

INFLUENCE OF QUALITY ON PERFORMANCE IN TELECOMMUNICATION COMPANIES IN KENYA

^{1*} **Masafu Kiberenge Simiyu
Christopher**
masafukris@gmail.com

^{2**} **Namusonge Gregory Simiyu**
gnamusonge@jkuat.ac.ke

^{3***} **Sakwa Maurice**
msakwa@jkuat.ac.ke

^{1,2,3} *School of Entrepreneurship, Procurement and Management, Jomo Kenyatta University of Agriculture and Technology, Kenya*

Abstract: *The study explains the effect of transitional policies on performance in telecommunication companies in Kenya. The envisaged problem is lack of effective policy framework for the fast-growing telecommunications industry, which impact negatively on the social and economic development in the country. Research has shown that countries that have low monopoly in telecommunications have high competition which helps reduce cost of data, call rates and mobile money transfer service charges and connectivity rates across networks. Such countries are on the road to universal service provision unlike Kenya where telecommunication sector has transitioned from a government monopoly to an oligopoly where one dominant player has consistently enjoyed 60% market share for years, well above the standard threshold for significant market power (SMP). The inherent weaknesses in the existing policies, befits “transitional” in the researcher’s point of view due to their volatility. The main objective of this study explains the effect of transitional policies on performance in telecommunication companies in Kenya. The consideration under the main objective is to avoid policies driving the once monopolistic market towards oligopolistic market against the desired global practices of free economies. The research targeted major telecommunication service providers within Tran Nzoia and Bungoma counties where questions and interview schedules were used to collect data from service providers (SPs) within the counties. The proportionate, stratified and the purposive sampling techniques were employed to analyze data. The Statistical Package for Social Sciences (SPSS) was used in the analysis of data. The findings explain how transitional policies have impacted performance in telecommunication companies; determined the emergence of oligopolies and predatory tendencies by major service providers and posing a threat to the regulatory. The research recommends harmonization of regulatory policies to ensure effective regulation which improves performance in telecommunication companies and also make the sector competitive.*

Keywords: *equity transitional policies, performance, telecommunication, market share*

1. Background of the study

The current telecommunication regulatory framework in Kenya is defined by policies from the Communication Authority of Kenya (CA) and the Ministry for Information and Communications Technology. One of the main priorities of the Government towards the attainment of Kenya Vision 2030 development goals and objectives for wealth and job creation is the achievement of an industrialised information society and knowledge economy as stated in the National Information Communication Technology Policy, (ICT policy, 2019).

The review of the 2006 ICT Policy that was based on the Economic Recovery Strategy for Wealth and Employment Creation was meant to provide a proactive framework that is in tandem with current technological realities and dynamics, and one that will guide the orderly development of the ICT sector so as to ensure maximum developmental impact for the benefit of all Kenyans. In reviewing this policy, the Government took into account the tremendous impact of globalisation and the rapid changes in technology. These changes have invariably affected the traditional approach to the management of public affairs and service delivery, and increasingly inform the need for an adaptive policy and regulatory response. This cannot be gainsaid anymore with the near shut of the economy arising from the global pandemic, the Covid 19 where the World Bank projects Kenya's gross domestic product (GDP) to decelerate substantially in 2020 due to the negative impact of the COVID-19 (coronavirus) pandemic. Economic growth projection remains highly uncertain and the outcome will hinge on how the pandemic plays out internationally and within Kenya, along with policy actions taken to mitigate the situation. The latest World Bank Kenya Economic Update (KEU) predicts growth of 1.5 percent in 2020 in the baseline scenario, with a potential downside scenario of a contraction to 1.0 percent, if COVID-19 related disruptions in economic activity last longer, (Chacha; Umutesi 2020). It is however, noted that, these policies do not define telecommunication in its current form with tremendous innovations and bundling of products which this study seeks to address. The policies have failed to effectively improve the telecommunication sector leaving the industry predominantly in the hands of one dominant player. The company enjoys a market share of 64.9% with four other service providers sharing 35.1% according to the Sector Statistics Report for the First Quarter of the 2019/20 Financial Year, (CA, 2019). This generally has an effect on the performance in telecommunication companies. The policies tend to create room for market abuse by dominant players, create oligopolistic tendencies, threaten competition and risk regulatory capture. The government focus is in relation to the design, development, acquisition, deployment, operation, support and evolution of public and private ICTS by defining the current and forward looking position of the government on various areas of the evolving and emerging technology landscape in Kenya, (ICT Policy, 2019). The policy further notes challenges particularly, the Structural and legal inadequacies that hinder the development and evolution of online transactions, such as a National Addressing System (NAS), an underdeveloped innovation ecosystem that hinders the development and growth of Kenyan corporations and industry, inadequate policies, legal and institutional frameworks at the national and devolved county levels of government, a dearth of competent and skilled human capacity due to inadequately and inappropriately equipped universities and tertiary institutions and also cyber-crime (ICT Policy, 2019). The various legislations in place are inadequate in dealing with issues of convergence, electronic commerce and e-government and recommends for a comprehensive policy, legal and regulatory framework. The telecommunications sector in the country has grown exponentially since it was liberalized back in 1999. This was achieved through firstly, the Telecommunications and Postal Sector Policy Statement of February 1997, which was subsequently followed by the enactment of the Kenya Information and Communications Act, 1998 (more commonly referred to as KICA), which outlined the government's acknowledgement of the important input that the information and communications sector could make to the economic development of the country, (Institute of Economic Affairs, 2019).

1.1. Statement of the Problem

The government recognizes that telecommunication is critical to rapid economic and social development of the country. The telecommunication sector is governed by the National Information, Communications and Technology (ICT) Policy 2019. The policy is designed to realize the potential of the digital economy by creating an enabling environment for all citizens and stakeholders. The Fourth Industrial Revolution is driving

automation and massive data exchange, impacting our macro and microenvironments and increasing the level of ICT consumption worldwide (ICT Policy, 2019), though defining a forward-looking position of the Government on various areas of the evolving ICT sector landscape in Kenya, the transitional nature of policies in the industry have negatively affected the performance of telecommunication companies. Dominance in both the mobile voice and mobile money markets needs to remain an active area of regulatory concern going forward. High levels of market concentration are unhealthy, and ongoing strategies need to be undertaken to promote a more diversified and competitive marketplace (Ndung'u et al., 2019). Dominance has remained unresolved with Safaricom PLC, remaining consistently above 60%, above the standard threshold for significant market power (SMP), at which regulatory interventions are usually prescribed (NERA, 2011). Analysys Mason appointed by CA to investigate competition in the telecommunication sector pointed out that dominance needed to be addressed proposing a raft of measures key being unbundling of the M-Pesa platform from Safaricom's voice and data services, to be run as an independent entity on the grounds that the vertical integration gave Safaricom an unfair advantage as well as price caps and network tower sharing, (Analysys Mason, 2018). This remains unresolved. Safaricom PLC controls 64.9% of the market share (CA, 2019). Mobile data and Internet usage have continued to experience rampant growth following the deployment of 3G and 4G long-term evolution (LTE) networks by the operators, availability of affordable smartphones and data plans, and increasing consumption of e-commerce, e-government, social media and other online content (CA, 2019). The work from home season has also contributed to a surge in data consumption following the Covid 19 lockdown measures. The Kenya government deployed balloon internet, popularly referred to google loons, that relies on aerial transmitters to try to bring down the cost of data and boost access to underserved regions particularly with the video conferences taking the space for boardrooms. But still, the country needs to work on its cyber security resilience, having lost Sh 29.5 billion to cyber gangs in 2018 so that the digital quality of life (DQL) is realized. A survey by the British technology research firm Cable, evaluated the average cost of 1GB of mobile data in 228 countries, placed Kenya at position 41. Despite commendable progress to reduce the cost from Sh 144 last year to Sh 112 this year, neighboring countries have done much better than Kenya to lower the cost of data. In eastern Africa, Kenya comes fourth after Somalia Sudan and Tanzania and position 9 in Africa (Ngila, 2020). The government is advocating for ICT-centric innovation strategy whose main aim will be to recommend programmes and policies supporting digital markets, infrastructure, digital platforms, digital entrepreneurship, digital skills and values, and identify flagship projects to help unleash the potential of ICT-centric innovation ecosystem (GOK, 2019). Therefore, there is need for an effective policy to promote competition, promote innovation, increase efficiency and improve quality of service.

1.2. Specific Objectives

This specific objective of the study was to determine the influence of quality on performance in telecommunication companies in Kenya

1.3. Research Questions

The study was guided by the following research question

How has quality influenced performance in telecommunication companies in Kenya?

1.4. Hypotheses

H0₁: Quality does not have a significant effect on performance in telecommunication companies in Kenya.

2. Methodology

2.1. Research Design

The study took an exploratory survey research design. In trying to confirm transitional policies in Kenya’s telecommunication industry, relevant regulatory literature was reviewed, past published reports in telecommunications service provision and the general market surveys. Further, questionnaires and interviews were used to obtain information from a selected sample of service providers within Trans Nzoia and Bungoma counties as the target population.

2.2. Target Population

The service providers have established offices and call centers within the counties making it easier to acquire products’ and services’ information. The management of the telecommunication service providers was involved to get clear information on regulations and policies relevant on each product and service offered, compliance and the impact of the existing policy frameworks by the Communications Authority (CA) on performance of telecommunication companies in the industry. The researcher targeted senior managers of the telecommunication service providers within Trans Nzoia and Bungoma counties who understand regulatory regimes in the country as well as service provision by their companies.

2.3. Sampling frame

Data was collected from the service providers within the counties categorized in three areas as follows: Mobile money services; Data and Voice services and Communication Infrastructure Services.

Table 1: Service Providers Sample

Service	Population	Sample
Mobile money	2	2
Data and Voice	3	3
Communication Infrastructure	4	2
Total	11	8

Source: Survey Data (2020)

Since not all services are provided by the companies (telecommunication service providers), the purposive technique was used to get information based on the service providers’ area of specialization. For example, Liquid telecom does not provide mobile money services. This therefore, necessitated the need to sample based on the services or products.

Table 2: List of Service Providers and specialty

Service Provider	Service/Product	Total
Safaricom PLC	a. Mobile money	3
	b. Data and Voice	
	c. Communication Infrastructure	
Airtel Networks Kenya Limited	a. Mobile money	3
	b. Data and Voice	
	c. Communication infrastructure	
Telkom Kenya Limited	a. Mobile money	3
	b. Data and Voice	
	c. Communication infrastructure	

Liquid Telecommunications Kenya Limited	a. Communication infrastructure	1
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Source: Survey Data (2020)

2.4. Sample size and Sampling Technique

Stratified sampling was used in determining the sample size. The target population was broken down into categories and a random sample taken on each category. This technique yields more accurate results and can show different tendencies within each category. The sample size of 44 respondents was determined using the Krejcie and Morgan Tables, which is constructed using:

The following formula is used to construct the table

$$s = \frac{X^2NP(1-P)+d^2(N-1)+X^2P(1-P)}{d^2}$$

Where;

- s = required sample size
- X² = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)
- N = the population size
- P = the population proportion
- d = the degree of accuracy expressed as a proportion (.05)

The table was appropriate because it had all provisions required to arrive at the researcher’s Sample size.

Table 3: Table Population and Sample

Services	Population	Sample
Mobile money	19	17
Data and Voice	16	14
Communications Infrastructure	15	13
Total	50	44

Source: Survey Data (2020)

2.5. Data collection Instruments

To help ease the collection of data the questions were formulated based on the strength of the service provision by respective service providers categorized as per the regulated services - Mobile money, Data and voice and Communication Infrastructure. For convenience purposes, the questionnaires and interview schedules were used to reduce misunderstandings and also because they provide a good opportunity to probe the respondents. Structured and unstructured questions were used.

3. Findings

According to the study, the following findings were arrived at to determine the influence of quality on performance in telecommunication companies in Kenya by focusing on Bandwidth, Standards and Regulatory policies.

3.1 Influence of Quality on Performance in Telecommunication Companies

This variable has a direct impact on demand and consumption of the services and therefore a measure of performance in telecommunication companies. Quality is the idea that transmission rates, error and other characteristics can be measured, improved and guaranteed in advance. It is determined by the bandwidth allocation, compliance to set standards and application of the regulatory policies. Through answering the questions bordering on the three; bandwidth, standards and regulatory policies, respondents’ feedback was critical in determining the influence of quality on Performance in Telecommunication Companies. Questions that simply required a “Yes” or “No” from respondents were also issued and the responses recorded appropriately, specifically attributed to regulatory policies which are important in determining quality as a variable in the study.

3.1.1 Is the current regulatory framework adequate to gap money laundering in the mobile money markets?

This question seeks the respondents’ view on the adequacy of regulatory policies to gap money laundering in the mobile money markets. Table 4 shows that majority of respondents at 31 representing 70.5% of the respondents feel the present policies are not adequate to prevent money laundering while only 29.5% or 13 of the 44 respondents confirmed they are adequate. This shows that quality is not guaranteed in mobile money services and errors could still occur and therefore affect the performance in telecommunication companies. This again from the research could be attributed to the fact that most banking roles are presently hinged on telecommunication, a new narrative in the industry and a challenge to regulatory agencies. In Kenya for instance, there is no clear regulator of the mobile money services in Kenya. The role oscillates between the Central Bank of Kenya and the Communications Authority.

Table 4: Adequacy of present regulations to prevent money laundering

Response	Frequency	Percent
Yes	13	29.5
No	31	70.5
Total	44	100

3.1.2 Effectiveness of Mobile Money Services

On the effectiveness of mobile money services, to justify why quality is important, most of the respondents supported the service at 81.8% by rating it at 9-10 on a scale of 10 while 7-8 formed 18.2% which is still a favorable verdict as shown in table 5. The service remains the most effective as rated by respondents and therefore, quality must be guaranteed.

Table 5: Effectiveness of Mobile Money Services

Rating	Frequency	Percent
9 – 10	36	81.8
7 – 8	8	18.2
5 – 6	0	0
3 – 4	0	0
0 – 2	0	0
Total	44	100

3.1.3 Consumption of Mobile Money Services besides sending and receiving money

To further beef up on quality, the respondents were asked on the other services utilized aside with sending and receiving money. Table 6 shows that most respondents hold the view that Mobile Money Services are rarely used on other services. 68.2% hold that they are rarely used aside with sending and receiving money. 9.1% considered the use as normal, while 22.7% confirmed that there are other uses for the service. In this case, the facility being used for sending and receiving money as well as for other services, it calls for an effective policy framework to eliminate errors, threats of money laundering and fraud. Taxation reporting and policy too should be looked at to avoid cases of service providers defaulting on tax remittance. Further, with such a development, there is need to develop policy that will avoid cases of customer lock-in and abuse of pricing for on-net and off-net transactions to hoodwink customers. Prevalence of this leads to anti-competitive practices in the telecommunication market and risks driving the sector to favor a dominant service provider.

Table 6: Any other use of Mobile Money Services

Response	Frequency	Percent
Frequently	10	22.7
Normally	4	9.1
Rarely	30	68.2
Total	44	100

3.1.4 Inter-network Mobile Money Services transactions

Quality is further pegged on inter-network transactions. The standards must allow for such services with a view to increase and make it flexible to enhance performance in telecommunication companies. The response in table 7 shows that the service remains largely inflexible at 88.6% of the respondents. Only 11.4% of respondents say it is flexible. Therefore, it remains at regulatory level to make policy that can support inter-network transactions without disadvantaging customers and service providers and leveraging any anti-competitive practices to enhance performance of the service providers.

Table 7: Inter-network Mobile Money Services

Response	Frequency	Percent
Flexible	5	11.4
Inflexible	39	88.6
Total	44	100

3.1.5 Security and safety of customers

This question intended to establish the level of privacy for consumers of the telecommunication services. This was measured on a scale of 1 to 10 with 9 – 10 as excellent, 5-8 guaranteed and below 5 as wanting. From table 8 it is therefore noted that 41 out of 44 or 93.2% of the respondents rated security and safety of customers between 5-8 while 3 out of 44 or 6.8% put it at 9-10. This confirms that there is need to make policy that will make the industry safe and resilient to any externalities.

Table 8: Security and safety of customers of data and voice services

Response	Frequency	Percent
9-10	3	6.8
5-8	41	93.2
Below 5	0	0
Total	44	100

3.1.6 Distribution of Communication Infrastructure Services

Communications infrastructure is very important when determining the bandwidth available to handle the traffic and minimize on errors on connectivity. Because quality is informed by the available bandwidth for the services it was critical that respondents’ views are sought. In table 9, 59.1% of the respondents confirmed that the distribution of communication infrastructure Services is fair, 25% said the distribution is good. 15.9% confirmed the distribution is poor. Communication Infrastructure Services are critical for other telecommunication services’ penetration like voice and data and mobile money services. It is therefore very important for the regulatory regime to make policy to unlock the universal fund and accelerate infrastructural development to enhance tele-density and universality.

Table 9: Distribution of Communication Infrastructure Services

Response	Frequency	Percent
Excellent	0	0
Good	11	25
Fair	26	59.1
Poor	7	15.9
Total	44	100

3.1.7 Effectiveness of policies on equipment hire and sharing

To bridge the gap in availability of the telecommunication services, standards as well as policies are required to ensure compatibility. This will give customers quality products and services as well as helping organizations improve in service provision. The effectiveness of such policies was reported as inappropriate. From table 10, 54.5% of respondents confirmed policies are inappropriate, 25% said the policies were good while 20.5% noted policies were fair. With majority saying policies were inappropriate, it calls for either review of policy, capacity development or any deliberate move to create awareness among service providers. That will improve accessibility and penetration or universality and consequently impact on Performance in Telecommunication Companies.

Table 10: Effectiveness of policies on equipment hire and sharing

Response	Frequency	Percent
Excellent	0	0
Good	11	25
Fair	9	20.5
Inappropriate	24	54.5
Total	44	100

3.1.8 Existence of specific policy regulating data and voice services

This question aimed at assessing the level of awareness of respondents about specific policies key in telecommunications. From the survey in table 11 all respondents (100%) were aware of the existence of policy on data and voice services. It can also be affirmed that the regulator has managed to create awareness in policies governing data and voice service provision. Awareness is very important in compliance to industry policies, meeting set standards and therefore attaining the desired quality levels.

Table 11: Existence of specific policy regulating data and voice services

Response	Frequency	Percent
Yes	44	100
No	0	0
Not Sure	0	0
Total	44	100

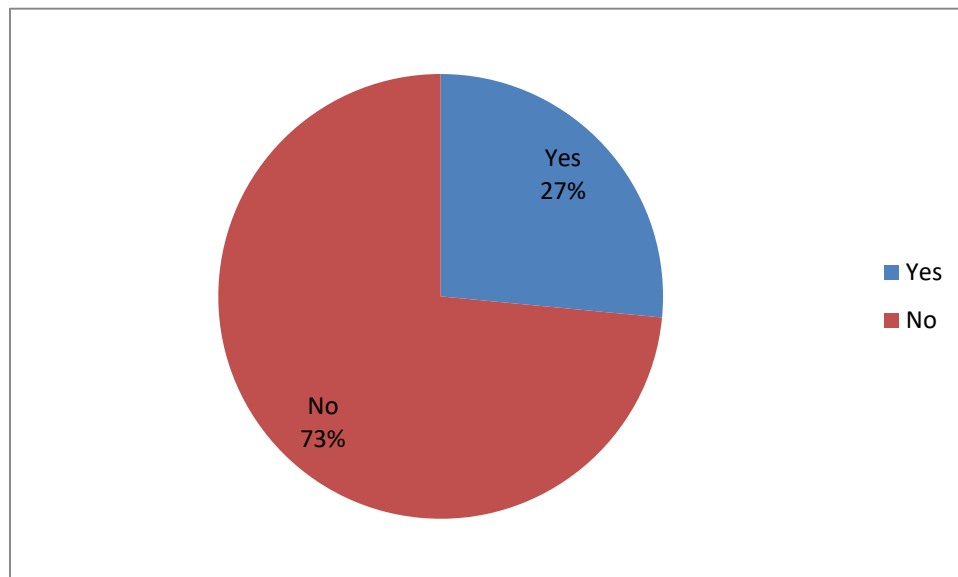
3.1.9 Regulatory Policies Assessment

Further using closed questions that required a “Yes” or “No” response to test quality the response was largely “NO”. This therefore indicates that most respondents have reservations on the set polices to guarantee quality service. From the respondents as shown in table 12, only 29% or showed that the policies in regard to quality were sufficient and adequate while 71% had reservations. A total of 11 questions addressing various aspects on quality were issued to the respondents and the feedback captured as indicated in the table 12 and percentage computed as indicated in the pie chart, figure 1.

Table 12: Regulatory Policies Assessment

Regulatory Policies Assessment	Yes	No
Are regulatory institutions charged with implementation and regulatory processes transparent and accessible?	13	31
Have the proposed regulations been assessed to identify that it is a necessary and effective means of achieving a legitimate policy goal?	10	34
Are regulations kept simple and unnecessary administrative burdens been eliminated?	11	33
Is regulatory enforcement and inspection effectively set for fighting corruption?	8	36
Is a telecommunications courier required to obtain the operating license from the regulator before offering the service?	13	31
Is licensing standardized factoring in the scale of service provision?	8	36
Do we have a service charter for specifying the timeframe for processing a service provision application from the regulator?	42	2
If yes, is it complied with?	3	41
Are there any sanctions for couriers that choose not to follow the model tariff?	3	41
Would you say the current bandwidth allocation to your company is adequate?	5	39
Is the bandwidth allocation relative to the fees charged to your company?	23	21
Total	140	388

Figure 1: Regulatory Policies Assessment



4. Conclusions

Effective policies are critical in any sector of the economy. The frequent repealing and reviewing of policies makes policies transitional and leaves devastating effects on the organizational performance and the economy. The transition nature of Kenya’s policies in telecommunication is not so good for the sector development. In most cases, they attract court battles, arbitration alternatives, regulatory capture and these leads to waste of resources and generally affect performance in telecommunication companies.

4.1 Influence of quality on performance in telecommunication companies in Kenya.

There is need to harmonize the regulations touching on quality. Quality has a direct impact on demand and consumption of the services provided by the telecommunications companies and it is therefore a measure of performance. High quality has a direct bearing on service provision. Dominance by a service provider affects quality and therefore performance. From the survey, majority respondents feel the present policies are not adequate to prevent money laundering because there is no clear regulator of the mobile money services in Kenya. The role oscillates between the central bank and the communications authority. There was less cross network transactions. Network infrastructure distribution is also poor meaning companies have not expanded their coverage to some parts of the country.

Poor quality in terms of services provided to consumers makes the uptake of telecommunication services costly and far from the reach of many. This works against the spirit of moving the country to gain from the digital economy prospects. It also lowers the digital quality of life.

5. Recommendations

In line with the conclusions, the following recommendations have been made:-

5.1 Management Recommendations

The transitional nature of policies in the sector was noted and they affect the performance of telecommunication companies in Kenya. Regulatory agencies should consider harmonizing various policies and adopt structured processes in policy formulation to come up with universally acceptable policies without necessitating litigation

battles, denying customers a wide range of services, affecting innovations which further improve efficiency, quality and enhance competition in the telecommunication sector as the country aspires to gain from the digital economy. The regulator must continually research for better industry regulatory practices for the highly changing sector to keep abreast with innovation trends and avoid regulatory capture.

5.2 Policy Recommendations

The regulator must operationalize and put in place transparent mechanisms to run the universal fund and accelerate universality. Surveys indicate the cost of building infrastructure is high and limit the availability of services in rural parts of the country making connectivity poor and therefore compromising quality. Telecommunication sector players should be encouraged to adopt arbitration efforts rather than the lengthy court battles that discourage investors in the sector and limit innovations that have continually improved telecommunication service provision and immensely contributed to the economic development of the country.

Lastly, a study should be carried out to ascertain the sustainability, succession, migration and prorogation of obsolete services adopted by telecommunication services with a desire for compatibility or universality assurances. This will cushion customers from any eventualities like the collapse of services or incompatibility of services as well as determine the country's e-readiness.

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