	N/C	85.45	N/C
Handover Success Rate	95% of calls to have MOS> 3.1	85%	99.28	C	97.57	C	94.14	N/C	94.17	C
Call Setup Time	95%	13.5 secs	8.85	C	9.69	C	9.15	C	9.33	C
Signal Strength (RxLev-dBm)	Outdoor = - 102 dBm, Indoor = -95 dBm, In car = - 100 dBm	Outdoor -102 dBm	-87.11	C	-87.43	C	-84.04	C	-84.86	C

: C – Com[illegible]nt and N/C – Non Compliant

ource: Communications Commission of Kenya, 2012, Annual Report Financial year 2010/11

[414] Kenya Information and Communications Act, Cap. 411A, Laws of Kenya.
[415] Republic of Kenya, Notice of Approved Quality of Service (QoS) Standards for GSM Systems, Gazette Notice No. 11382 of 2008, CX No. 91, 21st November 2008, Government Printer.
[416] Communications Commission of Kenya, 2012, Annual report financial year 2010/11, *Op. cit.*

To the extent that mobile financial services are value added services which depend on network availability and quality, the gazetted QoS regulations are relevant.

However, the Quality of Service regulatory framework does not sufficiently address the peculiarities of mobile financial services. As argued earlier, the electronic money transmission components of the money transfer services are communications services or "payment services" falling under the ambit of both the Central Bank of Kenya and the Communications Commission of Kenya.[417]

The Central Bank of Kenya has taken leadership in regulating the financial aspects of Quality of Service for mobile financial services in Kenya. Under Clause 12(c) of the Central Bank of Kenya Draft Regulations for the Provision of Electronic Retail Transfers, the Central Bank of Kenya has reserved the right to publish comparative information across competing payment service providers (such as Mobile Network Operators).[418] This information may include their fees and quality of service, as a way to protect consumers of the payment services.[419]

The CCK has not been proactive in developing Quality of Service metrics that address ICT-related aspects of mobile financial services. This insufficiency in the telecoms QoS regulation creates challenges in a number of mobile financial service areas that are critical for managing QoS. These include complaints or redress mechanisms, agent network quality assurance, and verification and tracking of mobile financial service transactions and charges. These are discussed below.

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[417] Lenart Bangens and Bjorn Söderberg (2008) "Mobile Banking –Financial Services for the Unbanked?" *op. cit.*

[418] Mobile network operators are payment service providers, as provided under the National Payment Systems Act, Cap 39.

[419] Central Bank of Kenya Draft Regulations for the Provision of Electronic Retail Transfers, at http://www.centralbank.go.ke/downloads/nps/Electronic%20%20Retail%20and%20E-regulations.pdf (accessed on 27/8/12).These Regulation is issued in terms of section 57(1) read with section 4A of the Central Bank of Kenya Act which requires the CBK to formulate and implement policies to promote the establishment, regulation and supervision of efficient and effective payment, clearing and settlement systems.

2.7.2 Complaints or redress mechanisms in mobile financial service transactions

With increased diversification of mobile financial payment services, the number of stakeholders in the payment system in Kenya has expanded.[420] They include the Mobile Network Operators, and owners of Pay Bill numbers, including the Government, utility service providers, private businesses.[421] This complicates a redress scenario where, for example, a utility service provider denies receiving payment.[422]

In Kenya, there is no clear redress mechanism for mobile financial service customers to pursue claims, for example, where the money transfer systems malfunction and account holders lose money. Consumers are therefore not sure whom to approach when they have complaints related to mobile money, especially when they involve the MNO.[423] Currently, the CCK forwards any complaints received from subscribers to the MNO (where an MNO is concerned) and to the CBK.[424] Because MNO system malfunction can affect the whole breadth of services offered by an MNO, the primary regulator with regard to complaints mechanisms should be the CCK rather than the CBK.

There is need for regulation, and guidelines for MNOs to set up dedicated customers support centres and systems for converged services such as mobile financials services.[425] This is because these new converged services have unique needs that may not be served by the standard customer support protocols for voice and other data services.

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[420] See Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," *op. cit.*

[421] Safaricom Limited (2011) *Annual Report and Group Accounts for the Year Ended March 2011*, *op. cit.*

[422] USAID and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix,"*op. cit.* One of the risks identified by the study is that customers are not able to resolve disputes with an account provider and recourse to a government body or regulatory authority to arbitrate disputes is weak or non-existent. The dispute requiring resolution could be a transaction that is initiated by a customer on the customer's phone, as well as a transaction that an agent makes on behalf of a customer who does not have his/her own phone.

[423] United Nations Conference on Trade and Development (2012) "Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations', *op. cit.*

[424] Interview with Japheth Odhiambo, Legal Officer, Communications Commission of Kenya, 2nd March 2012, Nairobi.

[425] United Nations Conference on Trade and Development (2012) "Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations', *op. cit.*

7.3 Agent network quality assurance

The MNO agent networks in Kenya are an integral infrastructure for the delivery of mobile financial services.[426] They are also the front end for the maintenance of quality and consumer confidence in the system. This is because the agents are the point of contact between the MNOs and the consumers.[427] Agents perform two key functions: registration of new mobile financial service subscribers, currency convertibility services through the cash-in and cash-out services.[428]

Safaricom, for example, maintains tight and direct control over staff and agent training to ensure that M-PESA's users receive a consistent and positive experience regardless of which agent they choose to patronize.[429] This also ensures that agents comply with Safaricom's Anti-Money Laundering (AML) and Counter Terrorist Financing (CTF) policies.[430] This is especially critical in the context of increased use of illegal SIM cards by terrorism suspects in Kenya. In October 2013, for example, after a devastating terrorist at a shopping mall in Nairobi, at least seven agents were charged in court with the offence of failing to register SIM cards.[431]

It is therefore important that the contracting, recruitment, training, management and service delivery aspects of the MNO agent networks are regulated from a telecoms Quality of Service perspective. The CBK has already outlined certain parameters, not in the public domain, for the recruitment and registration of MNO agents.[432] In addition, the CBK also inspects, on demand, the operations of the agents.[433] The CCK, however, has not provided any guidelines for the quality of service rendered by MNOs through the agent networks.

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[426] See Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," *op. cit.* This is especially in the rural areas, where financial inclusion is weakest. The kind of liquidity required by mobile financial service agents makes it difficult for certain rural areas to have a sufficient agent network.

[427] *Ibid.*

[428] William Jack and Tavneet Suri (2011) "*Mobile Money: the economics of M-Pesa*,"*op. cit.*

[429] Mercy W. Buku and Michael W. Meredith (2013) "Safaricom and M-Pesa in Kenya: financial inclusion and financial integrity,"*op. cit.*

[430] *Ibid.*

[431] Mark Okuttah (2012) "Police fail to link telcom CEOs with SIM card crimes", *Business Daily* (Nairobi) Sunday November 10, 2013.

[432] United Nations Conference on Trade and Development (2012) "Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations', *op. cit.*

[433] *Ibid.*

The telecoms regulators and policy makers should therefore distinguish and spell out specific QoS metrics for agent networks from a telecoms perspective.

2.7.4 Authentication and registration of mobile financial service subscribers

Quality services should be friendly to their recipients.[434] It is therefore important for the documentation and process required for customer registration and operation to be friendly to the illiterate, low-end account holders.[435] Aside from the statutory duties of the CCK in customer education and awareness, there are no specific regulations that require mobile financial service or other value added service providers to have customer-friendly convenient systems.

2.7.5 Verification and tracking of transactions and Mobile Network Operator charges

Another important QoS indicator in mobile financial service provision is the level of transaction transparency.[436] For example, can a customer track his/her transactions? This is especially critical where there are no intermediary third parties that can clarify and verify the fees charged.[437] This is regulated to the extent that the National Payment System Act of 2011[438]mandates reporting mechanisms and other measures on audit data availability. Prior to the enactment of the National payment Systems Act, the CBK approved the provision of mobile financial services by MNOs on condition that they model their audit and financial systems according to the then National Payments Systems Bill.[439]

The Kenya Information and Communications Act(Licensing and Quality of Service) Regulations minimally address mobile money peculiarities. It provides that licencees should get all other legally mandated authorizations from other regulators and authorities, like the Central Bank of

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[434] Isaiah Lule, Tonny Kerage Omwansa, and Timothy Waema (2012) "Application of Technology Acceptance Model (TAM) in M-Banking Adoption in Kenya".*op. cit.*

[435] Saiah Goss, Ignacio Mas, Dan Radcliffe, Evelyn Stark(2011) "The Next Challenge: channeling savings through mobile money schemes," in *The Mobile Financial Services Development Report*, World Economic Forum, Washington, DC, pp. 43-50. The authors contend that shopkeepers at retail outlets often lead mobile money customers through their first transaction, explain how to use the application, and assist with any problems. Such support early in the process is particularly important in rural areas, where a significant percentage of the potential user base is illiterate or unfamiliar with the functioning of their mobile phones or with financial transactions.

[436] Erwin Alampay (2010) "Mobile banking, mobile money and telecommunication regulations," *op. cit.*

[437] The banking industry, for example, has interest rate consultants who assist bank customers to verify interest and other fees charged on loans.

[438] Act No. 39 of 2011, Laws of Kenya.

[439] United Nations Conference on Trade and Development (2012) "Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations', *Oop. Ccit.*

Kenya.[440] In addition, the Communications Commission of Kenya may also play a nominal quality assurance role in the Central Bank of Kenya's licensing process.. This is to the extent that the CBK insists on getting a letter of recommendation from the Communications Commission of Kenya, vouching for the ability of an MNO to provide such a service.[441] There is, however, need for the Quality of Service framework to factor in service convergence in the telecommunications and finance industries.

2.8 Regulatory challenges posed by the convergence of mobile and financial services

From a conceptual point of view, Ben Sihanya (2000) summarizes the regulatory challenges of convergence into three.[442] First, it is very difficult in a number of situations, including mobile financial service provision, to distinguish between production, distribution, transmission and consumption.[443] For example, in hybrid mobile financial services such as M-PESA, both Safaricom and its banking partners such as Commercial Bank of Africa have primary roles in operationalization of the product *M-Shwari*.[444] Therefore it is not easy to determine what specific legal duties vest in parties to a converged mobile financial services, or which regulator has primary jurisdiction.[445]

Second, in telecoms, there is a distinction between Plain Old Telephone Services (POTS) such as voice services, and Value Added Services (VAS) such as mobile financial services.[446] The implication is that in many countries, including Kenya, POTS are regulated from a classical perspective, while there is a tendency to liberalize VAS and subjecting them to market forces.[447]

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[440] Section 20 of the Kenya Information and Communications Act (Licensing and Quality of Service) Regulations, 2010.

[441] Interview with Japheth Odhiambo, Legal Officer, Communications Commission of Kenya, 2nd March 2012, Nairobi..

[442] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.*

[443] Lennart Bångens, and Bjorn Söderberg (2008) *Mobile Banking –Financial Services for the Unbanked?*, The Swedish Program for ICT in Developing Regions, Reklam & Katalogtryck, Sweden. The authors warn that rigid classifications of value-added services is inadequate to properly police even the traditional operational aspects of telecommunications providers.

[444] Duncan Miriri & David Holmes (2012) "Safaricom faces court challenge over banking service," *op. cit.* See also, Mugambi Mutegi (2012) "Safaricom hits back at Faulu over M-Shwari ownership", *op. cit.*

[445] Jens C. Arnbak (2002) "Multi-utility regulation: yet another convergence," in Robin Mansell, Rohan Samarajiva & Amy Mahan (eds.) *Networking Knowledge for Information Societies: Institutions and Intervention*, DUP Science, Delft, p. 144.

[446] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.*

[447] Lennart Bångens, and Bjorn Söderberg (2008) *Mobile Banking –Financial Services for the Unbanked?*, *op. cit.*

An example is where the Communications Commission of Kenya regulates interconnection and inter-operability in voice services, but not in mobile financial services.[448] This distinction becomes problematic once convergence blurs the lines between POTS and VAS.[449]

Third, converged POTS, VAS and other non-telecoms services are caught up between the philosophically divergent regulatory regimes of the International Telecommunications Union (ITU) and the World Trade Organization (WTO).[450] The ITU's regulatory approach is developmental and consumer oriented, and emphasizes regulation of universal service and access, and quality of service.[451] WTOs Trade Related Aspects of Intellectual Property and Services (TRIPS) Agreement, on the other hand, focusses on market-oriented competition perspectives.[452]

These conceptual difficulties give rise to practical challenges faced by regulators. These are regulatory overlap, regulatory inertia, and regulatory arbitrage. They are discussed below.

2.8.1 Regulatory overlap

The convergence of two erstwhile separate sectors – telecoms and financial sectors – has resulted in the creation of a converged product regulated by more than one primary regulator. The Communications Commission of Kenya and the Central Bank of Kenya are the primary regulators of MNOs and financial service providers, respectively.[453] In Kenya's context, the Central Bank of Kenya has been more pro-active in taking primary regulatory responsibility over

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[448] See discussion in Section 2.4 and 2.5 on interconnection and interoperability, and on competition, above.

[449] Lennart Bångens, and Bjorn Söderberg (2008) *Mobile Banking –Financial Services for the Unbanked?*, *op. cit.*

[450] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.*

[451] The International Telecommunications Union (ITU) is the United Nations specialized agency for information and communication technologies (ICTs). ITU currently has amembership of 193 countries and some 700 private-sector entities. See http://www.itu.int/en/about/Pages/history.aspx (accessed on 29.8.13).

[452] The WTO's instruments such as Articles II and III of the Trade Related Investment Measures (TRIMs) and the Trade Related Aspects of Intellectual Property and Services (TRIPS) emphasize that cyberspace and infotainment business ought to be liberalized.

[453] *Ibid.*

[454] See Sections 3 and 4 of the Central Bank of Kenya Act, and Sections 5 and 6 of the Kenya Information and Communications Act, Cap 411.

the provision of mobile financial services, including authorization of Mobile Network Operators.[454] The CCK has taken a passive role, in the face of the regulatory overlap.[455]

Unfortunately, the regulatory frameworks for the financial sector and the telecommunications sector do not have provisions for dealing with instances of regulatory overlap.[456] The Constitution of Kenya 2010, however, by virtue of Article 10, binds state organs such as regulators to consult, before undertaking their regulatory functions.[457]

Ben Sihanya (2000) notes that it has been argued that regulatory competition is likely to bring about efficiency in the process of regulation.[458] However, he concurs with the mainstream view that regulatory overlap in any sector of the economy is not conducive to promoting innovation and investments because of the costs of regulatory compliance, and fear of multiple penalties from multiple regulators.[459]

2.8.2 Regulatory inertia

Converged service innovations prompted by rapid technological and economic developments often leave regulators and policy makers unsure of how to respond to the development.[460] The introduction of M-PESA by Safaricom in 2005 elicited a similar reaction from the CCK and the CBK.[461] In the case of M-PESA, the primary regulators, the Central Bank of Kenya and the

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Alliance for Financial Inclusion. (2010). "Enabling Mobile Money Transfer: The Central Bank of Kenya's reatment of M-Pesa." *op. cit.*

International Telecommunications Union (2011) Chairman's Report: 11th Global Symposium for Regulators, *op.*

Instances of regulatory overlap are dealt with administratively and politically, at Cabinet level, consultations, her than through legal structures. I discuss this in detail later in Chapter 3.

The Supreme Court in *Re The Matter of the Interim Independent Electoral Commission*, Constitutional plication No. 2 of 2011 (Unreported) underscored the importance of independent State organs to cooperate with h other in discharging their mandates.

Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," cit.

Kizomo Mutuku (2008) "Case for Consolidated Financial Sector Regulation in Kenya," Retirement Benefits hority, Nairobi.athttp://www.rba.go.ke/publications/research-papers/category/4-research-reports-2007-8?download=10%3Acase-for-consolidated-financial-sector-regulation (accessed on 29/8/12).

nternational Telecommunications Union (2011) Chairman's Report: 11th Global Symposium for Regulators, *op.* See also, Alliance for Financial Inclusion. (2010). "Enabling Mobile Money Transfer: The Central Bank of ya's Treatment of M-Pesa." *op. cit.*

nited Nations Conference on Trade and Development (2012) "Mobile Money for Business Development in the African Community: a comparative study of existing platforms and regulations', *Op. cit.*

Communications Commission of Kenya, were unsure of how best to regulate M-PESA, but at the same time feared putting up regulatory bottlenecks that may stifle the M-PESA innovation.[462]

Luckily, the CBK and the CCK agreed to provisionally authorize M-PESA, on condition that Safaricom adhered to certain audit and financial guidelines. These included up-to-date records of mobile money accounts opened, identities of account holders and the transactions they have engaged in.[463] The fact that the Government of Kenya owned (then) 35% of Safaricom may have also persuaded the regulators to give M-PESA a bureaucratic leeway through that kind of flexible authorization absent of a legal framework. Nevertheless, this leeway has been credited for the success enjoyed by Safaricom not only in Kenya but globally, in comparison to other failed mobile financial services in other countries.[464]

Unfortunately, five years after the introduction of mobile financial services, regulatory inertia, specifically on the side of the Communications Commission of Kenya, has persisted. The Commission and other ICT regulators have not been pro-active in rolling out regulations aimed at promoting innovation and fair competition in converged mobile and financial services. This includes regulations aimed at addressing competition, interconnection, and interoperability.

Regulatory inertia is disadvantageous to consumers. This is because regulations such as interconnection and interoperability requirements, competition regulations, and quality of service regulations, which would favour consumers, will not be implemented. This undermines the development of the mobile financial services sector.

2.8.3 Regulatory arbitrage

Technological, service and market convergence has created unique products – such as e-money and e-wallets – in the telecoms sector.[465] The absence of a clear responsive framework for convergence has encouraged the market players to capitalize on regulatory loop-holes. This is in

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[462] *Ibid.*
[463] *Ibid.*
[464] Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," *op. cit.*
[465] Jerôme Bezzina and Mostafa Terrab (2005) "Impacts of New Technologies in Regulatory Regimes: an introduction," *op. cit.*

order to circumvent unfavourable regulations. This is regulatory arbitrage.[466] Mobile financial services are a good example of such innovation.

Regulatory arbitrage is indeed a form of market innovation that should actually be encouraged.[467] However, *ex post* regulation should be used to respond appropriately.[468] This is because unregulated markets are inherently risky. In the absence of a legal framework that expressly legalizes a particular business enterprise, and apportions various rights and responsibilities in the business relations, the enterprise does not attract investments commensurate with the opportunities.[469]

Hence the presence of regulation lessens "regulatory risks" in the mind of an investor considering entering a particular market. This kind of risk, for example, prompted the Minister for Finance, Hon. John Michuki, to order an impromptu risk audit of M-PESA, in 2009.[470] The Minister, while presiding over the launching of new regulations for micro-finance institutions in Kenya, commented that he did not think M-PESA, which was not regulated, would end well.[471]

2.9 Conclusion

The discussion in this chapter was aimed at answering the second research question: do Kenya's telecoms regulations recognize mobile financial services as telecommunications services? The hypothesis was that Kenya's telecommunications laws and regulations are ambivalent as to the status of converged services such as mobile financial services, within the definition of "telecommunications services". It explored this question by analyzing five regulatory areas in mobile telecoms regulation. These are licensing and authorization, interconnection and

[466] Martha Garcia-Murillo and Ian MacInnes (2002) "The impact of technological convergence on the regulation of ICT industries," *The International Journal on Media Management*, Vol. 5, No. 1, pp. 57 – 67. Regulatory arbitrage is problematic when regulation does not yet exist for emerging convergent services that could fall under the supervision of more than one regulator. In the presence of these alternatives innovators can choose the one legal framework that would entail the least regulation. This may not necessarily be the best option for society or the industry as a whole.

[467] Atul K. Shah, (1997) "Regulatory arbitrage through financial innovation,"*Accounting, Auditing & Accountability Journal*, Vol. 10 Issue 1, pp.85 – 104. The author refers to regulatory arbitrage as "creative compliance." He notes that while creative compliance may not be illegal, it undermines the spirit of regulation, and makes the regulatory framework appear weak and ineffective.

[468] I discuss regulatory frameworks in detail later in Chapter 3.

[469] Alliance for Financial Inclusion. (2010). "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-Pesa." *op. cit.*

[470] *Ibid.*

[471] *Ibid.*

interoperability, competition, universal access and service, and quality of service (QoS). The enquiry was whether either of these regulatory frameworks expressly or incidentally anticipates, and addresses the new issues that have emerged as a result of convergence of mobile and financial services.

The discussion has demonstrated the regulatory inadequacies of dealing with converged services, especially mobile financial services, in Kenya. The Kenya Information and Communications Act does not expressly provide for converged mobile and financial services, or any other type of inter-sectoral converged services. While these may be covered under the definition of Value Added Services (VAS), the substantive regulations do not anticipate converged mobile financial services. This has made the current telecoms regulatory framework inadequate in addressing the emerging convergence issues in mobile financial services. The sector regulator, the Communications Commission of Kenya, for example has surrendered the regulatory mandate of the converged services to the Central Bank of Kenya.

Despite the existence of strong financial angles in mobile financial services, there are fundamental telecoms aspects that must remain under the regulatory purview of telecoms regulators. Kenyan telecoms regulations have not made the cut. There is therefore need for telecoms regulatory reform, if the gains the development of mobile financial services are to be safeguarded.

In chapter 3, I use the findings in this Chapter to explore which regulatory frameworks for convergence of mobile and financial services will promote innovation in the converged services.

CHAPTER THREE

3.0 DESIGNING A TELECOMS REGULATORY FRAMEWORK FOR CONVERGENCE IN MOBILE TELECOMS AND FINANCIAL SERVICES IN KENYA

3.1 Introduction

In Chapter 2, I discussed the impact of the convergence of mobile and financial services, in the form of mobile financial services, on regulation of mobile telecoms in Kenya. The discussion concluded that the telecoms regulatory framework in Kenya has been reformed to respond to convergence within the ICT sector.[472] However, this has not been sufficient to meet the challenges of cross-sectoral convergence, for example, with the financial services sector.[473] The result is that the emergence of mobile financial services in Kenya has led to many regulatory problems, including regulatory overlap, regulatory inertia, and regulatory arbitrage.[474]

In this Chapter, I draw from the findings in Chapter 2 to answer the research question three. I explore possible regulatory frameworks that will promote innovation and quality of service in convergence of mobile and financial services in Kenya. The study is based on the hypothesis that regulation of inter-sectoral converged services such as mobile financial services by telecoms regulators can be achieved by the adoption of principle-based regulation over rule-based regulation.

However, while the discussion is focused on an ideal regulatory framework for mobile financial services, I note that, as argued by Robert Frieden (2002) frameworks for regulation of convergence should be open and general.[475] Nevertheless, there are some regulatory frameworks

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[472] See section 2.3 on authorization and licensing of mobile telecoms business. The introduction of Unified Licensing Framework (ULF) by the Communications Commission of Kenya is perhaps the most significant regulatory response to convergence.

[473] *Ibid.* Definitions of telecommunications services under Section 2 of the Kenya Information and Communications Act and the Kenya Information and Communications Regulations, 2009, are ambivalent as to whether mobile financial services are Value Added services or telecommunications services, or neither.

[474] I have discussed regulatory inertia, overlap and arbitrage under section 2.8 of Chapter 2. For an in-depth discussion, see United Nations Conference on Trade and Development (2012) "Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations', *op. cit.*

[475] Robert M Frieden (2002) "Wither Convergence: Legal, Regulatory, and Trade Opportunism in Telecommunications,"*18 Santa Clara Computer & High Tech. L.J. 171.* I discuss this issue in detail in section 3.3.5 below.

that can be specific to specific types of convergence.[476] Hence the regulatory frameworks proposed are both specific to mobile financial services, but also general to other types of convergence, for example, within the ICT sector.

3.2 The regulatory framework for the telecommunications sector in Kenya.

The primary laws and policies that regulate the telecommunications sector in Kenya include:

(a) The Constitution of Kenya 2010;[477]

(b) The Kenya Information and Communications Act;[478]

(c) The State Corporations Act;[479] and

(d) Ministry of Information and Communication's National Information and Communications Technology (ICT) Policy of 2006;[480]

In 1998, the enactment of the Kenya Communications Act of 1998 broke up the Kenya Posts and Telecommunications Corporation (KPTC), the long-time legacy ICT regulator in Kenya.[481] It liberalized the telecommunications sector in Kenya and, and vested various regulatory responsibilities on a number of institutions:[482]

(a) The Communications Commission of Kenya (Communications Commission of Kenya);

(b) The Communications Appeals Tribunal (CAT);

(c) The National Communications Secretariat (NCS);

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[476] Kenneth Jull and Stephen Schmidt (2009) "Preventing Harm in Telecommunications Regulation: a new matrix of principles and rules within the ex ante vs. ex post debate" *Vol. 47,Canadian Business Law Journal,* pp. 329-362. See the discussion in section 3.3.5 below.

[477] The Constitution of Kenya 2010 was promulgated and came into force on the 27th August 2010. The constitutional framework has thoroughly transformed the architecture of governance, from both a normative and institutional perspective. See Ben Sihanya (2011) "The Presidency and Public Authority in Kenya's New Constitutional Order," Constitution Working Paper Series No. 2, Society for International Development (SID) Nairobi.

[478], Cap. 411A, Laws of Kenya.

[479], Cap. 446, Laws of Kenya.

[480] Gazette Notice No. 24 of 2006.

[481] Institute of Economic Affairs (2002) "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy,"*op. cit.*

[482] The Communications Commission of Kenya, the Communications Appeals Tribunal and the National Communications Secretariat are created by the Kenya Information and Communications Act. The office of the Minister/Cabinet Secretary has usually been created under the Constitution. Its roles are then defined by the Presidential Circular on Re-organization of Government, while its powers are then vested by Act. The judiciary is established by the Constitution, while the details of its mandate are found in various statutes, including the Law Reform Act, Cap. 26, and the Kenya Information and Communications Act. The KICA further contains and spells out the judiciary's role with regard to ICT. Comments by Ben Sihanya in the course of supervision.

(d) The Cabinet Secretary for Information and Communication;[483]

(e) The judiciary.

The Constitution of Kenya 2010 provides guidelines for exercise of state regulatory functions by the above-mentioned bodies. These include requirements for consultation and participation of stakeholders in the regulatory process.[484] To that extent, other regulatory institutions in the telecommunications sector include market players and lobby groups. These include the Telecommunications Service Providers Association of Kenya (TESPOK) and the Kenya Telecom Network Operators (KTNO), and the Telecommunications Network Operator Forum (TNOF).[485]

They also include consumer lobby groups and civil society, including the Consumer Federation of Kenya (COFEK).[486] Articles 22 and 258 of the Constitution have provided a gateway for public interest litigation by consumer protection groups, aimed at enforcement of the Bill of Rights, and the entire Constitution, respectively.[487]

Under the Constitution of Kenya 2010, regulators such as the Communications Commission of Kenya (CCK) and the Cabinet Secretary for ICT are also answerable to certain Senate, National Assembly, and joint Parliamentary Committees whose terms of reference include Communications.[488] These include the Parliamentary Committee on Energy, Communication and Information, and the Parliamentary Committee on Delegated Legislation.[489] These committees also directly investigate market players in which government has a stake, such as Telkom

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[483] The office of Cabinet Secretary, up until the promulgation of the Constitution of Kenya 2010, has been referred to as the office of Minister.

[484] See the national principles and values of governance under Article 10 of the Constitution of Kenya. See also, *Federation of Women Lawyers Kenya (FIDA-K) & 5 others v Attorney General & another* [2011] eKLR.

[485] See Lishan Adam, Tina James and Alice MunyuaWanjira (2007) "Frequently Asked Questions about Multi-Stakeholder Partnerships in ICT for Development: a guide for national ICT policy animators," the Association for Progressive Communications (APC) South Africa.

[486] *Ibid.*

[487] The Courts have recognized and legitimized this right in *Consumer Federation of Kenya (COFEK) V Attorney General & 4 Others [2012]eKLR.*

[488] See Article 124 of the Constitution, which gives Parliament the powers to establish Parliamentary committees.

[489] Republic of Kenya (2008) *National Assembly Standing Orders*, Government Printer, Nairobi. Standing Order number 216 establishes departmental committees, while the Second Schedule to the Standing Orders lists the committees and their terms of reference.

Kenya.[490] For example, recently, the Parliamentary committees summoned the ICT Minister and the CCK to shed light on award of a tender for distribution of digita broadcasting signals in Kenya.[491]

I discuss each of the regulatory institutions above, and the extent to which they are constituted to regulate and promote convergence in mobile and financial services in Kenya.

3.3 The Communications Commission of Kenya

The Communications Commission of Kenya is established under section 3 of the Kenya Information and Communications Act (KICA).[492] Under section 5 of the Act, the Commission is mandated to promote, develop and regulate information and communication services in accordance with the provisions of the Act. The Communications Commission of Kenya is therefore the primary regulator for the telecommunications sector in Kenya. In this role, as shall be explored below, the Communications Commission of Kenya is the central platform through which the activities of other key regulatory players outlined above can be integrated and coordinated.[493]

The role of the Communications Commission of Kenya in the new constitutional dispensation has been challenged in the courts by the Media Owners Association, an industry lobby group. This is because the Communications Commission of Kenya has not been restructured in line with Article 34(5) of the Constitution. This constitutional provision requires Parliament to enact legislation that provides for the establishment of a body which shall be independent of control of government, political interests, and commercial interests. It must also reflect the interests of all sections of the society.[494] However, as at August 2013, the courts had yet to determine the case,

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[490] Daily Nation (2013) "Telkom officials grilled over firm's performance," Daily Nation (Nairobi) Monday June 25, 2013. The Parliamentary committees took Michael Ghossein the Telcom Kenya CEO, to task over the company's continued dismal performance despite its privatization six years ago.

[491] Daily Nation (2011) "MPs to block award of broadcast tender," Daily Nation (Nairobi) Wednesday July 20, 2011.

[492] Cap. 411A, Laws of Kenya.

[493] I briefly compare the juridical and institutional establishment of the CCK with the UK's Office of Communications (OFCOM) and the US Federal Communications Commission (FCC). See section 3.3.1.8 below. See also, Constantijn Van Oranje, *et al* (2008) "Responding to Convergence: different approaches for telecoms regulators," RAND Europe, Brussels, Belgium for an in-depth examination of UK and US responses to convergence, generally. There is need for deeper comparative research in this area.

[494] *Media Owners Association v Attorney General, the Ministry of Information and Communication and the Communication Commission of Kenya,* Petition No. 244 of 2011.

as it had not been set for a full hearing. I discuss the issue of independence in section 3.3.2.1 below.

In addition, stakeholders in the broadcasting sector, including the Royal Media Services, have also challenged the constitutionality of the power of the Communications Commission of Kenya to license market players.[495]

I use a six-pronged framework to analyze the extent to which the Communications Commission of Kenya is institutionally structured to respond to the challenges of convergence in mobile and financial services. The five key benchmarks are:

(a) Regulatory philosophy of the CCK;
(b) Institutional or board composition of the CCK;
(c) Regulatory cooperation between the CCK and other regulators;
(d) Extent of state regulation, co-regulation and self-regulation within CCK's regulatory framework;
(e) Use of principle-based versus rule-based legislation by the CCK in its legislative mandate.

3.3.1 CCK's Regulatory philosophy in the era of convergence

The institutional perspective of the Communications Commission of Kenya (CCK) is integral in how it interprets its role and terms of reference for regulating telecoms in an era of convergence. Ben Sihanya (2000) has argued that in formulating regulatory practices, four questions are pertinent.[496] First, what is the subject matter of regulation? Second, why is regulation necessary? Third, how will the regulation be carried out? Fourth, who will regulate? These questions have been important to telecoms and other sectoral regulators in Kenya, with the advent of liberalization of utility sectors and privatization of state corporations.[497]

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[495] *Royal Media Services Ltd v Attorney General & 2 others* [2013] eKLR.
[496] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*
[497] Institute of Economic Affairs (2002) "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy,"*op. cit.*

Since 1983, when Christopher Hood first suggested that regulatory activities of the state involve far more than legislating or rule making, the definition of regulation has evolved.[498] There is consensus among lawyers, economists, political scientists and analysts such as the Kenyan chapter of the Institute of Economic Affairs (IEA) that the scope of regulatory activity has since expanded from regulatory authority to sector leadership.[499]

This sector leadership entails the processes of developing, agreeing, setting, evolving and enforcing rules of conduct and engagement.[500] In addition, regulation entails the processes of standard-setting, information gathering and monitoring, and behavior modification.[501] As discussed in detail further below, the CCK has exhibited this progressive view of its regulatory role by, for example, investing in research and development.[502]

The role of telecoms regulators in Kenya and globally has further been complicated by convergence within the ICT sector and between the ICT and other sectors such as financial services. As discussed in Chapter 1 above, convergence and other developments in the ICT sector have set the Kenyan economy towards an information society.[503]

In this context, what is the Communications Commission of Kenya's understanding of its role in regulating telecoms? Its perspective can be drawn from five main regulatory and policy instruments that outline its mandate. These include: the Kenya Information and Communications Act; the Communications Commission of Kenya Strategic Plan, 2008-2013; the State Corporations Act; the National Information and Communications Technology (ICT) Policy, 2006; and the National Information and Communications Technology Sector Master Plan, 2008-

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[498] Christopher Hood (1983) *The Tools of Government*, Macmillan, London, pp. 46-85.

[499] Institute of Economic Affairs (2003) "The Quest for an Information Society: benchmarking the regulatory framework to usher Kenya into an information era," Institute of Economic Affairs, Nairobi.

[500] *Ibid.* The author advocates a more pro-active and leadership-driven style for telecoms regulators. I explore this further below. See also, John Buckley (2003) *Telecommunications Regulation, op. cit.*

[501] Morgan Bronwen &Yeung Karen (2007) *Introduction to Law and Regulation.* Cambridge University Press, Cambridge, New York.

[502] See Section 23(2)(b) of the Kenya Information and Communications Act. See also, Communications Commission of Kenya, (2013) *Annual report financial year 2011/12*, Nairobi.

[503] See section 1.2.1 of Chapter 1. See also, Timothy Waema, *et al* (2010) *Kenya ICT Sector Performance Review 2009/2010: Towards Evidence-based ICT Policy and Regulation,op. cit.*

2012. I discuss their respective contents below. The chronology of the statutory and policy instruments below does not have any significance.

3.3.1.1 Kenya Information and Communications Act[504]

Section 5 of the Act provides the object of the Commission as to license and regulate postal, information and communication services in accordance with the provisions of the Act.[505] Aside from designating the Communications Commission of Kenya as a converged sectoral regulator, the Act does not provide a framework for inter-sectoral regulation of, for example, of mobile financial services.

As argued in this study, the ambivalence of the statutory framework has resulted in regulatory inertia on the part of CCK.[506] The regulator has ceded its primary regulatory role over mobile financial services to the Central Bank of Kenya. This is exhibited by formulation and enactment of laws and regulations relating to mobile money payments, administered by the Central Bank of Kenya and the National Treasury. These include the National Payments System Act[507] and the Central Bank of Kenya Draft Regulations for the Provision of Electronic Retail Transfers.[508]

Njaramba Gichuki (2013) has argued, however, that the Central Bank of Kenya has rightly claimed its regulatory mandate over mobile financial services, from sections 4 and 7 of the Central Bank of Kenya Act.[509]

Another integral provision in this context is Section 83C of the Kenya Information and Communications Act, which provides for one of the functions of the Communications Commission of Kenya as the facilitation of electronic transactions. The architecture of mobile

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[504] Cap. 411A, Laws of Kenya.

[505] See the findings of the High Court in *Royal Media Services Ltd v Attorney General & 2 others* [2013] eKLR regarding the regulatory mandate of the *Communications Commission of Kenya*.

[506] See section 2.8 in Chapter 2, on the impact of the convergence of mobile and financial services on regulation of mobile telecoms in Kenya.

[507] Cap. 39, Laws of Kenya.

[508] Central Bank of Kenya Draft Regulations for the Provision of Electronic Retail Transfers, at http://www.centralbank.go.ke/downloads/nps/Electronic%20%20Retail%20and%20E-regulations.pdf (accessed on 27/8/12). I have discussed these regulations under Section 2.7 in Chapter 2.

[509] Njaramba Gichuki (2013) *Law of Financial Institutions in Kenya, op. cit.* Section 4(2) of the Central Bank of Kenya Act, Cap. 491, Laws of Kenya, provides that the regulatory role of the CBK is to ensure liquidity, solvency and proper functioning of a stable, market-based financial system.

nancial service systems, as discussed in Section 1.2.3.1(b) of Chapter 1, indicates that these ervices are essentially electronic transactions.[510] The provisions of Section 83C of the Act ould ideally position the CCK as the primary regulator of any converged services that are lectronic in nature, including mobile financial services. However, as discussed above, the ommission has not interpreted this provision broadly enough to reclaim the primary regulatory andate over mobile payment services from the Central Bank of Kenya.

n 11th July 2013, the Information and Communications Cabinet Secretary, Dr. Fred Matiangi, ublished the Kenya Information and Communications (Amendment) Bill, 2013.[511] The Bill eeks to amend the definition of telecommunications service to refer to "any transaction, ncluding banking, money transfer, or similar services carried out through a communications ystem."[512] The aim of the amendment, according to Dr. Matiang'i, is to, among other objectives, enable better regulation of the sector by providing for the handling of new regulatory challenges n the communications sector due to rapid technological challenges".[513] In addition, the mendments seek to bring mobile money and online banking under the ambit of the CCK.[514]

The proposed amendments indicate a positive shift in the regulatory philosophy of the CCK and he Cabinet Secretary for ICT, with regard to the over-arching role of ICT regulators. In a policy ustification paper for the amendment, the CCK has stated that the changes will introduce the vider concept of communication and give it more power to discharge its regulatory function, as guided by constitutional and operational principles.[515]

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[510] Consultative Group to Assist the Poor (2007) "Notes on Regulation of Branchless Banking in Kenya," *op. cit.*

[511] See the Kenya Information and Communications (Amendment) Bill, 2013, published on 11th July 2013, at http://www.cickenya.org/index.php/legislation/item/332-the-kenya-information-and-communications-amendment-bill-2013#.Uh8V8T-NBs4 (accessed on 28/8/13).

[512] It seeks to amend Section 23 of the Kenya Information and Communications Act, which section provides the detailed regulatory mandate of the Communications Commission of Kenya. See Charles Wokabi (2013) "Bill backs CCK on mobile cash deals," Daily Nation (Nairobi) Tuesday July 9, 2013.

[513] Nation Media Group (2013) "Bill denies politicians broadcast license," Daily Nation (Nairobi) Thursday July 4, 2013.

[514] *Ibid.*

[515] Charles Wokabi (2013) "Bill backs CCK on mobile cash deals," *op. cit.* See also, William H. Melody's methodology below. See William H. Melody (1997) "Designing a Working Telecom Regulatory Structure for 21st Century Information Societies," *op. cit.* The author advocates for a wider interpretation of the concept of "communications" by ICT regulators.

In addition, the Central Bank of Kenya, which has been the primary mobile financial service regulator, has also moved towards this new regulatory philosophy.[516] In response to the amendment, it has indicated that there is a consensus that mobile money be regulated by both institutions.[517] This is especially because it is a value-added service offered by the licensees of CCK but which deals with financial transactions.[518]

3.3.1.2 The Communications Commission of Kenya Strategic Plan, 2008 – 2013[519]

In this plan, guided by the Kenya Vision 2030, the Commission sets out its mission as 'to facilitate access to communications services through enabling regulation and catalyse the country's socio-economic development". The Strategic Plan barely addresses convergence, other than by providing that the Commission shall reform its regulations and policies to meet the challenges of convergence.

In 2012, the CCK revised the Strategic Plan to align it with the Constitution of Kenya 2010, and the Government of Kenya Vision 2030.[520]

3.3.1 3 The State Corporations Act [521]

The State Corporations Act was enacted to make provision for the establishment, control and regulation of state corporations in Kenya. With respect to the operation of ICT regulators, this Act must be read alongside the Kenya Information and Communications Act (KICA), which takes precedence. This is because the KICA is a specialized Act of Parliament, and is also the latter enactment.[522]

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[516] See Section 1.2.4.1 of Chapter 1. During the inception of M-PESA the Financial Institutions Supervision Department (FISD) of the CBK viewed M-PESA as a banking business, its departmental counterpart, the National Payment System (NPS) Division of the Banking viewed M-PESA as a payment service provider. See Alliance for Financial Inclusion (2010) "Mobile Financial Services: regulatory approaches to enable access,"*op. cit.*

[517] Charles Wokabi (2013) "Bill backs CCK on mobile cash deals,"*op. cit.*

[518] Ibid.

[519] *Communications Commission of Kenya* (2008) Strategic Plan: 2008-2013, [online] available at http://www.*Communications Commission of Kenya*.go.ke/resc/publications/strategic_plan/Strategic_plan_08-13.pdf (last accessed on 3/9/12).

[520] See Communications Commission of Kenya, (2013) *Annual report financial year 2011/12*, Nairobi.

[521] Cap. 446, Laws of Kenya.

[522] This principle, also known as the rule of implied exception, is known as *generaliaspecialibus non derogant.* It was pronounced in the US Supreme Court case of *Rogers v. United States*185 U.S. 83 (1902).

Section 5(1) of the Act provides that every state corporation shall have all the powers necessary or expedient for the performance of its functions. This section is integral to the legal interpretation of the extent of the jurisdiction or mandate of the Communications Commission of Kenya, as a State corporation. Indeed, the wide vesting of "all the powers necessary or expedient for the performance if its functions" gives the Commission the necessary statutory backing to flex its regulatory muscle, especially on new and emerging converged services.

In the context of increased judicial challenges to the constitutional and statutory powers of the CCK, the regulator could fall back on the various judicial pronouncements of the *ultra vires* rule.

3.3.1.4 The National Information and Communications Technology (ICT) Policy, 2006[523]

This policy was approved by the cabinet in January 2006 and published in March 2006. It qualifies as a "policy guidance of a general nature" issued by the Minister for Information and Communication to the Communications Commission of Kenya under section 5A(1) of the Kenya Information and Communications Act.[524]

The status of the Communications Commission of Kenya as a State Corporation, and the power of the Minister for Information and Communication to give it policy guidelines has become controversial by virtue of Article 34(5)(a) of the Constitution of Kenya 2010. It provides that the media regulator shall be independent of control by Government, political or commercial interests. This has resulted in calls by industry stakeholders and regulators such as the Media Council of Kenya calling for the disbandment of the Commission.

The mandate of the Communications Commission of Kenya to regulate has also been called into question in Court, with some litigants arguing that Article 34(2) of the Constitution disqualifies any form of State regulation of ICT.[525]

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[523] Gazette Notice No. 24 of 2006.

[524] Section 5A(1) of the Kenya Information and Communications Act provides that The Minister may issue to the Commission policy guidelines of a general nature relating to the provisions of this Act as may be appropriate. The guidelines shall be in writing and shall be published in the Kenya Gazette.

[525] *Communications Commission of KenyaCommunications Commission of Kenya*See, for example, *Kwacha Group of Companies & another v Tom Mshindi& 2 others* , Civil Suit No. 319 of 2005, in the High Court of Kenya at Nairobi, [2011] eKLR. However, the Court upheld the power of the State to limit the freedom of speech.

The National ICT Policy acknowledges the inadequacy of the 1998 Kenya Communications Act, but does not provide any policy guidelines on the role of the Communications Commission of Kenya in meeting the challenges of convergence.

3.3.1.5 The National Information and Communications Technology Sector Master Plan, 2008-2012[526]

The National Information and Communications Technology Sector Master Plan 2008-2012 acknowledges the role of the Communications Commission of Kenya as a converged regulator. However, it does not address the challenges of convergence, or give any guidance to the Communications Commission of Kenya on its regulatory role in convergence.

As noted above, convergence of telecoms and other ICT and non-ICT services in Kenya has resulted in the innovation of new converged applications and services such as mobile financial services, health, education[527] and other converged services. In fact, the Communications Commission of Kenya's current strategic plan acknowledges thus:

> "The Commission's work is well cut out to create an enabling environment to serve what appears to be a market full of unlimited opportunities, including the provision of social services such as education, health and enterprise development."[528]

However, to date, there has been little, if any, coordination, of policy development and planning between telecom and other non-telecom sectors of the economy. For example, UNCTAD (2008) has noted that telecoms liberalization in the East African Customs Union has not attracted the anticipated investments from other business sectors. This is because general and specific business laws and policies in the respective countries, and at the Union level, are not in tandem with telecoms laws and policies.[529]

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[526] Republic of Kenya (2008) *National Information and Communications Technology Sector Master Plan 2008-2012*, Government Printer, Nairobi.

[527] Patti Swarts and Esther Mwiyeria Wachira (2009) *Kenya: ICT in education situation analysis*, The Global e Schools and Communities Initiative (GeSCI) Nairobi.

[528] Communications Commission of Kenya (2008) *Strategic Plan: 2008-2013*, *op. cit.*

[529] United Nations Conference on Trade and Development (2008) *Services and Development: implications for the telecommunications, banking and tourism services sectors in Kenya*, *op. cit.*. The authors note that in spite of substantial improvement in the legal and regulatory environment in the country, the business environment is not

What role, therefore, should the Communications Commission of Kenya play in the regulation of telecoms towards Kenya's transformation into a knowledge economy? There is a continuum of views on the role of telecoms regulators in convergence. They can be classified as follows: pure de-regulation; long-term market regulation; and pro-active regulation.[530] I discuss each of them below.

3.3.1.6 Pure deregulation

This model assigns a very limited role to the Communications Commission of Kenya: the liberalization of the telecoms industry, and the elimination of regulatory bottlenecks. It envisions a converged telecoms sector driven by market forces. However, as extensively discussed in Chapter 2, the Kenyan telecoms and mobile financial services markets are asymmetrical markets that have in fact been described as unfair playing grounds from the perspective of competition.[531]

Hence, pure deregulation will undermine competition, quality of service and other common regulatory benchmarks that benefit consumers.[532]

3.3.1.7 Long-term market regulation

This regulatory model recognizes the need for regulation of competition alongside market liberalization. This is especially necessary if the economic and social objectives of the telecoms sector are to be achieved. Some of the social objectives in Kenya include universal access to communications facilities.[533] For example, in 2012, in the run-up to the 2013 general elections in Kenya, the Consumer Federation of Kenya (COFEK) sued the Minister for Information and Communication over the digital migration of broadcasting signals. COFEK argued that the

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adequately stable and conducive to stimulate investors to take advantage of the market opportunities ushered in by liberalization of the telecommunications sector and the wider regional market arising from the East African Customs Union.

530 I have adopted William H. Melody's methodology below. See William H. Melody (1997) "Designing a Working Telecom Regulatory Structure for 21st Century Information Societies,"*op cit.*

531 World Bank (2012) *Information and Communications for Development 2012: Maximizing Mobile,"op. cit.*

532 *Ibid.*

533 Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.* the author posits that a major concern in cyberlaw and infotainment is the balancing of individual rights and the public interest in response to fast developments in technology. This debate has become a mainstream issue in the convergence of ICT and other sectors.

policy was inappropriate, unreasonable and expensive to consumers, in comparison to the right of consumers to access communication facilities, especially in an election period.[534]

In addition, long-term market regulation encompasses conventional telecoms regulatory elements such as tariff regulation, universal service and access, regulation of quality of service, licensing and authorization.[535] The regulatory model, however, maintains the narrow traditional focus on the telecoms service, and not outside of the sector. It is emerging that the Communications Commission of Kenya, until the formulation and publishing of the Kenya Information and Communications (Amendment) Bill, 2013, subscribes to this model. This is especially considering its previously narrow view of its mandate as the facilitation of access to communications facilities.[536]

The disadvantage of this regulatory model is that it is essentially reactive.[537] As seen from the review of Kenya's telecoms regulatory framework of mobile financial services, in Chapter 2, this regulatory model does not rise to the challenge of inter-sectoral telecoms convergence.[538] This is especially considering the new and increased economic and social policy goals that the Communications Commission of Kenya will have to attain in the era of convergence, and for the attainment of a knowledge economy.[539]

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[534] See the case of *Consumer Federation of Kenya v the Ministry of Information and Communication and 2 Others*, [2013] eKLR Petition No. 563 of 2012.The Court ordered for the postponement of the digital migration till after the general elections, on the basis that the State had a duty to ensure that voters had access to broadcast news, which is necessary in exercising their right to vote.

[535] See generally, the regulatory framework under the Kenya Information and Communication Regulations, 2001.

[536] See International Telecommunications Union (2011) *Chairman's Report: 11th Global Symposium for Regulators, Armenia City, Colombia, 21st-23rd September 2011*, *op. cit.*

[537] William H. Melody (1997) "Designing a Working Telecom Regulatory Structure for 21st Century Information Societies," *op. cit.* This reactive regulatory stance is especially with regard to Quality of Service regulation, tariff regulation, and universal access and service regulation.

[538] See generally, Chapter 2.

[539] Republic of Kenya (2007) *Kenya Vision 2030: a globally competitive and prosperous Kenya*, Government Printer, Nairobi.

3.3.1.8 Proactive regulation

In this regulatory model, the Communications Commission of Kenya would act as a catalyst for facilitating the development of new applications and converged services across telecoms networks.[540] Telecoms infrastructure is becoming increasingly important in achieving critical social and economic goals in society. Therefore, the Communications Commission of Kenya will be required to view telecom issues in the broader context of information society development policies and issues.[541] After all, it is seized of a critical responsibility in attaining Vision 2030's goal of a knowledge economy.[542]

For example, Communications Commission of Kenya's telecom development indicators and targets would not be limited to traditional telecom sector objectives.[543] They would be extended to applications and converged services in the financial, health, education and other sectors.[544] Telecoms regulation would then take a more proactive role in the attainment of broader social and economic goals of the Government of Kenya.[545]

For the Communications Commission of Kenya to promote innovation and increased convergence of services within the ICT sector, and between the ICT and other sectors, it must adopt a more broad-based and pro-active regulatory philosophy. Legislators and policymakers should consider restructuring the Communications Commission of Kenya along the institutional model of the UK's telecom regulator. The OFCOM is structured as a central platform on which converging issues, tools and styles of analysis can be integrated, and through which the activities

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[540] William H. Melody (1997) "Designing a Working Telecom Regulatory Structure for 21st Century Information Societies," *op. cit.*

[541] See the findings of the High Court in the case of *Consumer Federation of Kenya v the Ministry of Information and Communication and 2 Others* [2013] eKLR Petition No. 563 of 2012. See also, *Consumer Federation of Kenya v the Attorney General and 4 Others*, [2012] eKLR Petition No. 88 of 2011. In this case, the Court underscored the central role of State organs in the realization of socio-economic rights under Article 43 of the Constitution of Kenya 2010.

[542] Republic of Kenya (2008) National Information and Communications Technology Sector Master Plan 2008-2012, *op.cit.* See also, Republic of Kenya (2007) *Kenya Vision 2030: A Globally Competitive and Prosperous Kenya*, *op. cit.*,

[543] Rafael Fassil (2009) *Making ICT Work for Pro-Poor Development: a critical evaluation of initiatives in three sub-saharan African countries*, Books on Demand, Norderstedt, Germany. The author notes that there are two internationally-agreed indicators for assessing the performance of the ICT sector in countries. These are telecom revenue as a percentage of Gross Domestic Product (GDP) and telecom investment as a percentage of revenue.

[544] United Nations Conference on Trade and Development (2008) *Services and Development: implications for the telecommunications, banking and tourism services sectors in Kenya*, *op. cit.*

[545] These include short and long-term development plans such as Kenya Vision 2030. See Republic of Kenya (2007) "*Kenya Vision 2030: a globally competitive and prosperous Kenya,*" Government Printer, Nairobi.

of key policy stakeholders can be coordinated.[546] In addition, OFCOM maintains a close engagement with industry, community and the academy on convergence issues.[547]

3.3.2 Communications Commission of Kenya's Institutional Composition

The composition of the Communications Commission of Kenya's board is critical to determining the ability of the Commission to fulfill its role as a broad-based and proactive inter-sectoral converged regulator, as described in section 3.3.1 above.[548] The board composition should reflect two key constituencies in the context of converged telecoms services. These are the various sectoral regulators and policy makers, such as the Central Bank of Kenya and the National treasury, and various stakeholders in the convergence process, including market players, civil society, academia, and consumer groups.[549]

These include bodies such as Consumer Federation of Kenya (COFEK), the Telecommunications Network Operators Forum (TNOF); the Kenya Telecom Network Operators (KTNO), and the Telecommunications Service Providers Association of Kenya (TESPOK).

Composition of the Communications Commission of Kenya Board is guided by three main laws: the Constitution of Kenya 2010; the Kenya Information and Communications Act, and the State Corporations Act. I briefly examine them below.

3.3.2.1 The Constitution of Kenya 2010

Article 34(5)(b) of the Constitution of Kenya 2010 provides that the ICT regulator should be a body that is independent of control of government and political and commercial interests. It should also reflect the interests of all sections of the society. According to Ben Sihanya (2011),

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[546] This has assisted OFCOM in taking a strongly pro-active stance in relation to convergence. Its statutory activities range over responsive investigation and enforcement, discourse-centric consultation ptogramme, design of innovative and experimental policy instruments, and the design and evaluation of new rules, regulations and forms of government engagement. See Constantijn Van Oranje, *et al.* (2008) "Responding to Convergence: different approaches for telecoms regulators," RAND Europe, Brussels, Belgium.

[547] *Ibid.*

[548] Article 34(5)(d) of the Constitution of Kenya 2010 requires the ICT regulator to reflect all sections of the society in its composition. See also, Monica Kerrets (2004) "ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*op. cit.*

[549] See *Trusted Society of Human Rights Alliance v Attorney General and Other*Nairobi Petition 229 of 2012 (Unreported).

this and other sections of the constitution including Article 10, which provides for inclusiveness and participation of the people, have signaled the shift of regulatory activity from 'government' to 'governance'.[550]

The courts, for example, have entertained constitutional petitions questioning the breach of the requirement of consultation and participation in the appointment of state officers. In the process, the courts have emphasized the need for participation, consultation, consensus, accountability, transparency and responsiveness in the process of governance.[551]

The issue of independence of the Commission has also been litigated in the High Court.[552] The Media Council of Kenya and other civil society bodies, have also argued for absolute independence of the regulator from the State. However, this argument is not supported by Article 34(5)(a) of the Constitution, which only prohibits *control* by government, rather than *representation* of government. In addition, Article 34(5)(b) requires the regulator to reflect the interests of all sections of society.

There is no doubt that the State is a major societal interest, and also has fundamentally strategic national security and economic interests in the communications sector. Indeed, under Articles 1, 2, 10, and 73 of the Constitution, the State is the ultimate trustee and representative of public interest. This debate therefore boils down to the balance and number of State and non-state representatives in the governing board of the regulator, the Communications Commission of Kenya. I explore this balance in detail below.

3.3.2.2 Kenya Information and Communications Act

Section 6(1) of the Act provides for the composition of the Board. It includes 5 public officers designated by legislation, and seven other persons not being public officers, to be appointed by

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[550] Ben Sihanya (2011) "The Presidency and Public Authority in Kenya's New Constitutional Order,"*op. cit.*

[551] See the case of *Anne Kinyua v Nyayo Tea Zone Development Corporation & 3 Others* [2012] eKLR.

[552] *Kwacha Group of Companies & another v Tom Mshindi& 2 others* , Civil Suit No. 319 of 2005, in the High Court of Kenya at Nairobi, [2011] eKLR. However, the Court upheld the power of the State to limit the freedom of speech.

the Minister for Information and Communication. Ben Sihanya (2000) refers to this institutional composition as the "college of regulators."[553]

However, as discussed in Section 3.3.1.4 earlier above, the requirement of independence of control from government is controversial, and has been litigated in Court.[554] The Kenya Information and Communications (Amendment) Bill, published in July 2013, attempts to resolve the issue of government and political control by reducing the presence of state officers. It amends section 6 of the Act to provide for only two state officers to sit on the Board. These are the Principal Secretary in charge of Communication and the Principal Secretary in charge of the National Treasury. The other nine members are the Chairman and Director-general of the Board, and seven members who shall not be State officers.

3.3.2.3 State Corporations Act

Section 5 of the Act provides general guidelines for the composition of Boards of State corporations. It mirrors the provisions of section 6(1) of the Kenya Information and Communications Act, above.

How have the above constitutional and statutory frameworks reconfigured the Communications Commission of Kenya as a converged regulator? I consider this question briefly below.

3.3.2.4 Representation of other sectoral regulators and policy makers in the CCK Board

The ability of the Communications Commission of Kenya to forecast on convergence processes and impacts between the telecoms and other sectors depends on the representation of other sectors in its Board.[555] This is important for policy coherence between different sectors.[556] Section 6 of Kenya Information and Communications Act provides for the membership of the Information and Communication Principal Secretary, the Treasury Principal Secretary, and the

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[553] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium."*op. cit.*

[554] *Kwacha Group of Companies & another v Tom Mshindi& 2 others , Civil Suit No. 319 of 2005*, in the High Court of Kenya at Nairobi, [2011] eKLR.

[555] See generally, Monica Kerrets (2004) "ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*op. cit.*

[556] Constantijn Van Oranje, *et al* (2008) "Responding to Convergence: different approaches for telecoms regulators."*op. cit.*

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[553] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[554] *Kwacha Group of Companies & another v Tom Mshindi& 2 others , Civil Suit No. 319 of 2005*, in the High Court of Kenya at Nairobi, [2011] eKLR.

[555] See generally, Monica Kerrets (2004) "ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*op. cit.*

[556] Constantijn Van Oranje, *et al* (2008) "Responding to Convergence: different approaches for telecoms regulators,"*op. cit.*

Internal Security Principal Secretary, in the Board. These positions are currently held by Joseph Musuni Tiampaty, Dr Kamau Thugge, and Mr. Mutea Iringo, respectively.[557]

Representation of the Ministry of Finance or the National Treasury, is critical, especially for the development of regulatory policies for mobile financial services.[558] However, for the benefit of other forms of convergence between telecoms and other sectors such as health and education, there is need for expansion of the membership of the Board. This could be done by way of temporary memberships, by way of co-option, to specific Board Committees.[559]

3.3.2.5 Representation of other stakeholders in the convergence regulatory process

As discussed earlier, one of the significant roles of regulation of convergence is the standard-setting, information gathering, and behavior modification.[560] These processes, however, cannot be successfully undertaken by way of prescriptive rules. There is need for buy-in among the convergence stakeholders.[561] Therefore, linkages and engagements with convergence stakeholders such as market players, civil society, the academia and consumer groups are critical. They augment the ability of the Communications Commission of Kenya to play a pro-active role in the convergence process.[562]

One of these linkages is by way of board representations in the Commission. This is, according to Ben Sihanya (2000), is because many ICT regulatory boards in Africa, do not have sufficient expertise.[563] He argues that regulation is a complex and technical task that requires a combination of disciplines. These include law, business, consumer interest, technology, political

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[557] Communications Commission of Kenya, 2013, Annual report financial year 2011/12, *op. cit.*

[558] The National Treasury, and the Central Bank of Kenya, as the lead regulator of mobile financial services, have led efforts to formulate financial laws and policies touching on mobile financial services. These include The National Payments System Act, Cap. 39, the Proceeds of Crime and Anti-Money Laundering Act, and the Regulations for the Provision of Electronic Retail Transfers.

[559] Section 6(4) of the State Corporations Act grants the Minister the power to appoint alternate members, not being members of the Board, to the Board.

[560] See Institute of Economic Affairs (2003) "The Quest for an Information Society: benchmarking the regulatory framework to usher Kenya into an information era,"*Oop. Ccit.* See also, Morgan Bronwen &Yeung Karen (2007) *Introduction to Law and Regulation, Oop. cit.*

[561] See Lishan Adam, Tina James and Alice Munyua Wanjira (2007) "Frequently Asked Questions about Multi-Stakeholder Partnerships in ICT for Development: a guide for national ICT policy animators," the Association for Progressive Communications (APC) South Africa.

[562] *Ibid.*

[563] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

economy, and public policy.[564] The CCK board, however, has an impressive representation of expertise, as discussed below.

Section 6(1)(f) of the Kenya Information and Communications Act gives the Minister for Information and Communication the power to appoint at least seven persons, not being public officers, to the Board.[565] The competencies to be met by such appointments include knowledge or experience in matters related to law, postal services, broadcasting, radio communication, information technology or computer science, telecommunications, and consumer protection matters.[566]

While the current Board members indeed meet the professional qualifications outlined in statute, it is not apparent whether the appointments mirror the need for stakeholder representation at the Commission.[567] For example, representation from the finance or banking sector would be significant for the representation of financial sector views on the policies and regulations touching on mobile financial services in Kenya.

Monica Kerrets (2004) laments the trend in the case of the Communications Commission of Kenya, where majority of the senior management staff and the Board of Directors, is composed of lawyers and engineers. She notes that the ideological justification for this is seen to come from the Government and public opinion. This is to the extent that legal and engineering experts are assumed to make good regulators due to the technical and legal nature of telecommunications.

She counters this argument by asserting that the nature of telecommunications has now come to encompass information, communication and technology – and permeates all sectors of the

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[564] *Ibid.*

[565] Cap. 411A, Laws of Kenya.

[566] The competence of persons appointed to State organs is now a constitutional issue. Article 232(1)(g) provides for merit and fair competition as the basis of appointments and promotions in the public service. See *Community Advocacy and Awareness Trust and Others v Attorney General* Nairobi Petition No. 243 of 2011 (Unreported) where the Court underscored Article 232(1)(g) as a benchmark for appointments to state organs. It held that "Compliance with the objects of these provisions provide the legitimate purpose for the differentiation of various applicants."

[567] *Communications Commission of Kenya*, 2012, Annual report financial year 2010/11, *op. cit.*

economy. Thus, future policy making processes would do well to establish well rounded teams, from all domains of ICT as well as from other sectors of the economy.[568]

There is need for telecoms regulators and policy makers to consider reforming the Kenya Information and Communications Act to provide for a more inclusive telecoms regulator.

3.3.3 Regulatory Cooperation between the CCK and other Sectoral Regulators in Kenya

Convergence of mobile telecom and financial services in Kenya has launched the era of inter-sectoral convergence between telecoms and other sectors.[569] This has resulted in regulatory convergence, as the converged services fall within the jurisdictions of various regulators, such as the Communications Commission of Kenya, the Central Bank of Kenya, the Competition Authority, and other consumer protection authorities.

As discussed in Chapter 2, regulatory convergence, in the present state, has resulted in a number of regulatory problems. These include regulatory overlap and conflict, regulatory inertia, and regulatory arbitrage.[570] The Central Bank of Kenya has taken the primary role in the regulation of mobile financial services in Kenya.[571] On the other hand, the Communications Commission of Kenya has taken a passive role and stuck to its traditional role of regulating access to communication services.[572]

Market players, including Safaricom, Airtel, Essar Telecom and Orange Telkom, have taken advantage of the regulatory gaps to roll out their services. The success of mobile financial services in Kenya has actually been attributed to the absence of many bureaucratic and regulatory bottlenecks.[573]

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[568] Monica Kerrets (2004) "ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya," *op. cit. Communications Commission of Kenya*

[569] See the discussion on the process of network, market and regulatory convergence in section 1.2 of Chapter 1.

[570] See the discussion on regulatory problems occasioned by convergence, in Section 2.8 of Chapter 2.

[571] Alliance for Financial Inclusion (2010) "Enabling mobile money transfer: The Central Bank of Kenya's treatment of M-Pesa,"Alliance for Financial Inclusion (2010) "Enabling mobile money transfer: The Central Bank of Kenya's treatment of M-Pesa," *op. cit.*

[572] International Telecommunications Union (2011) *Chairman's Report: 11th Global Symposium for Regulators, op. cit.*

[573] United Nations Conference on Trade and Development (2012) "Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations', *op. cit.*

This regulatory context, however, does not provide a healthy regulatory environment for the growth of investments and innovation in mobile financial services and other converged services.[574] There is need for policy coherence at all policy and regulatory levels touching on mobile financial services and other converged services.[575] The question that arises is where the Communications Commission of Kenya falls in a coherent framework for policy and regulation of mobile financial services. I discuss at least three proposed designs for a coherent regulatory structure: multiple regulation, multi-utility regulation, and regulatory cooperation.

3.3.3.1 Multiple regulation

In this model of regulation, all mobile financial service regulators, including the Communications Commission of Kenya, Central Bank of Kenya, the Competition Authority, and any other fringe regulators, would independently exercise regulation over aspects of converged services that fall within their jurisdiction.[576]For example, the Central Bank of Kenya will continue to regulate the payment services offered by mobile network operators, while the Communications Commission of Kenya would regulate access to communications services.[577]

As discussed above, the extent of convergence in services has rendered this distinction between regulating the service infrastructure, and regulating the service itself, untenable.[578] For example, one solution to the problems of convergence regulation would be to leave the competition and consumer protection issues to be regulated by the general competition authorities and the consumer regulation agencies. However, there has been extensive integration of mobile financial services into voice communications services, through service bundling. The implication is that regulation of mobile financial services by non-telecom regulators would result into their interference with the regulatory mandate of telecoms regulators.

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[574] Martha Garcia-Murillo and Ian MacInnes (2002) "The impact of technological convergence on the regulation of ICT industries," *op. cit.* The author argues that regulatory arbitrage may not necessarily be the best option for society or the industry as a whole.

[575] Atul K. Shah, (1997) "Regulatory arbitrage through financial innovation,"*op. cit.* The author refers to regulatory arbitrage as "creative compliance." He notes that while creative compliance may not be illegal, it undermines the spirit of regulation, and makes the regulatory framework appear weak and ineffective.

[576] Jens C. Arnbak (2002) "Multi-utility regulation: yet another convergence," in *Networking Knowledge for Information Societies: Institutions and Intervention*, Robin Mansell, RohanSamarajiva& Amy Mahan (eds.) Delft University Press, Delft, p. 144.

[577] See the regulatory mandate of the Central Bank of Kenya under the National Payments System Act, and that of the Communications Commission of Keya under Sections 5 and 83 of the Kenya Information and Communications Act.

[578] Communications Commission of Kenya (2008) *Strategic Plan: 2008-2013, op. cit.*

In addition, multiple regulations will increase the cost of multiple regulatory compliance and undermine development and innovation of converged services such as mobile financial services.[579] This is because the increased risk and cost from multiple heterogeneous regulations will harm incentives for efficient infrastructure investment and service provisioning.[580]

3.3.3.2 Multi-sector regulation

In common usage, multi-sector regulation is understood to be the functioning of a single regulatory agency that has responsibility for sectors such as telecom, energy, water and transportation.[581] This model of regulation establishes a central regulatory authority with jurisdiction over multiple sectors.[582] A good example of a multi-sector regulator in Kenya is the Energy Regulatory Commission, established under the Energy Act.[583] It regulates various independent sectors within the energy sector, including the electricity sector, the petroleum sector, and the renewable energy sector.

There is a distinction between a multi-sector regulator and a multi-utility regulator. The Communications Commission of Kenya is a converged multi-utility regulator, to the extent that it regulates telecommunications, broadcasting, postal communications, information technology, computing and other emergent services that fall within ICT sector.[584] The advantages for this model are that policy coherence over ICT convergence has been easily achieved, and regulatory cost reduced. Indeed, the Communications Commission of Kenya can count its Universal Licensing Framework as a milestone for multi-utility regulation.[585]

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[579] Nzomo Mutuku (2008) "Case for Consolidated Financial Sector Regulation in Kenya,"*op. cit.* Regulatory overlap in any sector of the economy is not conducive for promoting innovation and investments because of the costs of regulatory compliance, and fear of multiple penalties from multiple regulators. Currently, the financial services sector in Kenya is governed by multiple Acts of Parliament: the Central Bank of Kenya Act (Cap. 491) the Banking Act (Cap. 488) Capital Markets Act (Cap. 485A) the Retirements Benefits Act (No. 3 of 1997) and the Insurance Act (Cap. 487). These statutes create the Central Bank of Kenya (Central Bank of Kenya) the Capital Markets Act (CMA) the Retirements Benefits Authority (RBA) and the Insurance Regulatory Authority (IRA).

[580] William Lehr and Kiessling Thomas (1999) "Telecommunication Regulation in the United States and Europe: the case for centralized authority," in *Competition, Regulation and Convergence: Trends in Telecommunications Policy Research*, S. E. Gillett and I. Vogelsang (Eds.) (1999) Lawrence Erlbaum Associates, Mahwah, NJ.

[581] Rohan Samarajiva and Anders Henten (2002) "Rationales for Convergence and Multi-sector Regulation," World Dialogue for Regulation of Network Economies (WDR) Lyngby.

[582] A sector is a set of closely related industries, which have a degree of substitution possibilities and, furthermore, substantial complementarities. See Frederick M. Scherer, and David Ross (1990) *Industrial market structure and economic performance*, 3rd edition, Houghton Mifflin, Boston, pp. 73-79.

[583] Energy Act, No. 12 of 2006, Laws of Kenya.

[584] See generally, the Kenya Information and Communications Act, Cap. 411A, Laws of Kenya

[585] *Communications Commission of Kenya*, 2009, Annual report financial year 2008/09, *op. cit.*

Multi-sector regulation brings together various sectors under one regulator. This model of regulation, however, portends many challenges, especially over mobile financial services. One of the challenges is the complexities of regulating traditionally distinct but converged services such as telecoms and financial services.[586] If the Central Bank of Kenya were to be fashioned as a central regulator for mobile financial services, can it efficiently regulate equipment type-approval? Can it undertake other specialized regulatory roles of the Communications Commission of Kenya?

On the other hand, if the Communications Commission of Kenya were to be designated the central regulator for mobile financial services, can it efficiently ensure macro-economic and micro-economic stability within the financial system? The answer would be negative.[587]

In addition, the distinct regulatory philosophies and cultures of regulation of each sector make a central multi-utility and multi-sectoral regulator a hard sell.[588] For example, the main regulatory role of the Central Bank of Kenya is to ensure liquidity, solvency and proper functioning of a stable, market-based financial system.[589] On the other hand, Communications Commission of Kenya's mission statement is to regulate to ensure access to communications services.[590]

Both the CCK and the CBK, as multi-sector regulators, would also suffer certain problems associated with multi-sector regulators. Ben Sihanya (2000), for example, argues that the CCK would encounter three problems as an individual regulator.[591] First, there is a likelihood of regulatory capture, where the regulated sector has more information than the regulator, and

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[586] Jens Ambak, for example, argues against centralized regulation of mobile and financial services by pointing out that the fact that SIM cards of GSM mobile terminals are being upgraded to function simultaneously as credit or debit cards does not necessarily justify a single regulatory authority for telecom and financial services. See Jens C. Arnbak (2002) "Multi-utility regulation: yet another convergence," in *Networking Knowledge for Information Societies: Institutions and Intervention*, Robin Mansell, Rohan Samarajiva & Amy Mahan (eds.) Delft University Press, Delft, p. 144.

[587] *Ibid.*

[588] Jeremy Mitchell (1997) "Converging Communications, Fragmented Regulation and Consumer Needs," in W. Melody (ed.) *Telecom Reform: Principles, Policies and Regulatory Practices*, 441-450. Technical University of Denmark, Lyngby.

[589] Section 4(2) of the Central Bank of Kenya Act, Cap.491, Laws of Kenya.

[590] Section 5(1) of the Kenya Information and Communications Act, Cap.411A. Laws of Kenya.

[591] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.*

therefore determines the regulatory outcome.[592] Regulatory capture can also occur as a result of corrupt practices. Second institutional memory is compromised, since, not everything pertaining to regulation goes into writing. Third multi-sector regulation compromises benefits of sharing expertise and information, since utility regulation is a multi-disciplinary task.[593]

This therefore calls for another model of regulation that addresses the deficiencies of multiple regulation and multi-sector regulation of converged telecoms services.

3.3.3.3 Regulatory cooperation

The inadequacies of multiple regulation and multi-sector regulation of inter-sectoral convergence call for a new, overarching regulatory framework. This should be a framework that ensures a competitive level playing field for industry players without strangling economic and technological innovation.[594]

In the case of mobile financial services, for example, this can be achieved through a legal framework that encompasses an inter-related regulatory approach which recognizes the distinctive features of telecommunications and financial services requirements.[595] In addition, the regulatory framework should establish and institutionalize co-operation and information sharing between the regulators. Cooperation and information-sharing is essential between the telecommunications regulator, supervising the provision of value-added services by a mobile network operator, and the banking regulator, supervising the deposit-taking business of the mobile network operator.[596] Ben Sihanya (2000) has referred to this model as a cocktail of regulators.[597]

Regulatory cooperation between the Communications Commission of Kenya and other sectoral regulators of the mobile financial services, and even other converged services, is therefore

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[592] *Ibid.*
[593] *Ibid.*
[594] Jeremy Mitchell (1997) "Converging Communications, Fragmented Regulation and Consumer Needs,"*op. cit.*
[595] Rolf H. Weber (2010) "Regulatory framework for mobile financial services," in *Mobile applications of inclusive growth and sustainable development*, Telekom Regulatory Authority of India, New Delhi, India, pp. 87-93.
[596] *Ibid.*
[597] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.* According to the author, a "cocktail" occurs where various regulators have a mandate on the same or related regulatory issues.

critical if it is to properly undertake its new telecoms regulation role. As discussed above, there is need for a clear legal framework for this kind of cooperation between sectoral regulators and the Communications Commission of Kenya. A plausible reason for the Commission's passive role in mobile financial services could be that the Central Bank of Kenya, by virtue of its functions, commands more political weight than the Communications Commission of Kenya, in the absence of legal guidelines.

Currently, there are no clear and elaborate legal or administrative provisions for cooperation between the Communications Commission of Kenya and the Central Bank of Kenya or other sectoral regulators. This has undermined the process of formulating an optimal regulatory framework for mobile financial services, due to regulatory inertia. The Constitution of Kenya 2010, by virtue of Article 10, binds state organs such as regulators to consult, before undertaking their regulatory functions.[598] However, in absence of legal and administrative guidelines, state agencies such as the Communications Commission of Kenya and the Central Bank of Kenya have pursued parallel regulatory programmes.

This provision requires clarification by way of either statute or subsidiary legislation. Indeed, this will require clear and elaborate mechanisms. This is because even where other constitutional offices such as the Presidency and the defunct Office of the Prime Minister were required to consult, there were interpretation conflicts regarding the extent of the process and nature of consultation.[599]

Section 5(3) of the Kenya Information and Communications Act[600] also provides that the Communications Commission of Kenya may enter into associations with such other bodies or organizations within or outside Kenya, as the Commission may consider desirable or appropriate,

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[598] Article 10 of the Constitution provides for national values and principles of governance that bind all state organs, state officers, pubic officers and any person that applies or interprets the Constitution, enacts, applies or interprets any law, or makes or implements any public policy decision. These values and principles of governance include sharing and devolution of power, participation of the people, and inclusiveness.

[599] The Constitutional and statutory requirement for consultation has been litigated numerously in the Kenyan courts, and has become a significant requirement in the governance process. In *Centre for Rights Education and Awareness & 7 Others v. The Attorney General, Petition 16 of 2011, in the High Court at Nairobi*, the Courts considered the meaning of consultation, and observed that while neither the constitution nor statute provide benchmarks for consultation, public institutions must be guided by the spirit of Article 10 of the Constitution.

[600] Cap. 411A, Laws of Kenya

and in furtherance of its statutory purposes. Similarly, this section requires implementing guidelines in the form of ministerial orders or regulations.

In a number of countries, telecoms regulators have responded to the need to cooperate with other sectoral regulators in areas of concurrent jurisdiction by adopting memoranda of understanding and cooperation protocols.[601] For example, the Dutch Independent Telecommunications and Post Regulator (OPTA) and the Dutch competition authority have established a cooperation protocol to provide clarity on how they will cooperate on matters of mutual interest.[602] Similarly, the Nigerian Communications Commission (NCC) and the Nigerian Consumer Protection Council (CPC) have adopted a memorandum of understanding that establishes how the agencies will collaborate on matters related to consumer protection.[603]

A good legal and institutional forum for establishing a framework for cooperation between the Communications Commission of Kenya and other sectoral regulators such as the Central Bank of Kenya would be under the State Corporations Act.[604] Section 26 of the Act establishes the State Corporations Advisory Committee. One of its functions under section 27 is to:

> "examine proposals by state corporations to acquire interests in any business or to enter into joint ventures with other bodies or persons or to undertake new business or otherwise expand the scope of the activities and advise thereon."

Hence the Committee would be an appropriate forum for coordinating the establishment of cooperation protocols and memoranda of understanding between the Communications Commission of Kenya and various State corporations. This would be important to avoid similar administrative challenges, e.g. functional overlaps, occasioned by regulatory convergence.[605]

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[601] International Telecommunications Union (2012) "Universal Access and Service," in ICT Regulation Toolkit, International Telecommunications Union, Geneva [online], available at www.ictregulationtoolkit.org (last accessed on 8/8/12).
[602] *Ibid.*
[603] *Ibid.*
[604] Cap. 446, Laws of Kenya
[605] See section 2.8 in Chapter 2 for a discussion on the regulatory problems occasioned by convergence of mobile and financial services.

3.3.4 Extent of State regulation, co-regulation and self-regulation in Kenya's telecom sector

One of the most important distinctions between innovative economic sectors such as the ICT sector and other sectors is that innovation is essentially led by other players other than the State.[606] These players include the market, goods and service providers, consumers, and civil society groups, among others. Indeed, the rapid development of the ICT sector in Kenya can be credited to the liberalization of the ICT sector over the last 15 years.[607] The mainstreaming of ICT into all socio-economic and political facets of society is evidenced by mobile financial services, e-learning, and mobile applications such as e-health, e-agriculture, among others.[608]This distinction has elicited an important global debate on regulation of ICT generally, and telecoms, in particular. Is regulation a State-centric or a polycentric activity?[609]

There is emerging consensus on a number of related regulated issues in this debate. First, regulation is not merely the action of the State in setting prescriptive rules backed by sanctions. Regulation also entails the use of other non-state and non-rule-and-sanction based regulatory tools and methods.[610] These include regulatory incentives, market-based incentives, and other tools and methods discussed more exhaustively further below.[611] Second, the sphere of regulation is not occupied only by the State, but by other non-state regulatory actors. It is polycentric.[612]

This polycentric view of regulation has been reinforced by many authors who have written on regulation of the information industry. Lawrence Lessig, for example, has captured this composite view of regulation by suggesting four main regulatory tools or modalities, in general terms, as law, social norms, markets and architecture.[613] Ben Sihanya (2000) adapts Lessig's regulatory framework in his argument that for Africa to claim the 21st century, it should re-

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[606] Marc Bourreau & Pinar Dogan (2001) "Regulation and innovation in the telecommunications industry," Telecommunications Policy, Elsevier, Vol. 25(3) pages 167-184, April.

[607] Gatana Kariuki (2009) "Growth and Improvement of Information Communication Technology in Kenya,"*op. cit.*

[608] Jenny C. Aker and Isaac M. Mbiti (2010) "Mobile Phones and Economic Development in Africa,"*op. cit.*

[609] Julia Black (2008) "Constructing and contesting legitimacy and accountability in polycentric regulatory regimes," *Regulation and Governance*, Volume 2, Issue 2, pp. 137–273.

[610] *Ibid.*

[611] *Ibid.*

[612] *Ibid.*

[613] Lawrence Lessig (1999) *Code and Other Laws of Cyberspace*, Basic Books, New York. See also, Lawrence Lessig, (1998) "The New Chicago School,"*Journal of Legal Studies,* vol. XXVII (June 1998).

examine four factors that are critical to a technology-led development strategy. These are the architecture, market instruments, constitutional and letal principles, and social norms.[614]

In this proposed scheme, the regulators occupying the sphere of regulation are the State, the society, the market players such as service providers and consumers, and infrastructure, respectively.[615] Joel Reidenberg, on the other hand, also proposed a slightly varied set of regulatory modalities, as a 'complex mix' of State, business, technical, and citizen mechanisms for regulation.[616]

The telecoms regulatory sphere in Kenya is indeed composed of actors such as the Communications Commission of Kenya and other State actors, market players such as MNOs, civil society organizations, and other fringe actors.[617] However, as has been appreciated by lawyers, economists and political scientists, State regulation remains the main regulatory actor in telecoms regulation. Other regulatory players exercise their roles around the legal regulatory framework of the State.[618]

Three main regulatory mechanisms are used to engage other players in the process of telecoms regulation: state regulation, co-regulation and self-regulation.[619] In order to effectively regulate converged telecoms services such as mobile financial services, it is necessary to engage these other regulatory players. They assist the regulator to evolve regulations that are timely and

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[614] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.* The author further argues that whether Africa claims the 21st century largely depends on whether Africa develops and harnesses the promise and opportunities presented by cyberspace, telecommunications and information technology.

[615] *Ibid.* See also, Morgan Bronwen &Yeung Karen (2007) *Introduction to Law and Regulation,op. cit.*

[616] Joel Reidenberg (1997) 'Governing networks and rule-making in cyberspace', in B. Kahin and C. Nesson (eds.) *Borders in Cyberspace: Information Policy and the Global Information Infrastructure*, The MIT Press, Cambridge, MA. See also, Joel Reidenberg and Paul Schwartz (1998) *Data Protection Law and On-line Services: regulatory responses*, (Eur. Comm. 1998) available athttp://europa.eu.int/comm/dg15/en/media/dataprot/studies/regul.pdf (last accessed on July 15, 2012).

[617] Lishan Adam, Tina James and Alice Munyua Wanjira (2007) "Frequently Asked Questions about Multi-Stakeholder Partnerships in ICT for Development: a guide for national ICT policy animators,"*op. cit.*

[618] A Ogus, (1994) *Regulation: Legal Form and Economic Theory,* Clarendon Press, Oxford.

[619] See Colin Scott (2002) "Private Regulation of the Public Sector: a neglected facet of contemporary governance" 29 *Journal of Law and Society*, pp. 56-76. See also, Julie Black (2001) 'Decentering Regulation: understanding the role of regulation and self-regulation in a 'post-regulatory' world' 54 *Current Legal Problems*, pp. 103-46.

relevant to the evolving technological and converging sector.[620] Below I briefly discuss the extent to which state regulation, co-regulation and self-regulation have been used to regulate mobile financial services.

3.3.4.1 State regulation in the Kenyan telecoms sector

This type of regulation is typified by the traditional prescriptive, sanction-based, command-and-control regulation by statutory agencies.[621] The Communications Commission of Kenya, by virtue of its status as a state corporation, embodies the model of state regulation.[622] As discussed earlier above, though, Article 34(5)(a) of the Constitution, requires that the information regulator should be independent of control of Government. Media stakeholders such as the Media Council of Kenya (MCK) have called for the re-establishment of the Communications Commission of Kenya as an independent statutory commission rather than a state corporation.[623]

State regulation of the telecoms sector by the Communications Commission of Kenya is justified by the need for risk aversion and economic planning in an increasingly complex and globalized economy and society.[624] This is especially necessary for sensitive services such as converged mobile telecoms and financial services. In addition, the Communications Commission of Kenya is better placed to push for certain regulations, and the compliance with those regulations, as they may not be in the interest of other regulatory players, e.g. MNOs. These include competition regulations, quality of service regulations, and other consumer-oriented regulations.

However, Article 10 of the Constitution of Kenya 2010 also provides certain standards for inclusiveness and participation of the people in the regulatory process of the Communications

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[620] Lishan Adam, Tina James and Alice Munyua Wanjira (2007) "Frequently Asked Questions about Multi-Stakeholder Partnerships in ICT for Development: a guide for national ICT policy animators,"*op. cit.*

[621] Ian Ayres and John Braithwaite (1992) *Responsive Regulation: transcending the deregulation debate*, Oxford University Press, New York, p. 102.

[622] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.* The author notes that this model assumes that the government is endowed with infinite wisdom, and always seeks the public good.

[623] Winfred Kagwe (2012) "Communications Commission of Kenya to be Replaced by New Independent Body,"*op. cit.* However, an independent Commission, as long as it is established by an Act of Parliament, would still fall under the definition of a State organ, as provided under Article 260 of the Constitution.

[624] Mike Nxele and Thankom Arun (2005) "Regulatory Impact on the Development of the Telecommunications Sector in East Africa: a case study of Kenya,"*op. cit.*

Commission of Kenya and other state organs.[625] These principles require that the Communications Commission of Kenya and any other regulators and policy makers in the telecoms sector consult with sector stakeholders and other regulators in making regulations and policies.

This is necessary for augmenting Communications Commission of Kenya's regulatory capacity with technical know-how, industry statistics, and other vital information that it may not have. This practice has been reflected, for example, in the composition of the Prime Minister's Task Force on price wars in the mobile telecoms sector.[626] The Task Force was composed of representatives from the Prime Minister's office, the CBK, the Communications Commission of Kenya and also from the respective MNOs.[627]

3.3.4.2 Self-regulation within Kenya's telecoms sector

As contrasted with State regulation, self-regulation entails the specification, administration and enforcement of the regulations by the regulated bodies themselves.[628] Self-regulation is common in restricted professions such as the practice of medicine, Engineering, Law and other similar disciplines. In Kenya, for example, the above professions are regulated by the Kenya Medical Practitioners and Dentists Board, Engineers Board of Kenya, and the Law Society of Kenya, respectively.[629]

In the ICT sector, some of the self-regulatory agencies include the Computer Society of Kenya (CSK), the Information Technology Standards Association (ITSA), and the East Africa Internet Association (EAIA).[630] Public utility sectors such as the telecoms sector have been under state

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[625] See *Centre for Rights Education and Awareness & 7 Others versus The Attorney General, Petition 16 of 2011, in the High Court at Nairobi*, [eKLR].

[626] David Ochami (2011) "State Acts to Fix Mobile Phone Wars," East African Standard, Thursday February 24, 2011, Nairobi.

[627] *Ibid.*

[628] Ian Ayres and John Braithwaite (1992) *Responsive Regulation: transcending the deregulation debate, op. cit.*

[629] The above self-regulatory bodies are, however, set up by statute. These include the Law Society of Kenya Act, and the Engineers Act, 2011.

[630] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.* The author notes that these are membership organizations mainly consisting of professionals. They have the characteristics of trade unions and have limited consumer participation.

regulation. However, in 2007, Parliament enacted the Media Act[631], which established the Media Council of Kenya to regulate the Media industry.

Nevertheless, the telecom sector has also organized itself into various market associations such as the Kenya ICT Network (KICTANET), the Telecommunications Service Providers Association of Kenya (TESPOK) and the Kenya Telecom Network Operators (KTNO), and the Telecommunications Network Operator Forum (TNOF).[632] These organizations, however, are more of lobby groups than self-regulatory organizations.[633] The telecoms sector therefore lacks a self-regulatory regime.

Self-regulation is generally advantageous over state regulation because of a number of reasons. First, industry knowledge and expertise is used more efficiently, especially in regulation of technical issues.[634] Second, regulations emanating from self-regulatory bodies are more flexible and adaptable to rapid technological and other economic changes, compared to state-centric regulations. In Kenya, for example, regulations made by the Communications Commission of Kenya must be approved by parliamentary committees such as the Committee on Energy, Communication and Information, and the Committee on Delegated Legislation.[635]

Third, self-regulation lowers the regulatory burden on business, compared to the costs of State regulation, which many times involve revenue-focused fees and levies.[636] Reciprocally, the cost

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[631] Act No. 3 of 2007, Laws of Kenya.

[632] Lishan Adam, Tina James and Alice Munyua Wanjira (2007) "Frequently Asked Questions about Multi-Stakeholder Partnerships in ICT for Development: a guide for national ICT policy animators,"*op. cit.*

[633] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[634] However, this is not always the result in establishing self-regulation. In the media industry in Kenya, for example, the media has been accused of lacking the will, intellectual leadership and capacity to address the diversity of legal, policy and regulatory challenges facing them. Their desultory handling of media laws and regulation is indicative of its lack of commitment to address critical issues facing the sector radically and speedily. See Peter Oriare, Rosemary Okello-Orlale, Wilson Ugangu (2008) "The Media We Want: the Kenya media vulnerabilities study," Friedrich Ebert Stiftung, Nairobi.

[635] Section 34(1) of the Interpretations and General Provisions Act, Cap.2, Laws of Kenya.

[636] The World Bank (2012) *Doing Business 2012: Kenya*, World Bank, Washington. The burden of regulatory compliance for Kenyan companies is particularly heavy, for example, in tax compliance. Globally, Kenya stands at 166 in the ranking of 183 economies on the ease of paying taxes. On average, Kenyan firms make 41 tax payments a year, spend 393 hours a year filing, preparing and paying taxes and pay total taxes amounting to 33.1% of profit.

of state regulation is also lowered to entertain appeals from the self-regulatory bodies.[637] Lastly, self-regulation allows the market to work better, in absence of the disruptive interference of the State.

For the above reasons, self-regulation would provide a good regulatory environment for innovation-led and rapidly-changing sectors such as the converged telecoms sector. This is especially with regard to the increased speed of promulgation of sector regulations for new business and technological innovations such as mobile financial services.[638]

However, as discussed earlier above, self- regulation may not be a suitable regulatory scheme for services such as mobile financial services. This is because of the inherent risks of financial and other improprieties that may be perpetrated by the mobile network operators.[639] Therefore, there is need for a balanced approach between state regulation and self-regulation, so as to achieve the benefits of both frameworks. This is discussed below.

3.3.4.3 Co-regulation by the State and market players in the telecoms sector in Kenya

Because of the advantages and inherent inadequacies in both state regulation and self-regulation, there is need for a balanced approach that can harness the benefits of both frameworks, to promote innovation and development of converged services. This is known as co-regulation. The most common definition of co-regulation is that it involves self-regulation with a statutory element, or with the oversight of a public authority.[640] Co-regulation can take either of the following three forms.

First, cooperation between state authorities, e.g. the Communications Commission of Kenya, with the industry, such as the Kenya Telecoms Network Operators (KTNO), and the

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[637] See generally, Connie Ngondi Houghton (2006) "Access to Justice and the Rule of law in Kenya," paper prepared for the High Level Commission on Legal Empowerment of the Poor, Nairobi.

[638] Currently, there are no telecoms regulations specific to mobile financial services. Aside from the provisions of Section 83C of the Kenya Information and Communications Act, which touch on electronic transactions, the *Communications Commission of Kenya* does not exercise a direct regulatory role.

[639] USAID and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix,"*op. cit.*

[640] Ian Bartle and Peter Vass (2005) "Self-Regulation and the Regulatory State: a survey of policy and practice," Research Report 17, Centre for the Study of Regulated Industries, University of Bath School of Business, Bath.

Telecommunications Service Providers of Kenya (TESPOK), on regulatory matters;[641] Second, delegation of a public authority's regulatory powers to an industry or professional body; Third, review, approval and endorsement of self-regulatory schemes developed by industry associations, without necessarily being established by statute.[642]

The advantage of co-regulation is that it combines the advantages of state regulation and self-regulation, in a bid to create an optimal regulatory framework for telecoms convergence.[643] The Kenya Information and Communications Act does not have a framework for co-regulation. It preserves the state regulatory orientation.

The input of market players in the regulatory process is critical to maintaining regulatory processes at the age of innovation.[644] While the Government has strategic goals and objectives that must be safeguarded by State regulation, it requires the input of market players in the regulatory process.[645] There is therefore need for regulatory reform to incorporate regulatory cooperation in the telecoms sector.[646]

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[641] The Ministry of Information and Communication and the *Communications Commission of Kenya*, for example, have encouraged an inclusive and consultative process in the drafting of the Independent *Communications Commission of Kenya* Bill, 2010. See Winfred Kagwe (2012) "*Communications Commission of Kenya* to be Replaced by New Independent Body," The Star, Tuesday 9th October 2012, Nairobi.

[642] For example, self-regulation of the capital markets with statutory approval has been established under Section 18B of the Capital Markets Act Cap. 485A, Laws of Kenya. This section allows industry players intending to operate as self-regulatory schemes to apply to the Capital Markets Authority for recognition. Consequently, the Nairobi Securities Exchange has fashioned itself as a self-regulatory organization. See Jacob K. Gakeri (2011) "Enhancing Securities Markets in Sub-Saharan Africa: an overview of the legal and institutional arrangements in Kenya."*International Journal of Humanities and Social Science*, Vol. 1, No. 9, Special Issue July 2011. The author notes that self-regulation in the capital markets has served the market well, but failed in the area of enforcement of rules.

[643] Ian Bartle and Peter Vass (2005) "Self-Regulation and the Regulatory State: a survey of policy and practice,"*op. cit.*

[644] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[645] *Ibid*

[646] *Ibid.*

3.3.5 Use of principle-based versus rule-based regulations by Kenyan telecom regulators

As mentioned above, the challenge of regulating rapidly-changing technologies and business environments is that regulations are not promulgated as fast as the introduction of technological and business innovations.[647] Hence, where innovative and unregulated services such as converged mobile financial services are introduced in the market, regulations may stifle innovation and investments.[648] This is because market entry may be barred by the unavailability of regulations providing for licensing and authorization of these new services and business models.[649]

Indeed, in the case of mobile financial services in developing countries, telecoms and financial regulators have been reluctant to replicate the successful M-Pesa in their countries due to absence of a regulatory framework.[650] In Kenya's case, Safaricom was lucky to have successfully lobbied the Central Bank of Kenya and the Communications Commission of Kenya to grant conditional authorization, while the regulators monitored the new service.[651]

It is in this context that the extent of detail in the regulations governing mobile financial services and other similar converged services is crucial to the promotion of innovation and investment in telecoms. The most common framework of regulation in this context is principle-based regulation versus rule-based regulations.[652] Which of these two frameworks are conducive to the development of mobile financial services and other converged services? I briefly consider each framework below. This is by no means exhaustive of the analytical frameworks of regulation of convergence in ICTs.

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[647] *Ibid.*

[648] James Prieger (2000) "Regulation, Innovation, and the Introduction of New Telecommunications Services," Working Papers 00-8, University of California at Davis, Department of Economics.

[649] *Ibid.*

[650] United Nations Conference on Trade and Development (2012) *Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations, op. cit.*

[651] Alliance for Financial Inclusion. (2010) "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-Pesa." *op. cit.*

[652] Kenneth Jull and Stephen Schmidt (2009) "Preventing Harm in Telecommunications Regulation: a new matrix of principles and rules within the ex ante vs. ex post debate" *Canadian Business Law Journal*, Vol. 47, pp. 329-362, 2009.

3.3.5.1 Rule-based regulation of telecoms in Kenya

Rule-based regulation is more commonly known as ex ante regulation, whereby the law states, in advance, a detailed and particular rule that a company must obey.[653] Certainty of rule-based or ex ante regulation in telecommunications is necessary for building competitive markets and risk management.[654] For example, where health, safety or economic harms are likely to occur, regulators prefer to make detailed, prescriptive rules.[655]

Examples of rule-based regulations under Kenyan telecoms laws include the communications equipment regulations[656], which prescribe a detailed framework for authorization of use of communications equipment in Kenya. Other rule-based regulations include spectrum use regulations,[657] which regulates the allocation and use of spectrum in Kenya. The regulations are detailed and restrictive to the extent that, for example, spectrum trading is not allowed. The telecoms competition regulations[658] are also rule-based to the extent that, for example, they provide numerical thresholds and parameters for defining Significant Market Players (SMPs).

Rule-based regulations more consistently regulate simple phenomena, and become less adequate the more telecoms markets evolve and converge with sectoral and non-sectoral services such as mobile financial services.[659] For example, equipment type regulations in Kenya have been criticized by Ben Sihanya (2000) for "being too superficial and for fossilizing technological development."[660] Indeed, as discussed in Chapter 2, the traditional regulatory framework of telecoms – authorization, competition, interconnection and interoperability, universal service and access, and quality of service – have failed to anticipate emergent converged services across

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[653] John Buckley (2003) *Telecommunications Regulation*, *op. cit.*

[654] *Ibid.*

[655] Kenneth Jull and Stephen Schmidt (2009) "Preventing Harm in Telecommunications Regulation: a new matrix of principles and rules within the ex ante vs. ex post debate" *op. cit.*

[656] Kenya Information and Communications Act (Importation, Type Approval and Distribution of Communications Equipment) Regulations, 2010.

[657] Kenya Information and Communications Act (Radio Communications and Frequency Spectrum) Regulations, 2010.

[658] Kenya Information and Communications Act (Fair Competition and Equality of Treatment) Regulations, 2010.

[659] John Braithwaite (2002) "Rules and Principles: a theory of legislative certainty,"*Australian Journal of Legal Philosophy*Volume 27 (2002) 47, at p. 60. Braithwaite, however, acknowledges that consistency in complex domains can be better realized by an appropriate mix of rules and principles than by principles alone.

[660] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.* The author gives the example of the defunct Kenya Posts and Telecommunications Corporation's (KP&TC) insistence on the analog telephone handset.

sectors. This is because the rule-based regulations are not detailed enough to foresee future telecoms developments.[661]

These inadequacies of rule-based regulation have led to the increasing need for more flexible telecoms regulatory frameworks – principle-based regulations. These are discussed below.

3.3.5.2 Principle-based regulation

These are regulations that are high-level, broadly stated rules or principles that set the standards by which regulated firms must conduct business.[662] In contrast to rules, as the regulated phenomena become more complex, principles deliver more consistency than rules.[663] Principle-based regulations are related to ex post regulations, which contain general principles, and leave to the regulators and the courts to determine, after the event, whether a breach of the regulations has occurred.[664]

This framework of regulation is advocated in situations where technological and market change can quickly overtake any short-term prescriptive rules.[665] For example, the definition of telecommunications service, and the role of the Communications Commission of Kenya under the Kenya Information and Communications Act have become problematic with the convergence of mobile telecoms and financial services.[666]

As discussed earlier above, the Communications Commission of Kenya interprets its role as facilitating access to communications services, which services do not factor in value added services such as mobile financial services.[667] Hence the regulator has been reluctant to exercise regulatory jurisdiction over mobile financial services.[668]

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[661] *Ibid.*
[662] Julia Black (2007) *Making a Success of Principles-based Regulation, op. cit.*
[663] John Braithwaite (2002) "Rules and Principles: a theory of legislative certainty,"*op. cit.*
[664] John Buckley (2003) *Telecommunications Regulation, op. cit.*
[665] Kenneth Jull and Stephen Schmidt (2009) "Preventing Harm in Telecommunications Regulation: a new matrix of principles and rules within the ex ante vs. ex post debate" *op. cit.*
[666] See section 5 of the Kenya Information and Communications Act, and also the definitions of the terms 'communication' and 'value-added services' under section 2 of the Kenya Communications Regulations, 2001.
[667] International Telecommunications Union (2011) Chairman's Report: 11th Global Symposium for Regulators, Armenia City, Colombia, 21st-23rd September 2011, *op. cit.*
[668] Alliance for Financial Inclusion (2010) "Enabling mobile money transfer: The Central Bank of Kenya's treatment of M-Pesa," *op. cit.*

Such regulatory dichotomies work best when technological categories remain discrete and absolute.[669] However, these dichotomies cannot work when technological convergence results in porous service categories and diversification by network operators.[670]

Another area of telecoms regulation that requires principle-based regulations rather than rule-based regulations is universal service and access. Convergence of services within and without the telecoms sector has exposed the fact that a clean semantic dichotomy between telecommunications service and information services does not work in a time of rapid technological evolution and convergence.[671] Hence the objective of universal service may be undermined where traditional telecoms services are converged with other services that fall outside the ambit of universal service and access regulations.[672]

Principle-based regulation may, however, leave the telecoms and other sectoral regulators with too much discretion that may be abused, especially in the context of market capture. In such instances, rule-based regulations work better to regulate the market.[673]

It is clear that both principle-based regulations and rule-based regulations serve important functions in telecoms regulation. The present era of increasing convergence of telecoms and other services, is also characterized by increasing globalization of telecoms and trade by way of ICT.[674] How can the Communications Commission of Kenya ensure a telecoms regulatory framework that manages risk against consumers, the economy and national security, while at the same time promoting innovation and increased investment in converged telecoms services?

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[669] Robert M Frieden (2002) "Wither Convergence: Legal, Regulatory, and Trade Opportunism in Telecommunications,"*18 Santa Clara Computer & High Tech. L.J. 171*. Frieden urges legislators, policy makers and regulators to devise technology-neutral classifications, and recognize that technological and marketplace convergence integrates content and conduit. The model has the potential of expanding the reach of regulation, and offers greater consistency and rationality.

[670] *Ibid.*

[671] Robert M Frieden (2000) *Universal Services: When technologies converge and regulatory models diverge*, Harvard Journal of Law and Technology, Volume 13, Number 3, Summer.

[672] *Ibid.*

[673] See generally, Julia Black (2010) "The rise, fall and fate of principle-based regulation" LSE Legal Studies Working Paper No. 17/2010, London School of Economics, London.

[674] See Institute of Economic Affairs (2002) "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy,"*op. cit.*

A third view has emerged within the principles-rules debate. Principles and rules are not necessarily mutually exclusive. Every telecoms regulatory framework can be placed along a comtinuum rule-based and principle-based regulations. Indeed, as discussed above, both regulatory frameworks have desirable features necessary for functional telecoms regulation. Whether particular laws are cast in one form or another depends on trade-offs involving certainty versus contextual judgment on the one hand, and the relative novelty versus norm recognition on the other hand.[675]

For example, the most intrusive (ex ante, rule-based) regulations can be reserved for situations where serious harm – whether health, safety, national security or economic – is at issue.[676] This includes regulations on equipment type, competition and consumer protection. On the other hand, principle-based regulations can be used in regulating interconnection and interoperability, universal access and service, and other telecoms regulatory areas.[677]

Ultimately, the most effective regulatory framework that will promote mobile financial services and other converged services will be one guided by the following principles: limited regulation for clear and necessary policy objectives; consumer-centric regulation; blend of clarity, certainty and predictability; participatory regulation, independent and effective regulation.[678]

3.4 The Role of the Communications Appeals Tribunal in Regulating Convergence in the Telecoms Sector

The Communications Appeals Tribunal (CAT) is established under section 102 of the Kenya Information and Communications Act.[679] Its role under the Act is to arbitrate in cases where disputes arise between the parties under the Act, and also such matters as may be referred to it by

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[675] *Ibid.*

[676] Kenneth Jull and Stephen Schmidt (2009) "Preventing Harm in Telecommunications Regulation: a new matrix of principles and rules within the ex ante vs. ex post debate" *op. cit.*

[677] *Ibid.*

[678] Zorayda Ruth B. Andam and Christian Gerard P. Castillo, *Regulating Communications in a Converging Environment: technology, markets and dilemmas*, Philippine Law Journal, Vol. 79, (Oct. 2004) p. 392.

[679] Cap. 411A, Laws of Kenya.

the Minister.[680] These include disputes between the Communications Commission of Kenya and market players, and also between the market players themselves.

The members of the Tribunal consist of a Chairman who holds or has held a judicial office in Kenya, or an Advocate qualified to do so, two other members with expert knowledge of matters under the Tribunal's jurisdiction, and two other members nominated by the Media Council established under the Media Act, 2007.

The CAT is an integral telecoms regulatory organ in the sense that it can uphold, reaffirm, or annul the decisions of the primary regulator, the Communications Commission of Kenya.[681] In the context of converged telecoms services, the CAT can play the important role of reviewing the decisions of the Communications Commission of Kenya, where the regulator has not made a decision that sufficiently factors in the convergence context.[682] Hence its interpretation of telecoms laws and regulations is important for the development of jurisprudence that promotes or undermines innovation and increased investments in converged services.

The CAT has had an opportunity to exercise its mind on licencing matters that, as I have argued in Section 2.3.1.1 of Chapter 2, have a bearing on the ability of the mobile network operators to invest and innovate further in converged services. In *Appeal No. 3 Of 2009 – Dispute between Safaricom Limited and Communications Commission of Kenya*, the CAT was seized of an appeal against the decision of the CCK.

The dispute involved the pricing of a renewal of a 3G license granted by the CCK to Safaricom in 2007. Upon application by Safaricom for renewal of the 3G license in 2008, the CCK required the Applicant, Safaricom, to pay a sum of Kshs. 135,450,000/= as frequency utilization fees for the period 1st July 2008 to 30th June 2009.

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[680] Section 102(1) of the Kenya Information and Communications Act, Cap.411A, Laws of Kenya.
[681] Section 102 of the Kenya Information and Communications Act.
[682] See, for example, *Republic versus Communications Appeals Tribunal & Another Ex-Parte Safaricom Limited, Miscellaneous Civil Application 257 of 2010*, High Court of Kenya at Nairobi [eKLR]. The Tribunal had to review the *Communications Commission of Kenya*'s decision on the pricing of 3G license applied for by Safaricom. I have discussed this case in Chapter 2.

Safaricom appealed to the CAT on 2 grounds. First, the CCK failed to take into consideration relevant facts and international standards in computing the fees payable. Second, Safaricom contended that subsequent applicants for the 3G license, being Safaricom's competitors such as Airtel Kenya, paid significantly lower fees for the same License. Safaricom argued that this was discriminative and did not guarantee fair competition in the mobile telecoms market. The CAT, on 22nd February 2012, delivered its ruling and dismissed the appeal, directing the Applicants to pay the sums as required by the CCK.

The CAT determined that the differentiation in the license fees was as a result of the change in the competition status of the mobile telecommunications market. The High Court, in ... later upheld the CAT's findings.[683]

This one decision does not betray a particular orientation of the CAT with regard to regulation of converged mobile and financial services. There is need for further research on the jurisprudence emanating from the CAT, and its effects on the regulatory aspects of convergence of mobile financial services and other converged services.

3.5 The Role of the National Communications Secretariat in regulating Telecoms Convergence

The National Communications Secretariat (NCS) is established under section 84 of the Kenya Information and Communications Act. Its functions include advising the Government on the adoption of a communications policy. According to the Act, the policy should promote the benefits of technological development to all communications users.[684] It should also fosters national safety and security, economic prosperity, and the delivery of critical social services through telecommunications.[685]

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[683] *Republic versus Communications Appeals Tribunal & Another Ex-Parte Safaricom Limited, Miscellaneous Civil Application 257 of 2010*, High Court of Kenya at Nairobi [eKLR].
[684] Section 84(2) of the Kenya Information and Communications Act.
[685] *Ibid.*

In addition, the NCS is mandated with advising on adopting a communications policy that promotes competition and efficiency in the communications sector, and also fosters efficient use of telecommunications resources, while protecting public interest.[686]

As I have argued earlier above, the era of convergence has expanded the business and mandate of telecoms service providers to include social services such as financial services, education, health and even agricultural services.[687] Some of these services, such as mobile financial services in Kenya, have become critical for social and economic inclusion. Therefore, the Communications Commission of Kenya should re-evaluate and expand its regulatory terms of reference. The current legislative efforts by the Cabinet Secretary for ICT, in amending the Kenya Information and Communications Act, are geared towards this direction.[688]

Hence the role of the NCS in promoting a communications policy that fosters the delivery of critical social services is critical to the development of converged telecoms services such as mobile financial services. The NCS has been silent in its operations. However, if the government's ICT policy instruments outlined above are to be used as an evaluation benchmark, then the NCS has not succeeded in promoting the provision of converged social services such as mobile financial services and other converged services.

The policy instruments, including the Communications Commission of Kenya Strategic Plan, 2008 – 2013[689] , the National Information and Communications Technology (ICT) Policy, 2006[690], and the National Information and Communications Technology Sector Master Plan,

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[686] *Ibid.*

[687] United Nations Conference on Trade and Development (2008) *Services and Development: implications for the telecommunications, banking and tourism services sectors in Kenya, op. cit.* William H. Melody (1997) "Designing a Working Telecom Regulatory Structure for 21st Century Information Societies," Op cit. See also, *Communications Commission of Kenya* (2008) *Strategic Plan: 2008-2013, op. cit.*

[688] As discussed in See the Kenya Information and Communications (Amendment) Bill, 2013, published on 11th July 2013, at http://www.cickenya.org/index.php/legislation/item/332-the-kenya-information-and-communications-amendment-bill-2013#.Uh8V8T-NBs4 (accessed on 28/8/13). On 11th July 2013, the Information and Communications Cabinet Secretary, Dr. Fred Matiangi, published the Kenya Information and Communications (Amendment) Bill, 2013. The Bill seeks to amend the definition of telecommunications service to refer to "any transaction, including banking, money transfer, or similar services carried out through a communications system."

[689] *Communications Commission of Kenya* (2008) Strategic Plan: 2008-2013, *op. cit.*

[690] Gazette Notice No. 24 of 2006. The Kenyan ICT policy remained in draft form for several years, largely because of a disjointed institutional framework for policy development, lack of a high-level ICT champion in government and lack of adequate and sustainable funding for ICT. See Gatana Kariuki (2009) "Growth and improvement of

2008-2012[691], do not address in any detail the Government's plan to promote the convergence of telecoms and other sectoral services to deliver critical social services. Indeed, according to the Communications Commission of Kenya Strategic Plain, and the Kenya Vision 2030, the Government's flagship programme for ICT development is Business Process Outsourcing (BPO) rather than mobile financial service development.[692]

The NCS, therefore, should play a greater role in mainstreaming the importance of convergence in telecoms and other ICT services in current and future government communications policy instruments.

3.6 The Role of the Ministry of Information and Communication in Regulating Convergence of Mobile and Financial Services

The Ministry of Information and Communication was created in 2004, after being hived off from the Ministry of Transport and Communication, in a Cabinet Reshuffle.[693] According to some observers, the previous Minister of Transport and Communication had an uneasy relationship with the private sector. As was the case with his predecessors, the Permanent Secretary's attention under the old ministry of Transport and Communications tended to focus more on the transportation sector than the communications sector.[694]

Under the Presidential Circular No. 1 of 2008, the Ministry of Information and Communication is charged with the development and implementation of the National Information and Communications Technology (ICT) Policy.[695]

In addition, section 5A of the Kenya Information and Communications Act provides that the Minister may issue to the Commission policy guidelines of a general nature relating to the

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information communication technology in Kenya,"*International Journal of Education and Development using Information and Communication Technology (IJEDICT)* 2009, Vol. 5, Issue 2, pp. 146-160.

[691] Republic of Kenya (2008) National Information and Communications Technology Sector Master Plan 2008-2012, *op. cit.*

[692] Republic of Kenya (2007) "*Kenya Vision 2030: a globally competitive and prosperous Kenya,"op. cit.*

[693] Timothy Waema (2007) "2007 Kenya Telecommunications Sector performance Review: a supply side analysis of policy outcomes,"Research ICT Africa, Cape Town.

[694] *Ibid.*

[695] Republic of Kenya (2008) Organization of the Government of the Republic of Kenya, Government Printer, Nairobi.

provisions of the Act as may be appropriate.[696] Section 5 of the Act also provides that the Commission shall, in the performance of its functions under this Act have regard to any policy guidelines of a general nature relating to the provisions of this Act notified to it by the Minister and published in the Gazette. These provisions qualify the independence of the Communications Commission of Kenya as provided under section 5B of the Act.[697]

The success of implementing ICT programmes, and regulating the market, are largely determined by the nature and outcomes of the ICT policy processes.[698] Hence, the Ministry of information has an important role in orienting the regulatory activities of the Communications Commission of Kenya to achieve general and specific government functions.

Currently, there are two ICT policy instruments prepared by the Ministry, in force. These are the National Information and Communications Technology (ICT) Policy, 2006[699], and the National Information and Communications Technology Sector Master Plan, 2008-2012[700], discussed above. These policy instruments have also informed the Communications Commission of Kenya's Strategic Plan, 2008 – 2013[701]. As discussed above, the Ministry of Information and Communication has not, in its policy instruments, outlined a government plan to promote the development of converged services.

The Cabinet Secretary for Information and Communication, currently Hon. Fred Matiang'i, and the Principal Secretary (currently, Mr. Joseph Musuny Tiampaty) also have an important role to play. This is especially in fostering and promoting regulatory cooperation between the Ministry of Information and Communication and the Communications Commission of Kenya on the one hand, and the Ministry of Finance and the Central Bank of Kenya on the other hand.

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[696] As discussed earlier in section 3.3.1.1, this provision is problematic, in view of Article 33(5) of the Constitution of Kenya 2010, which requires that the ICT regulator be independent of government control.

[697] The proposals contained under the Kenya Information and Communications (Amendment) Bill, 2013, are meant to create an independent ICT regulator free from government control. For example, it seeks to amend sections 5 and 6 of the Act, to reduce executive influence on the regulator. .

[698] Monica Kerrets (2004) "ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya," *op. cit.*

[699] Gazette Notice No. 24 of 2006.

[700] Republic of Kenya (2008) National Information and Communications Technology Sector Master Plan 2008-2012, *op. cit.*

[701] *Communications Commission of Kenya* (2008) Strategic Plan: 2008-2013, *op. cit.*

This is because, at Cabinet and at the Civil service level, the Cabinet Secretary and the Principal Secretary, respectively, are in a position to coordinate policy and administrative functions aimed at promoting cross-sectoral convergence of services such as mobile and financial services. In addition, both the Information and Communication Permanent Secretary and the Finance permanent Secretary sit in the Communications Commission of Kenya Board.[702]

However, as discussed earlier, the role of policy and regulatory coordination has not been achieved to the desired level. This is because the Central Bank of Kenya has taken the primary regulatory role in mobile financial services, and sidelined the Communications Commission of Kenya. While there is indeed coordination between the two ministries, it is to the extent that the Information and Communications Ministry promotes and champions the policies and regulations of the Communications Commission of Kenya.[703]

There is need for greater focus by the Ministry for Information and Communication in preparing a communications policy that recognizes the increasing convergence of services among various ICT and non-ICT sectors. The policy guidelines should also give the Communications Commission of Kenya better direction on orienting their regulatory activities and resources. This is especially on how to foster regulatory cooperation with other sectoral regulators such as the Central Bank of Kenya. This will be necessary for instilling confidence in present market players and investors to increase innovation and investment in converged telecoms services.

[702] See section 5 of the Kenya Communications Act, on the composition of the Communications Commission of Kenya board.

[703] This can be seen, for example, in PS Ndemo's comments during the Africa Mobile Money Research Conference held on April 1, 2012, at the Kenya School of Monetary Studies. The PS championed for tighter regulation of mobile money transfer by the CBK, rather than the role of the Communications Commission of Kenya in regulating mobile money. See Financial Technology (2012) "CBK seeks tighter regulation of M-Payments," available [online] at http://www.financialtechnologyafrica.com/top-story/25/cbk-seeks-tighter-regulation-of-m-payments/ (last accessed on 12/9/12).

3.7 The Role of the Judiciary in Regulating Convergence of Mobile and Financial Services

The general role of the judiciary is the interpretation and enforcement of the law.[704] However, the judiciary also exercises a specific role in the regulation of telecoms in Kenya. Judicial power over the telecoms sector is exercised through three principal legal frameworks:

First, under the Constitution of Kenya 2010, the High Court has the original jurisdiction of interpreting the Constitution and enforcing the Bill of Rights.[705] In the context of telecoms regulation, some of these rights include the freedom of speech, the right to fair administrative action, and the consumer rights to good and quality services.

With regard to freedom of speech, the High Court, in the case of *Kwacha Group of Companies & another v Tom Mshindi& 2 others,* considered whether defamation was protected by freedom of speech under Article 33 of the Constitution.[706] It also considered whether Article 34 of the Constitution also prevented the State from regulating freedom of speech. The Court held that freedom of expression is not absolute, and can be regulated both by the Constitutional provisions, and by statutory limitations allowed under article 24 of the Constitution.

The High Court has also been called upon to determine the right to fair administrative action under Article 47 of the Constitution. In *Power Technics versus the Attorney General & 2 Others,* the Court ruled that the Petitioner's right to fair administrative action under Article 47(1) of the Constitution of Kenya 2010 had been violated because the Petitioner was not given a hearing by the Registrar of Lands, in an administrative proceeding,[707]

The right of consumers to goods and services off reasonable quality has been litigated in the case of *Kenya Toner and Supplies Limited versus The Director of Weights and Measures & 2 Others.*[708]In this case, the Court was asked to determine whether the petitioner's rights to privacy

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[704] Article 165 of the Constitution of Kenya 2012.
[705] Article 165, Constitution of Kenya 2010. In *Re The Matter of the Interim Independent Electoral Commission* Constitutional Application 2 of 2011, Supreme Court of Kenya [2011] eKLR, the Supreme Court reiterated the role and place of the High Court as the first audience for litigants in constitutional issues.
[706] Civil Suit No. 319 of 2005, High Court of Kenya at Nairobi, [2011] eKLR,
[707] Petition 178 of 2011, High Court of Kenya at Nairobi
[708] Petition No. 51 of 2012, High Court at Nairobi [eKLR].

under article 31 had been violated. The courts held that the Constitution must be read as a whole, and that it is proper that both Article 31 and 46 be read together and reconciled to the extent that the right to privacy may be limited by enforcement of consumer rights. The Court must endeavor to balance and give effect to both rights as contemplated by the provisions of Article 24(d).

Second, under section 8 of the Law Reform Act, the High Court has jurisdiction to entertain applications for orders of judicial review against administrative bodies such as the telecoms regulators, including the Communications Commission of Kenya, CAT, the Minister for Information and Communication, and any other administrative bodies under the Act.[709]

Third, under the Kenya Information and Communications Act, appeals from the decisions of the Communications Appeals Tribunal lie at the High Court of Kenya.

In the context of converged telecoms services, the courts will become increasingly crucial to maintaining a regulatory framework that promotes telecoms convergence. This will be achieved in the following ways: First, interpreting communications laws and regulations in the context of converged telecoms and other services, hence making the laws relevant to new developments;[710] and second, where the telecoms laws are irrelevant to certain disputes around new and un-anticipated converged services, the courts can fill in the gaps my using general principles of law to "make law".

[709] Law Reform Act, Cap. 26, laws of Kenya.

[710] In the US, for example, where the telecoms regulators have been more reactive that proactive with convergence issues, the courts have been instrumental in resolving disputes and pronouncing regulations in areas not anticipated by telecoms regulations. See Constantijn Van Oranje, *et al* (2008) "Responding to Convergence: different approaches for telecoms regulators,"*op. cit*.

3.8 Role of the Parliamentary Committee on Energy, Communication and Information in Convergence Regulation

Parliamentary Committees in the Kenya Parliament play an important role of overseeing the policy and regulatory actions of the state.[711] The Parliamentary Committee on Energy, Communication and Information, then chaired by Hon. Eng. James Rege, in the 10th Parliament, is responsible for overseeing policy and regulatory actions of various players in the telecoms sector, including the Communications Commission of Kenya, and the Ministry for Information and Communication.[712]

Parliament also plays an integral role in the process of passing and amending Acts of Parliament such as the Kenya Information and Communications Act, which is the main regulatory instrument of the telecoms sector. In addition, under Sec. 34(1) of the Interpretation and General Provisions Act,[713] unless otherwise provided, delegated legislation must be laid before parliament for approval. Parliament is empowered to declare the rules or regulations null and void by resolution to that effect whereupon the rules become ineffectual.

Hence the Parliamentary Committee on Delegated Legislation, and the Parliamentary Committee on Energy, Communication and Information which recommends to the House particular actions, is an important regulatory player in telecoms.

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[711] Article 95(5)(b) of the Constitution of Kenya 2010 provides that the National Assembly shall exercise oversight over state organs. Since the formation of the Grand Coalition Government by PNU and ODM in 2008, Parliament has increasingly exercised ex post and ex ante oversight over the executive and other state organs. This has resulted in some bureaucrats complaining of Parliament violating the principle of separation of powers. See Ben Sihanya (2011) "The Presidency and Public Authority in Kenya's New Constitutional Order,"*op. cit.* See also, Kennedy Buhere (2009) "Yes, Parliament has grabbed powers from Executive," East African Standard, Wednesday March 25, 2009, Nairobi.

[712] Standing Order 198(2) Kenya National Assembly, 2012.

[713] Cap. 2, Laws of Kenya.

3.9 Role of Industry and Market Players in Regulating of Convergence of Mobile and Financial Services

Mobile Network Operators (MNOs), being the principal targets of regulation in mobile financial services, play an important role in the regulation of converged services.[714] As argued earlier above, the telecoms market is one of the regulatory organs in telecoms regulation.[715] The four main market players - Safaricom, Airtel, Essar and Orange Telkom – have also organized themselves into industry associations. These include the Kenya Telecom Network Operators (KTNO) Association, Telecom Service Providers of Kenya (TESPOK) and Kenya ICT Network (KICTANET).

Industry players are integral stakeholders in the regulatory process, as they are the front line of innovation.[716] In addition, the industry players have expert knowledge of the telecoms technologies that they make use of.[717] Hence there is need for constant consultations between the industry players and the regulators in discussing the challenges of the present regulations in promoting converged services.[718] Market players can also provide regulators with market forcasts on forthcoming innovations. This assists regulators such as the Communications Commission of Kenya to think through the best way to regulate, or to pre-empt new market developments.[719]

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[714] Institute of Economic Affairs (2002) "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy,"*op. cit.* The industry is multi-disciplinary with multiple players who work in synergy. It is important that more stakeholders on both supply and demand sides, and support services, be integrated into policy and regulation formulation processes.

[715] Lawrence Lessig (1999) *Code and Other Laws of Cyberspace*, Op cit. See also Lawrence Lessig, (1998) "The New Chicago School,"*op. cit.*

[716] Institute of Economic Affairs (2002) "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy,"*op. cit.*

[717] Peter Oriare, Rosemary Okello-Orlale Wilson Ugangu (2008) "The Media We Want: the Kenya media vulnerabilities study," Friedrich Ebert Stiftung, Nairobi.

[718] Ben Sihanya (1997) "Regulating Internet business in Kenya," in H. R. Mgombelo& M.C.M. Werner (eds.) (1997) *Telecommunications for Business in Africa* IOS Press, Amsterdam, pp.125-42. The author argues that a cocktail of industry and government is a good approach to regulation, because industry players have much more industry information. This gives rise to regulatory competition or coordination.

[719] *Ibid.*

For examples, Safaricom has been an integral player in consulting with the Central Bank of Kenya and the Communications Commission of Kenya on the best way to regulate M-Pesa.[720] These consultations ultimately opened doors to other competitors to enter the market.

Airtel Kenya, on the other hand, has been instrumental in starting a conversation on mandatory mobile money platform interconnection and interoperability. In February 2011, Airtel Kenya lobbied the Office of the Prime Minister to prevail on Safaricom to share its M-Pesa platform with competitors.[721] Ultimately, the Prime Minister formed a Task Force to look into the matter. The Task Force recommended that mobile network operators should create a seamless mobile money transfer system regulated by Central Bank of Kenya.[722]

3.10 Conclusion

In this Chapter, I set out to answer the research question three. I explored possible regulatory frameworks that will promote innovation and quality of service in convergence of mobile and financial services in Kenya. The inquiry was based on the hypothesis that regulation of inter-sectoral converged services such as mobile financial services by telecoms regulators can be achieved by the adoption of principle-based regulation over rule-based regulation.

The study has examined the role of the Communications Commission of Kenya, the Communications Appeals Tribunal, the National Communications Secretariat, the Cabinet Secretary for Information and Communication, the Judiciary, Parliamentary committees, and the market.[723] The study has used the concept of broad versus restrictive regulatory perspectives to examine five key regulatory benchmarks. These are regulatory philosophy, institutional composition of regulators, extent of regulatory cooperation, extent of self-regulation and co-regulation, and also the use of principle-based versus rule-based legislation.[724]

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[720] Alliance for Financial Inclusion (2010) "Enabling mobile money transfer: The Central Bank of Kenya's treatment of M-Pesa," *op. cit.*

[721] David Ochami (2011) "State Acts to Fix Mobile Phone Wars," East African Standard, Thursday February 24, 2011; Nairobi.

[722] Mark Okuttah (2011) "Kenya: Telecommunications Companies Tasked to Set Up Shared Cash Transfer Platform," Business Daily, June 15, 2011, Nairobi.

[723] See Section 3.2 above.

[724] See the analytical framework as set out in respect of the Communications Commission of Kenya, at Section 3.3.

The findings are extremely useful for constructing a new, over-arching framework for regulation of converged services. First, there is need for the Communications Commission of Kenya (CCK) to embrace a broad perspective and interpretation of its mandate as ICT regulator under Sections 5, 6 and 23 and 83 C of the Kenya Information and Communications Act (KICA).[725] This will assist the CCK to step up to its role as a trend-setting and pro-active convergence regulator, and to effectively regulate mobile financial services and other converged services.[726]

In addition the KICA should be amended to provide a wider definition of telecommunications services and value added services (VAS) that fall under the ambit of the CCK.[727] There is also need for telecom regulators and policy makers to mainstream inter-sectoral convergence into ICT policy documents. Currently, this is lacking in the present documents.

Second, the current CCK Board, which is the primary market regulator, does not embody an institutional composition that reflects the various competencies required in regulating converged services.[728] This includes representatives and competencies from various converged sectors such as finance, banking, among others.[729] In addition, the Board should also include representatives of market players, civil society, academia and consumer groups.[730]

Third, the convergence of non-traditionally converged sectors, such as telecoms and finance, has challenged the "multi-sector" and "multiple regulator" models of regulation.[731] This calls for a new, over-arching model of regulatory cooperation between equal, primary regulators such as the CCK and the Central Bank of Kenya.[732] However, for regulatory cooperation to effectively deal

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[725] Sections 5, 23 and 83C of the Kenya Information and Communications Act (KICA) gives the CCK the licensing mandate over telecommunications services, value added services, and electronic transactions. I have argued that this is adequate jurisdiction over mobile financial services. See section 1.2.3.1 of Chapter 1.

[726] Institute of Economic Affairs (2007) "The Quest for an Information Society: benchmarking the regulatory framework to usher in Kenya into the information era," Institute of Economic Affairs (IEA) Nairobi.

[727] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[728] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[729] Monica Kerrets (2004) "ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*op. cit.*

[730] Ibid.

[731] See the discussion on regulatory cooperation under section 3.3.3.

[732] Rolf H. Weber (2010) "Regulatory framework for mobile financial services,"*op. cit.*

with the problems of regulatory conflict, inertia and arbitrage, detailed cooperation protocols must be established within the legal framework.[733]

Fourth, regulation of ICT and other sectors is a polycentric process.[734] The regulatory sphere embodies other non-state actors such as the market players and civil society, societal norms, and even architecture.[735] However, the State remains the focal point platform from which these non-state actors can claim their regulatory space. It is therefore necessary that the continuum of regulation – state regulation and self-regulation – be balanced, to arrive at an optimal level of co-regulation between the State and non-state actors.[736]

Fifth, convergence regulators should use a mixture of principle-based and rule based regulations to promote innovation and investment in mobile financial services, while protecting public interest. Rule-based regulations can be reserved for health, safety, national security and economic issues, such as consumer protection and competition. On the other hand, principle-based regulations can be reserved for regulation of complex issues. These include interconnection and interoperability, universal access and service, and other telecom regulator areas.

Lastly, other than the CCK, the other regulatory agencies such as the Communications Appeals Tribunal, the National Communications Secretarial, the Ministry for Information and Communication, Parliamentary committees and the judiciary, should also promote the above regulatory principles.

Amendments to the Kenya Communications Act of 1998, coupled with the promulgation of the Constitution of Kenya 2010, have significantly altered the framework of telecoms regulation in

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[733] International Telecommunications Union (2012) "Universal Access and Service,"*op. cit.*

[734] Julia Black (2008) "Constructing and contesting legitimacy and accountability in polycentric regulatory regimes" *op. cit.*

[735] Lawrence Lessig (1999) *Code and Other Laws of Cyberspace*, Basic Books, New York. See also, Lawrence Lessig. (1998) "The New Chicago School,"*Journal of Legal Studies,* vol. XXVII (June 1998). See also, Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[736] Rolf H. Weber (2010) "Regulatory framework for mobile financial services,"*op. cit.*

Kenya.[737] Indeed, there have been significant gains with regard to orienting the telecoms regulations to promote convergence of ICT. However, as discussed above, the regulatory framework for convergence is rather sectoral. There is need for more policy and regulatory reform, to create a policy and regulatory framework that not only promotes ICT convergence and mobile and financial service convergence, but also convergence between telecoms and other sectors that are yet to create linkages with ICT.

In Chapter 4, I explore specific recommendations on regulatory reform for inter-sectoral convergence.

[737] Tonny Omwansa (2009) "M-PESA: progress and prospects,"*op. cit.*. See also, Ben Sihanya (2011) "The Presidency and Public Authority in Kenya's New Constitutional Order,"*op. cit.*

CHAPTER FOUR

4.0 CONCLUSION AND RECOMMENDATIONS ON DESIGNING A TELECOMS REGULATORY FRAMEWORK FOR CONVERGENCE IN MOBILE TELECOMS AND FINANCIAL SERVICES IN KENYA

4.1 Introduction

This study set out to answer three research questions. First, has the convergence of mobile and financial services changed the traditional nature of communications services offered by mobile network operators?[738] Second, do Kenya's telecom regulations recognize inter-sectoral converged services such as mobile financial services, as telecommunications services?[739] Third, what regulatory approach, if any, should telecoms regulators and policy makers adapt, to effectively regulate converged services such as mobile financial services, to promote innovation?[740]

The examination of the above research questions has been guided by three respective hypotheses. First, the convergence of mobile and financial services has blurred the distinction between telecommunications and Value Added Services (VAS), and changed the definition of telecommunications.[741] Second, Kenya's telecommunications laws and regulations are ambivalent as to the status of converged services such as mobile financial services, within the definition of 'telecommunications services'.[742] Third, Regulation of inter-sectoral converged

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[738] See Section 1.1 in Chapter 1. See also, Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience,"***op. cit.*** The author also explores this research question from a regional perspective.

[739] See section 2.1 in Chapter 2. See also, Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.* The author examines the comvergence of telecoms and internet technology, and their impact on regulation of Plain Old Telecommunications Services (POTS) and Value Added Network Services (VANS).

[740] See section 3.1 in Chapter 3. This question has also been explored by th Institute of Economic Affairs (IEA). See Institute of Economic Affairs (2007) "The Quest for an Information Society: benchmarking the regulatory framework to usher Kenya into an information era,"*op. cit.* See also, Institute of Economic Affairs (2002) "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy,"*op. cit.*

[741] See section 1.1 in Chapter 1. I have relied on the works of Ben Sihanya, and Bangens and Soderberg in putting forth this hypothesis. See Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.* See also, LennartBångens, and Bjorn Söderberg (2008) *Mobile Banking –Financial Services for the Unbanked*?,*op. cit.*

[742] See Section 2.1 in Chapter 1.

services such as mobile financial services by telecoms regulators can be achieved by the adoption of principle-based regulation over rule-based regulation.[743]

The main aim of the research is to propose a telecoms regulatory framework that promotes innovation and development of mobile financial services, and other converged services, by mobile network operators. I argue that telecommunications regulations should be adapted to anticipate and promote the convergence of telecoms and non-telecoms services.[744] In addition, telecom regulators should be given a broader mandate in regulating converged telecoms service such as mobile financial services.[745]

4.2 Summary of Findings

This section focusses and provides a summary of the research questions, hypothesis and summary of the findings in each of the Chapters 1, 2 and 3. It also draws recommendations based on the conclusions of the chapter.

4.2.1 Nature and impact of convergence of mobile telecoms and financial services in Kenya

This chapter has explored the first research question: has the convergence of mobile and financial services changed the traditional nature of communications services offered by mobile network operators?[746] The hypothesis that has undergirded the study is that the convergence of mobile and financial services in Kenya has blurred the distinction between telecommunications and Value Added Network Services (VANS), and changed the definition of telecommunications.[747]

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[743] See section 3.1 in Chapter 3. I have relied on the arguments by Julia Black in setting forth this hypothesis. See Julia Black (2007) "Making a Success of Principles-based Regulation" *op. cit.* See also the findings of this study as to the need for a combination of principle-based and rule-based regulations, especially in the wake of the global financial crisis, and the de-regulation debate. Further readings on an alternative view of principle-based regulation include Julia Black (2010) "The rise, fall and fate of principle-based regulation" *op. cit.*

[744] See William H. Melody (1997) "Designing a Working Telecom Regulatory Structure for 21st Century Information Societies,"*op cit.*

[745] *Ibid.*

[746] See section 1.1. See also, Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience,"*op. cit.*

[747] See section 1.1 in Chapter 1. I have relied on the works of Ben Sihanya, and Bangens and Soderberg in putting forth this hypothesis. See Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for

It further explored the convergence of two sectors service – mobile telecoms and financial services - and the effects that they have had on traditional telecoms business. Increasing convergence in the telecoms sector has resulted in the introduction of Value Added Services, a secondary category of telecommunications services offered by MNOs.[748] This includes the mobile financial services, the subject of the study. Value Added Services are provided for under section 2 of the Kenya Communications Regulations, 2009.[749] For example, mobile financial services in Kenya are offered primarily by Mobile Network Operatorss (MNOs), in partnership with banks and other service providers.[750] This includes Safaricom's M-PESA, Airtel's*Pesa Pap*, Essar Telecom's YU Cash, and Telkom Kenya's Orange Money.[751]

Converged mobile financial services in Kenya have been innovatively modeled as electronic transaction services rather than banking services, or payment services.[752] This is to the extent that persons depositing money with M-PESA agents are essentially buying electronic units equivalent to money, rather than making a deposit with the MNO.[753] Similarly, persons withdrawing money from their M-PESA accounts are essentially redeeming their electronic units for cash, rather than making a cash withdrawal as done in banks.[754]

This innovation therefore brings mobile financial services under the ambit of electronic transactions, regulated by the CCK under the Kenya Information and Communications Act, rather than banking transactions regulated by the CBK under the Banking Act.[755]

However, at the regulatory level, this fine dichotomy between electronic transactions and banking transactions has not been captured and translated into regulatory practice.[756] The CBK,

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the third Millennium,"*op. cit.* See also, LennartBångens, and Bjorn Söderberg (2008) *Mobile Banking –Financial Services for the Unbanked*?,*op. cit.*

[748] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[749] Section 2 of the Kenya Communications Regulations, 2001.

[750] United States Agency for International Development and Kenya School of Monetary Studies (2010) "Mobile Financial Services Risk Matrix,"*op. cit.*

[751] Jenny C. Aker and Isaac M. Mbiti (2010) "Mobile Phones and Economic Development in Africa,"*op. cit.*

[752] Alliance for Financial Inclusion. (2010). "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-PESA." *op. cit.*

[753] William Jack and TavneetSuri (2011) "*Mobile Money: the economics of M-PESA*,"*op. cit.*

[754] *Ibid.*

[755] Section 83C of the Kenya Information and Communications Act, Cap. 411A, Laws of Kenya give the CCK the regulatory jurisdiction over electronic transations.

rather than the CCK, remains the primary regulator.[757] More fundamentally, the convergence of mobile and financial services has blurred the lines between telecommunications services provided by the Mobile Network Operators (MNOs) and converged Value Added Network services (VANs) offered by MNOs and other non-telecom players such as banks.[758] Convergence of mobile and financial services has therefore resulted in the following regulatory problems: regulatory conflict, regulatory inertia, and regulatory arbitrage.[759]

4.2.2 Impact of convergence of mobile telecoms and financial services on telecoms regulation

Chapter 2 of the study explored the second research question: whether Kenyan telecoms regulations recognize mobile financial services as telecommunications services.[760] It also explored the challenges that convergence of mobile and financial services has posed to traditional telecoms regulation in Kenya.[761] The study was based on the hypothesis that Kenya's telecommunications laws and regulations are ambivalent as to the status of converged services such as mobile financial services, within the definition of "telecommunications services".[762]

4.2.2.1 Authorization and licensing of converged mobile financial services in Kenya:

Convergence within the ICT sector, and between the ICT and other sectors in Kenya, has challenged the specific licensing regime that has been operational in Kenya up until 2002.[763] In 2008, the Communications Commission of Kenya responded to increasing convergence by

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[756] Alliance for Financial Inclusion (2010) "Mobile Financial Services: regulatory approaches to enable access,"*op. cit.*

[757] *Ibid.* See also, Consultative Group to Assist the Poor (2007) "Notes on Regulation of Branchless Banking in Kenya."*op. cit.*),"

[758] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.* See also, See also, LennartBångens, and Bjorn Söderberg (2008) *Mobile Banking –Financial Services for the Unbanked?*.*op. cit.*

[759] International Telecommunications Union (2011)*Chairman's Report: 11th Global Symposium for Regulators*, *op. cit.*

[760] See section 2.1 in Chapter 2. See also, Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[761] *Ibid.*

[762] See section 2.1 in Chapter 2.

[763] Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience,"***op. cit.***

adopting the Unified Licensing Framework (ULF), which is a service and technology neutral authorization framework.[764]

The ULF has provided a conducive licensing regulatory and policy framework for the development of converged services such as mobile financial services in Kenya.[765] For example, mobile network operators (MNOs) intending to provide value added services such as mobile financial services, internet services, and other non-voice services, require only one license from the CCK.[766] It is on this basis that mobile financial services are being offered by MNOs.[767]

However, other hindrances to increased convergence innovations within the licensing framework include very high and discriminatory licensing fees. An example is the 3G licensing fees.[768]

4.2.2.2 Regulation of interconnection and interoperability of mobile financial services in Kenya

Interconnection and interoperability of mobile financial services in Kenya can be realized at three levels. These are: mobile financial service platform interconnection, MNO agent network interoperability, and customer level interoperability, where customers can maintain one account in multiple SIM cards.[769]

However, mobile financial service systems in Kenya maintain exclusive networks, without any of the three forms of interconnection and interoperability.[770] This is despite the presence of a regulatory framework for interconnection and interoperability. As I have argued in section 2.4.1 in Chapter 2, The Kenya Information and Communications (Interconnection and Provision of

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[764] Communications Commission of Kenya (2009)*Annual report financial year 2008/09*, *op. cit.* See also, Stella Ndemo and MwendeNjiraini (2009) "Enabling NGN Regulatory Ecosystem for a Developing Country: Kenya,"*op. cit.*.

[765] Communications Commission of Kenya (2009)*Annual report financial year 2008/09*, *op. cit.*

[766] Timothy Waema, Catherine Adeya, and Margaret Ndung'u (2010)*Kenya ICT Sector Performance Review 2009/2010: Towards Evidence-based ICT Policy and Regulation,op. cit.*

[767] *Ibid.*

[768] Deloitte (2011) "Mobile Telephony and Taxation in Kenya,"*op. cit.*

[769] Consultative Group to Assist the Poor "Interoperability and Related Issues in Branchless Banking: A Framework,"*op. cit.*

[770] United Nations Conference on Trade and Development (2012)*Mobile Money for Business Development in the East African Community: a comparative study of existing platforms and regulations*, *op. cit.*

Fixed Links, Access and Facilities) Regulations 2010[771] mandate interconnection and interoperability.

This lack of enforcement of the interconnection and interoperability regulations by the CCK has undermined competition in the Kenyan mobile financial services market, in favour of Safaricom.[772] As argued by Ben Sihanya (2000), Kenyan telecoms regulators need to find a regulatory balance on the issue of interconnection and interoperability.[773] They should promote innovation by protecting proprietary intellectual property interests of the Mobile Network Operators, and simultaneously promote competition in the mobile financial services market.[774]

4.2.2.3 Regulation of competition in the mobile financial services sector in Kenya

Convergence of mobile financial services in the Kenyan telecoms sector has affected competition in the telecoms sector in two ways. First, mobile financial services have become a significant revenue source for Kenyan Mobile Network Operators.[775] For example, Safaricom's revenue increase over the last 2 years is predominantly from its M-PESA service.[776]

Second, in the face of stiff competition in the voice market, Kenyan Mobile Network Operators (MNOs) are using mobile financial services to reduce churn rates, that is, the migration of subscribers to other networks.[777] The current competition situation in the mobile financial services sectors has been described as an unfair playing field.[778] This is because Safaricom, the dominant market player, accounts for 14 million out of the 19 million mobile financial service customers.[779]

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[771] Kenya Information and Communications Act, Cap. 411A, Laws of Kenya.
[772] World Bank (2012)*Information and Communications for Development 2012: Maximizing Mobile,"op. cit.*
[773] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*
[774] *Ibid.*
[775] Brookings Institution (2012)*Mobile Financial Services and Financial Inclusion, op. cit.*
[776] Safaricom Limited (2011) *Annual Report and Group Accounts for the Year Ended March 2011, op. cit.*
[777] *Ibid* World Bank (2012)*Information and Communications for Development 2012: maximizing mobile, op. cit.* See also, Brookings Institution (2012)*Mobile Financial Services and Financial Inclusion, op. cit.*
[778] World Bank (2012)*Information and Communications for Development 2012: Maximizing Mobile,"op. cit.*
[779] *Ibid.*

Kenya's mobile telecoms regulatory framework has encouraged this asymmetrical market.[780] These regulatory elements include: lack of interconnection and interoperability of mobile financial service systems,[781] and operationalization of exclusive dealing arrangements between MNOs and their mobile financial service agent networks.[782] Other anti-competitive regulatory elements include non-regulation of service bundling of the voice services and mobile financial services.[783] In addition, the poor implementation of Mobile Number Portability in Kenya has also contributed to the maintenance of the asymmetrical market.[784]

The competition regulations and guidelines under the Kenya Communications Regulations address all of the above aspects of competition. These include Section 10 of the Kenya Information and Communications Act (Fair Competition and Equality of Treatment) Regulations, 2010, and the Communications Commission of Kenya Competition Guidelines, 2011[785]

However, the Communications Commission of Kenya has been unwilling to exercise regulatory oversight and compel compliance.[786] One of their reasons for inaction is the need to balance the push for a symmetrical mobile financial services market without killing innovation and the investor appetite in increased investments in the sector.[787]

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[780] See generally, the discussion on interconnection and interoperability, and competition, under sections 2.4 and 2.5 of Chapter 2, respectively.
[781] See section 2.4 of Chapter 2. See also, Consultative Group to Assist the Poor "Interoperability and Related Issues in Branchless Banking: A framework,"*op. cit.*
[782] William Jack and TavneetSuri (2011) "*Mobile Money: the economics of M-Pesa*,"*op. cit.* See also, See Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," *op. cit.*
[783] Michael Klein and Colin Mayer (2011) "Mobile Baking and Financial Inclusion: the regulatory lessons,"*op. cit.* See generally, John Buckley (2003)*Telecommunications Regulation*, *op. cit.*
[784] Aaron Thuo and Charles Kihungi (2011) "Mobile Termination (MTR) Mobile Number Portability (MNP) and Cost of Internet in Kenya as at July 2011,"*op. cit.*
[785] Communications Commission of Kenya (2011)*Competition Guidelines*, *op. cit.*
[786] See the discussion in section 2.5 in Chapter 2.
[787] Balancing Act Africa (2011) "CBK Rules Out Shared Infrastructure in Mobile Money,"*op. cit.*

4.2.2.4 Universal access and service (UAS) obligations of mobile netwrk operators in the mobile financial services sector in Kenya

Convergence of mobile and financial services has challenged the UAS framework to the extent that it does not include in the scope of services, new converged services such as mobile financial services.[788]

Other jurisdictions such as the European Union (EU) have expanded the scope of UAS beyond the traditional telcommunications services.[789] However, the Kenya Information and Communications Act Universal Access and Service Regulations still retain a scope of traditional telecoms services such as voice telephony.[790] Convergence across sectors has not been factored in the regulations. This is especially in crucial mobile financial services areas such as extent of MNO agent network coverage, and provision of technology-agnostic mobile financial services.[791]The UAS regulations have not factored in the regulation of the design of user-friendly interfaces, and interconnection and interoperability.[792]

There is need for an update of the scope of UAS obligations to include new converged services that are not anticipated by legislation.

4.2.2.5 Quality of service (QoS) regulation in the mobile financial services sector in Kenya

Increased convergence of mobile and financial services has challenged the QoS framework in the Kenyan telecoms regulations. This is to the extent that it contains indicators for voice services, but not indicators for converged services such as mobile financial services.[793] This leaves an increasingly crucial aspect of telecoms business in Kenya and globally – electronic transactions – unregulated, to the detriment of consumers.[794] This is despite the mandate given to the

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[788] See the KICA Universal Access and Service Regulations, 2010.

[789] Colin Blackman and Lara Srivastava (2010)*Telecommunications Regulation Handbook*, *op. cit.*

[790] See section 2.6.1 in Chapter 2. See also, Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive)*op. cit.*

[791] See section 2.6.2 of Chapter 2. See also, Isaiah Lule, Tonny Kerage Omwansa, and Timothy Waema (2012) "Application of Technology Acceptance Model (TAM) in M-Banking Adoption in Kenya". *op. cit.*

[792] See section 2.3 of Chapter 2.)

[793] See discussion in section 2.7 in Chapter 2.

[794] See generally, Ben Sihanya (2006) *Legislative Reforms for Electronic Transactions in Kenya: Policy and Strategic Options* report presented to the Office of the President, Directorate of e-Government and the United Nations Development Programme (UNDP) on February 8, 2007, following the stakeholders workshop on e-transactions held at the Whitesands Hotel, Mombasa, 13th -16th December 2006.

Communications Commission of Kenya, under section 83C of the Kenya Information and Communications Act, to regulate electronic transactions.[795]

Telecoms regulators and policy makers should amend the present QoS regulations to capture the emerging converged services that differ from traditional voice communications over telecom networks.[796]

4.2.3 Designing a telecoms regulatory framework for convergence in mobile telecoms and financial services

Chapter 3 of the study drew from the findings in chapter 2, to answer the research question three. It explored possible regulatory frameworks that will promote innovation and quality of service in convergence of mobile and financial services in Kenya.[797] These regulatory frameworks are in relation to various aspects of CCK's normative, institutional and operational framework, and also aspects of other secondary regulators.[798] The hypothesis that guided this study is that regulation of inter-sectoral converged services such as mobile financial services by telecoms regulators can be achieved by the adoption of principle-based regulation over rule-based regulation.[799]

I summarize the findings with regard to the normative, institutional and operational framework of converged telecoms regulation, below.

4.2.3.1 The role of the Communications Commission of Kenya in regulating converged mobile financial services

I examined the regulatory role of the Communications Commission of Kenya (CCK) on the basis of five benchmarks. These are: regulatory philosophy, institutional or board composition, extent of regulatory cooperation with other sectoral regulators, the extent of co-regulation between the

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[795] Electronic money is an innovation of Safaricom, and is not regulated by either the Central Bank of Kenya or the Communications Commission of Kenya. Parliament is yet to enact a substantive Electronic Transactions law. Section 83C of the Kenya Information and Communications Act, however, gives the Communications Commission of Kenya the regulatory jurisdiction over electronic transactions.

[796] See section 2.7 under Chapter 2.

[797] See section 3.1 in Chapter 3. This question has also been explored by th Institute of Economic Affairs (IEA). See Institute of Economic Affairs (2007) "The Quest for an Information Society: benchmarking the regulatory framework to usher Kenya into an information era,"*op. cit.* See also, Institute of Economic Affairs (2002) "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy,"*op. cit.*

[798] See section 3.1 in Chapter 3.

[799] See section 3.1 in Chapter 3. I have relied on the arguments by Julia Black in setting forth this hypothesis. See Julia Black (2007) "Making a Success of Principles-based Regulation" *op. cit.*

CCK and other non-State regulators, and lastly, the use of principle-based and rule based regulations.[800] I summarize my findings below.

4.2.3.1.1 Regulatory philosophy of the CCK towards converged telecoms and other non-telecoms services

Service convergence between the telecoms and other sectors in Kenya has challenged the perspective of Kenyan and other global telecoms regulators on their roles. This is especially in regard to regulating services such as mobile financial services.[801] Telecom infrastructure in Kenya is increasingly becoming the backbone for the delivery of non-telecom services such as e-education, e-health and e-financial services.[802]

However, the CCK has maintained a limited and conservative perspective on its role in regulating cross-sectoral converged services.[803] This has made it reluctant to regulate various telecoms aspects of mobile financial services.[804] This is despite the fact that these services fall within its ambit as a regulator of electronic transactions, under section 83C of the Kenya Information and Communications Act.[805] This view has since changed, with the CCK advocating for an expanded role in the regulation of mobile financial services.[806] In the Kenya Information and Communications (Amendment) Bill, 2013, published by the Minister for Information and Communication, the CCK seeks to amend the definition of telecommunications services, to include converged services, including mobile financial services, and online banking services.[807]

CCK's inaction has undermined the rapid development of mobile financial services and other converged services.[808] This inaction is in various aspects of mobile financial services, such as

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[800] See section 3.3. in Chapter 3.

[801] See International Telecommunications Union (2011) *Chairman's Report: 11th Global Symposium for Regulators, Armenia City, Colombia, 21st-23rd September 2011, op. cit.*

[802] See Jenny C. Aker and Isaac M. Mbiti (2010) "Mobile Phones and Economic Development in Africa,"*op. cit.* See also, Communications Commission of Kenya (2008) Strategic Plan: 2008-2013, *op. cit.* See also, William H. Melody (1997) "Designing a Working Telecom Regulatory Structure for 21st Century Information Societies,"*op. cit.*

[803] International Telecommunications Union (2011)*Chairman's Report: 11th Global Symposium for Regulators, Armenia City, Colombia, 21st-23rd September 2011, op. cit.*

[804] See International Telecommunications Union (2011) *Chairman's Report: 11th Global Symposium for Regulators, Armenia City, Colombia, 21st-23rd September 2011, op. cit.*

[805] See the discussion under section 1.2.3.1 of Chapter 1, and section 3.3.1 under Chapter 3.

[806] See Charles Wokabi (2013) "Bill backs CCK on mobile cash deals," Daily Nation (Nairobi) Tuesday July 9, 2013.

[807] *Ibid.*

[808] World Bank (2012)*Information and Communications for Development 2012: Maximizing Mobile," op. cit.*

interconnection and interoperability, competition, universal assess and service, and quality of service.[809] CCK should adopt a pro-active regulatory model that keeps it at the frontline of policy and regulation of innovations in converged telecoms and other services.[810]

4.2.3.1.2 Institutional composition of the CCK Board for pro-active regulation of converged mobile and financial services

Increased levels of convergence across the telecoms, ICT and other sectors in Kenya has necessitated the need for expanding the sphere of regulation, and to ensure multiple and complementary competencies within regulators.[811] This is especially necessary at the Board level, which exercises primary regulation over the telecoms sector.[812]

Therefore institutional composition of the Board of the CCK is crucial to attract the various representatives of secondary regulators.[813] These secondary regulators include the telecoms market players, such as Kenya ICT Network (KICTANET), Telecommunications Network Operators Forum (TNOF) and other civil society players and consumer organizations such as the Consumer Federation of Kenya (COFEK).[814] In addition, the board composition should be expanded to include various sectoral representations and competencies such as banking, finance, insurance, and other sectors that are increasingly experiencing service convergence with the telecoms sector.[815]

Currently, the CCK's Board and management composition has a concentration of professional from the engineering, law and economics field.[816] The strategic addition of other disciplines such as finance can assist the regulator in projecting future convergence developments in the telecoms sector.[817] It can also assist regulators to make appropriate policies and regulations in anticipation

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[809] See generally, the discussion in Chapter 2.
[810] *Ibid.*
[811] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*
[812] Monica Kerrets (2004)"ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*op. cit.*
[813] *Ibid.* See also, the discussion in section 3.3.2 of Chapter 3.
[814] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*
[815] *Ibid.*
[816] Monica Kerrets (2004)"ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*op. cit.Ibid*
[817] *Ibid.* See discussion in section 3.3.2 under Chapter 3.

of such market developments.[818] There is need for expansion of the institutional composition of the CCK.

4.2.3.1.3 Regulatory cooperation between the CCK and other non-telecoms regulators over converged mobile and financial services

The cross-sectoral nature of various converged services such as mobile financial services has resulted in regulatory conflict and inertia among regulators.[819] The CBK has taken advantage of these regulatory problems to assert its role as primary regulator, even in telecoms aspects of regulation.[820] The CCK has been reluctant to assert its regulatory authority in this context.[821]

One solution would be to leave the competition and consumer protection issues to be regulated by the general competition authorities and the consumer regulation agencies. However, there has been extensive integration of mobile financial services into voice communications services, through service bundling. The implication is that regulation of mobile financial services by non-telecom regulators would result into their interference with the regulatory mandate of telecoms regulators. Therefore regulatory cooperation has been suggested as the most practical response to the convergence of mobile and financial services.[822]

Currently, the primary regulatory frameworks for the telecoms and financial service sectors are the Central Bank of Kenya Act, the Competition Act, and the Kenya Information and Communication Act.[823] These statutes do not provide either legal or administrative frameworks for regulatory cooperation between the CBK, the Competition Authority, and the CCK. This is despite their status as the primary regulators of mobile financial services.[824]

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[818] *Ibid.*

[819] See the detailed discussion in sections 2.8 and 2.9 in Chapter 2.

[820] Alliance for Financial Inclusion. (2010). "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-PESA." *op. cit.* See also, See Alliance for Financial Inclusion. (2010) "Enabling Mobile Money Transfer: The Central Bank of Kenya's Treatment of M-PESA." *op. cit.*

[821] *Ibid.* See also, International Telecommunications Union (2011)*Chairman's Report: 11th Global Symposium for Regulators, Armenia City, Colombia, 21st-23rd September 2011*, *op. cit.* I discuss these issues in section 1.2.3.1 in Chapter 1.

[822] See the discussion under section 3.3.3 of Chapter 3. See Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.* See also, Rolf H. Weber (2010) "Regulatory framework for mobile financial services,"*op. cit.*

[823] See generally, the discussion under sections 1.2.3.1 of Chapter 1, and generally, Chapter 2, on the legal framework for regulating mobile financial services.

[824] See section 3.3.3 of Chapter 3 for a detailed discussion of the framework for regulatory cooperation.

Telecoms regulators and policy makers in Kenya should borrow from countries such as Nigeria and Netherlands. These countries have introduced regulatory cooperation protocols between their telecoms regulators and other sectoral regulators.[825] These protocols will assist in providing regulatory frameworks for converged services between telecoms and other sectors. This regulatory cooperation framework is necessary for providing regulatory certainty to investors who may be reluctant to invest in sectors in which the regulatory risk is unclear.[826]

4.2.3.1.4 Extent of State regulation, self-regulation and co-regulation in the converged telecoms sector in Kenya

One of the characteristics of the converged telecoms sector in Kenya is that technological changes are rapid and render telecoms policies and regulations redundant.[827] Innovation is essentially led by the market.[828] Therefore, competent regulation of convergence requires the engagement of other secondary regulators such as market players, consumers, civil society, and other stakeholders.[829] This polycentric model of regulation has been operationalized using three principal regulatory models: state regulation, co-regulation and self-regulation.[830]

The advantage of co-regulation is that it combines the advantages of state regulation and self-regulation, in a bid to create an optimal regulatory framework for telecoms convergence. The Kenya Information and Communications Act[831] does not have a framework for co-regulation.[832] It preserves the state regulatory orientation.[833] To promote co-regulation, the Kenya Information

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[825] International Telecommunications Union (2012) "Universal Access and Service,"*op. cit.*

[826] See NzomoMutuku (2008) "Case for Consolidated Financial Sector Regulation in Kenya,"*op. cit.*

[827] See section 2.8 in Chapter 2 for a discussion on the regulatory problems occasioned by convergence of mobile and financial services. See also, Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience,"*op. cit.*

[828] *Ibid.*

[829] Lawrence Lessig (1999) *Code and Other Laws of Cyberspace*, Basic Books, New York. See also, Lawrence Lessig, (1998) "The New Chicago School,"*Journal of Legal Studies,* vol. XXVII (June 1998). See also, Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*
See also, Ian Bartle and Peter Vass (2005) "Self-Regulation and the Regulatory State: a survey of policy and practice," *op. cit.*

[831] Cap. 411A, Laws of Kenya.

[832] See the discussion under section 3.3.4.3 of Chapter 3.

[833] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

and Communications Act should be amended to provide mechanisms for regulatory cooperation between the CCK industry players, civil society and other stakeholders.[834]

4.2.3.1.5 Use of principle-based versus rule-based regulations by telecoms policy makers and regulators in Kenya

Regulation of convergence requires a regulatory framework that accommodates the rapid changes in ICT, but at the same time provides consistency.[835] This pits principle-based regulation against rule-based regulation.[836]

However, both principle-based regulations and rule-based regulations serve important functions in telecoms regulation.[837] The present era of increasing convergence of telecoms and other services, is also characterized by increasing globalization of telecoms and trade by way of ICT.[838]

Hence there is need for an appropriate mix of principle-based and rule based regulations. For example, the most intrusive (ex ante, rule-based) regulations can be reserved for situations where serious harm – whether health, safety, national security or economic – is at issue.[839] This includes regulations on equipment type, competition and consumer protection.[840] On the other hand, principle-based regulations can be used in regulating interconnection and interoperability, universal access and service, and other telecoms regulatory areas.[841]

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[834] *Ibid.*

[835] See the discussion under section 3.3.5 of Chapter 3. See also, Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience,"*op. cit.*

[836] *Ibid.*

[837] See the detailed discussion in section 3.3.5.2 of Chapter 3.

[838] See Institute of Economic Affairs (2002) "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy,"*op. cit.*

[839] Kenneth Jull and Stephen Schmidt (2009) "Preventing Harm in Telecommunications Regulation: a new matrix of principles and rules within the ex ante vs. ex post debate" *op. cit.*

[840] However, Sihanya criticizes the use of rule-based regulation for equipment type regulation. See Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[841] *Ibid.*

4.2.3.2 The role of the Communications Appeals Tribunal in regulating converged telecoms services in Kenya

The Communications Appeals Tribunal (CAT) plays an integral role in the telecoms convergence era by presiding over disputes between the various entities under the KICA, including the CCK, licensees and consumers.[842] As new technologies are introduced into the market, they will challenge the regulatory framework, especially as applied by the Communications Commission of Kenya.[843] The CAT will therefore play an increasingly important role of interpreting the telecoms regulations in the context of rapid technological changes.[844]

It is therefore important that the institutional framework, composition, and facilitation of the CAT enables them to carry out this important task, so as to promote increased innovations and investments in converged services.[845]

4.2.3.3 The role of the National Communications Secretariat (NCS) in regulating converged telecoms services in Kenya

The National Communications Secretariat (NCS) is established under section 84 of the Kenya Information and Communications Act. Its functions include advising the Government on the adoption of a communications policy.[846] This places the NCS in a pivotal position to advise various ministries and regulatory bodies on the adoption of an integrated and coordinated ICT policy that promotes convergence between the telecoms sector and other ICT and non-ICT sectors.

Presently, the policy documents emanating from the Government ministries, especially the Ministry of Information and Communication, do not provide for an integrated policy strategy for promoting ICT convergence. The NCS should re-assert its role as the adviser of not only the

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[842] Section 102 of the Kenya Information and Communications Act.

[843] Monica Kerrets (2004)"ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya"*op. cit.*

[844] See, for example, *Republic versus Communications Appeals Tribunal & Another Ex-Parte Safaricom Limited, Miscellaneous Civil Application 257 of 2010*, High Court of Kenya at Nairobi [eKLR]. The Tribunal had to review the Communications Commission of Kenya's decision on the pricing of 3G license applied for by Safaricom. I have discussed this case in Chapter 2.

[845] See the detailed discussion in section 3.3 under Chapter 3.

[846] Section 84(2) of the Kenya Information and Communications Act.

CCK, but all other government agencies representing the various sectors that have the potential of creating converged services.

4.2.3.4 The role of the Ministry of Information and Communication in regulating converged telecoms services in Kenya

Under section 5 of the Kenya Information and Communications Act, and the Presidential Circular No. 1 of 2008 on Re-organization of Government[847], the Minister for Information has the statutory duty of providing general policy guidelines to the Communications Commission of Kenya on regulation of ICT. These policy guidelines are critical for orienting various Government agencies to cooperation in the regulation of converged sectoral services such as mobile financial services.[848]

However, the Ministry of Information has not been proactive in mainstreaming convergence, especially between the telecoms and other sectors such as financial services sector. Indeed, the Ministry has delegated its role in policy making in mobile financial services to the Central Bank of Kenya.[849] There is need for the Ministry to provide more proactive policy guidelines for the promotion of convergence in mobile and financial services, and in ICT services generally.

4.2.3.5 The role of the Judiciary in regulating converged telecom services in Kenya

The Judiciary maintains the role of final arbiter of any disputes between stakeholders in the converged telecoms sector. This is done by way of deciding appeals against decisions of the Communications Appeals Tribunal, judicial review applications against the ICT and other regulators, and constitutional petitions touching on freedoms of expression, and right to fair administrative action, among other constitutional provisions.[850] Indeed, the judiciary's role in evolving judicial precedents that fill in the gaps in telecoms regulations, as new technological innovations challenge the present regulations, is critical.

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[847] Republic of Kenya (2008) Organization of the Government of the Republic of Kenya, Government Printer, Nairobi.

[848] Monica Kerrets (2004)"ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*op. cit.*

[849] Alliance for Financial Inclusion (2010) "Mobile Financial Services: regulatory approaches to enable access,"*op. cit.*

[850] Article 165 of the Constitution provides for the jurisdiction of the High Court.

4.2.3.6 The role of Parliamentary Committees in regulating converged telecoms services in Kenya

Parliament, through its committees, has an important role in the regulation of converged mobile and financial services. The Parliamentary Committee Energy, Communication and Information, is responsible for overseeing policy and regulatory actions of various players in the telecoms sector, including the CCK, and the Ministry for Information and Communication.[851] In addition, under Sec. 34(1) of the Interpretation and General Provisions Act,[852] unless otherwise provided, delegated legislation must be laid before parliament for approval. Parliament is empowered to declare the rules or regulations null and void by resolution to that effect whereupon the rules become ineffectual.

Hence the Parliamentary Committee on Delegated Legislation, and the Parliamentary Committee on Energy, Communication and Information which recommends to the House particular actions, are important regulatory players in the converged telecoms sector. However, so far, the committees have not contributed much to the formulation of ICT policies that promote services convergence in telecoms. One of the reasons could be the inadequate resource capacity of the Parliamentary committees.

4.2.3.7 The role of industry players in the regulatory process in the converged telecoms sector

For telecoms regulations to be sufficiently responsive to the rapid technological changes in the converged telecoms sector, there is need for integration of industry players into the regulatory process. Over the last 10 years, industry lobby groups such as TESPOK, KICTANET, KTNO, and TNOF have been instrumental in contributing to the various legislative reforms and amendments to the telecoms regulatory framework.[853] As ICT convergence continues to be stepped up by technological innovations, these industry players need to be further mainstreamed into the day-to-day regulatory processes, so that the telecoms regulators can benefit from industry expertise.

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[851] Standing Order 198(2) Kenya National Assembly, 2012.
[852] Cap. 2, Laws of Kenya.
[853] Lishan Adam, Tina James and Alice MunyuaWanjira (2007) "Frequently Asked Questions about Multi-Stakeholder Partnerships in ICT for Development: a guide for national ICT policy animators,"*op. cit.*

4.3 Recommendations on reforming the telecoms regulatory framework to promote telecoms convergence

The section above has highlighted the major findings of the discussions in Chapters 1, 2, and 3 of the study. The section below summarizes the general and specific recommendations on reforms required for proper regulation of converged mobile and financial services.

4.3.1 General reforms on regulation of converged telecoms services in Kenya

The evolving nature of telecoms convergence requires that the regulatory response should be optimal enough to promote convergence between the telecoms and any other sector other than the financial services sector. Below, I outline some general reforms required in Kenya's telecoms regulatory framework.

4.3.1.1 Jurisdiction of the Communications Commission of Kenya (CCK) over converged services

The CCK should interpret its mandate in telecoms more broadly than the regulation of transmission of information by telecom licensees.[854] This will enable the CCK to objectively and competently regulate the telecommunications aspects of hybrid and converged telecoms services such as mobile financial services.[855] The CCK should model itself according to UK's OFCOM.[856] It should be a central platform on which converging issues, tools and styles of analysis can be integrated, and through which the activities of key policy stakeholders can be coordinated.[857]

4.3.1.2 Institutional composition of the CCK Board

The Board of the CCK should be reconstituted to be more responsive to convergence issues in its regulatory role. This should be done by ensuring wider representation from two parameters.[858] First, it should include wider competencies from other sectors other than law, engineering and

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[854] See the detailed discussion under section 3.3.1 of Chapter 3. See also, Institute of Economic Affairs (2002) "Telecommunications Policy in Transition: mainstreaming Kenya into the global information economy,"*op. cit.*

[855] See William H. Melody (1997) "Designing a Working Telecom Regulatory Structure for 21st Century Information Societies,"*op cit.*

[856] Constantijn Van Oranje, *et al* (2008) "Responding to Convergence: different approaches for telecoms regulators,"*op. cit.*

[857] *Ibid.*)."

[858] See section 3.3.2 of Chapter 3. See also, Monica Kerrets (2004) "ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya,"*op. cit.*

economics. This includes banking, finance, and other service industries.[859] Second, it should include representation from all stakeholders in the polycentric sphere of regulation. They include the State, market players, civil society and other economic sectors.[860]

4.3.1.3 Regulatory cooperation between the CCK and other non-telecoms regulators

Increased convergence of services across different sectors requires regulatory cooperation between the CCK and primary regulators of the other sectors, such as the financial services industry.[861] Legislators and policy makers should provide for a legal and administrative framework for cooperation between the CCK and other sector regulators, where new innovations converge across services.[862] This can be in the form of cooperation protocols sanctioned by statute.[863]

4.3.1.4 Co-regulation by State regulators and non-State actors

Policy makers, legislators and regulators should promote co-regulation in the telecoms and the ICT sector, as a means of tapping into industry expertise on convergence issues.[864] This will give the CCK or other telecoms regulators the capacity to forcast changes in the telecoms sector brought about by convergence of services. The regulators will also be able to prepare policies and regulations that effectively regulate these services while at the same time promoting innovation.[865]

4.3.1.5 Use of principle-based and rule-based regulations by converged telecoms regulators

Kenyan telecoms regulators should calibrate a practical mix of the use of principle-based and rule-based regulations, as a means of benefitting from the best aspects of each regulatory

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[859] *Ibid.*

[860] Ben Sihanya (2011) "The Presidency and Public Authority in Kenya's New Constitutional Order,"*op. cit.*

[861] See section 3.3.3 of Chapter 3. See also, Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[862] International Telecommunications Union (2012) "Universal Access and Service,"*op. cit.*

[863] *Ibid.*

[864] See section 3.3.4 of Chapter 3. See also, Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[865] Joseph Kariuki Nyaga (2011) "Convergence of Information and Communication Technology Sectors in the East African Community: challenges for the current legislative and regulatory frameworks and lessons from the European Union Experience,"***op. cit.***

regime.[866] As discussed above, the most intrusive (ex ante, rule-based) regulations can be reserved for situations where serious harm – whether health, safety, national security or economic – is at issue.[867] This includes regulations on equipment type, competition and consumer protection. On the other hand, principle-based regulations can be used in regulating interconnection and interoperability, universal access and service, and other telecoms regulatory areas.[868]

4.3.2 Specific reforms on telecommunications regulation of converged mobile financial services in Kenya

The convergence of mobile and financial services requires specific regulatory responses, to promote innovation in the mobile financial services sector. I outline them below.

4.3.2.1 Authorization and licensing of converged mobile financial services in Kenya

Regulators should move the licensing framework further from specific licensing to technology-neutral general authorization.[869] In addition, the CCK should revisit the complaints by the mobile network players and other stakeholders regarding the allegedly exorbitant fees for 3G licenses for MNOs, which licenses are necessary for the provision of VAS such as mobile financial services.[870] The CCK should endeavour to free up additional resources that MNOs can invest in better infrastructure and innovation in converged services.[871]

4.3.2.2 Regulation of interconnection and interoperability of converged mobile financial service platforms in Kenya

The CCK should regulate interconnection and interoperability of mobile financial service platforms to promote competition.[872]The telecoms regulator can use incentives such as government procurement to convince MNOs to allow interconnection onto their mobile financial

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[866] See the discussion in section 3.3.5 of Chapter 3.
[867] Kenneth Jull and Stephen Schmidt (2009) "Preventing Harm in Telecommunications Regulation: a new matrix of principles and rules within the ex ante vs. ex post debate" *op. cit.*
[868] *Ibid.*
[869] See the discussion in section 2.3 of Chapter 2.
[870] Deloitte (2011) "Mobile Telephony and Taxation in Kenya,"*op. cit.*
[871] Ibid.
[872] See the discussion in section 2.4 in Chapter 2.

service platforms.[873] This could be a way of balancing the proprietary interests of the MNOs over their service platforms, with the need to promote competition in the mobile financial service sector.[874]

4.3.2.3 Regulation of competition in the converged mobile financial services sector in Kenya

The CCK should exercise its jurisdiction over telecom Value Added Services by regulating the competition aspects of mobile financial services.[875] This includes promoting interconnection and interoperability, banning exclusive agent network arrangements, and bundling of voice and mobile financial services.[876] This will promote competition in the asymmetrical mobile financial services market, leading to increased innovations, better quality, and reduced service charges.[877]

4.3.2.4 Regulating Universal Access and Service (UAS) in the converged mobile financial services sector in Kenya

Telecoms policy makers and regulators in Kenya should update the scope of services under universal access and service obligations to include converged VAS such as mobile financial services.[878] The UAS obligations attached should then include extent of mobile financial service agent network coverage, user-friendly interfaces and technology agnostic services.[879]

4.3.2.5 Regulating Quality of Service (QoS) in converged mobile financial services in Kenya

Telecoms policy makers and regulators should amend the QoS regulations to provide comparators for assessing QoS in converged VAS.[880] For example, for mobile financial services, these comparators can include efficiency of complaint/redress mechanisms, agent network

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[873] *Ibid.*

[874] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

[875] See the discussion in section 2.5 of Chapter 2. See also, Muriuki Mureithi (2011) "State of Competition in Mobile Telephony: mobile money transfer (MMT) services in Kenya" *op. cit.*

[876] Loretta Michaels (2011) "Better than Cash: Kenya mobile money market assessment," *op. cit.* See also, World Bank (2009)*Information and Communications for Development 2009: Extending reach and increasing impact,op. cit.*

[877] *Ibid.*

[878] See the discussion under section 2.6 of Chapter 2. See also, Colin Blackman and Lara Srivastava (2010)*Telecommunications Regulation Handbook, op. cit.*

[879] *Ibid.*

[880] See the detailed discussion under section 2.7 of Chapter 2.

quality assurance, authentication and registration, and verification and tracking of transactions and MNO charges.[881]

4.4 Conclusion

This study set out to explore one over-arching research question: are Kenya's telecoms regulations and policies adequate to regulate and promote innovation in converged telecoms and non-telecoms services? My hypothesis has been that both the telecoms policies and regulations, and the approach of Kenya telecoms regulators and policy makers towards converged services, is ambivalent.

The study has indeed confirmed that Kenya's telecoms regulations and policies have given telecoms regulators the jurisdiction to regulate converged telecoms services such as mobile financial services.[882] This is especially taking into account sections 5, 23 and 83C of the Kenya Information and Communications Act.[883]

However, aside from the Unified Licensing Framework (ULF) the detailed regulations under the Kenya Information and Communications Regulations, 2009, do not address the regulatory nuances of converged mobile and financial services.[884] This includes regulations on interconnection and interoperability, competition, universal access and service (UAS), and Quality of Service (QoS).[885] It is important that converged mobile and financial services are expressly regulated on these issues, so as to promote sustainable growth and development of converged telecoms service in Kenya.

Whether regulation of the converged telecoms sector promotes innovation and further development of converged services depends on the framework of regulation.[886] The study has

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[881] *Ibid.*
[882] See generally, the discussion under section 1.2.3 of Chapter 1.
[883] Cap. 411, Laws of Kenya.
[884] See generally, the discussion under Chapter 2.
[885] *Ibid.*
[886] See also, Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium,"*op. cit.*

indicated that regulation should not be merely undertaken.[887] Telecoms regulations and policies should be carefully calibrated to forecast and allow further innovation and development.[888]

Therefore, five key regulatory features should be integrated into the legal framework. First, telecoms regulators should broadly interpret their mandate over telecoms services to include converged telecoms and non-telecoms services. This puts the CCK and other regulators in good stead to pro-actively regulate converged services.[889] Second, the institutional composition of telecoms regulators such as the CCK should co-opt non-State regulators. These include market player groups such as Kenya ICT Network (KICTANET), consumer groups such as Consumer Federation of Kenya (COFEK), civil society groups, and the academia.[890]

In addition, the institutional composition of the CCK should also reflect the various competencies and expertise required to pro-actively regulate converged telecoms and non-telecoms services.[891] These include finance and banking, law, ICT, humanities, economics, and other relevant competencies.[892]

Third, the overall regulatory framework for all economic sectors in Kenya, for example, the telecoms, financial, energy, education and other sectors, should promote regulatory cooperation between the sectoral regulators[893]. This will assist telecoms regulators such as the CCK to engage seamlessly with other sectoral regulators such as the Central Bank of Kenya, to regulate converged telecoms services.[894]

Fourth, the Kenyan telecoms regulatory framework should make use of co-regulation as a regulatory model, to bring together various synergies from both State and non-state actors.[895]

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[887] See generally, Chapter 3.
[888] *Ibid.*
[889] See section 3.3.1 of Chapter 3.
[890] See section 3.3.2 of Chapter 3
[891] Ben Sihanya (2000) "Infotainment and Cyber Law in Africa: regulatory benchmarks for the third Millennium," *op. cit.*
[892] Monica Kerrets (2004) "ICT Regulation and Policy at a Crossroads: a case study of the licensing process in Kenya," *op. cit.*
[893] See section 3.3.3 of Chapter 3.
[894] Jeremy Mitchell (1997) "Converging Communications, Fragmented Regulation and Consumer Needs," *op. cit.*
[895] See section 3.3.4 of Chapter 3.

This is necessary, especially for forecasting future regulation of converged services, since the market usually has more industry information than the State.[896]

Fifth, telecoms regulators should make use of a delicate balance of principle-based and rule based regulations, when legislating on converged telecoms services.[897] This give regulators such as the CCK the ability to effectively forecast and promote innovation in converged services, while protecting public and consumer interest.[898]

Increased network, service, sector and regulatory convergence in the telecoms sector will continue to elevate the role of MNOs in the knowledge economy in Kenya. For the telecoms sector to be optimally positioned to play its critical role in the attainment of a knowledge economy, telecoms regulations should be attuned to promote innovation within the industry. This should be done while being responsive to the critical regulatory concerns of the State.

The evolving nature of the convergence process and the rapid development of technologies means that regulatory needs continue to evolve. This presents a challenge to regulators, policy makers, and other actors in regulation. Hence even the proposed regulatory frameworks above may be rendered inadequate or obsolete. State and non-state regulatory actors should therefore expend more time and resources in continually exploring optimal regulatory frameworks for specific contexts in the ever-evolving telecoms convergence process.

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[896] Ian Bartle and Peter Vass (2005) "Self-Regulation and the Regulatory State: a survey of policy and practice,"*op. cit.*

[897] See section 3.3.5 of Chapter 3.

[898] Kenneth Jull and Stephen Schmidt (2009) "Preventing Harm in Telecommunications Regulation: a new matrix of principles and rules within the ex ante vs. ex post debate" *op. cit.*

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