

**DETERMINANTS INFLUENCING GROWTH OF MOBILE TELEPHONY IN KENYA:
A CASE OF SAFARICOM LTD****Dr. Karanja Ngugi**

Lecturer, Jomo Kenyatta University of Agriculture and Technology, Kenya

Geoffrey Mutai

Telecommunications Specialist, Kenya

CITATION: Ngugi, K. & Mutai, G. (2014). Determinants influencing growth of mobile telephony in Kenya: A case of Safaricom LTD. *International Journal of Social Sciences and Entrepreneurship*, 1 (10), 218-230.

ABSTRACT

Globally the mobile telephony subscription stood at 6.8 billion by the end of 2012 with the Americas, Asia, Europe and Africa having 1.08 billion, 3.5 billion, 790 million and 545 million respectively. Locally, the mobile telephony industry in Kenya has grown rapidly in the past decade from a duopoly in the year 2003 to the current oligopoly with a total of 30.4 million subscribers at the end of first quarter, 2012/2013. The general objective of the study was to investigate the determinants that influence the growth of mobile telephony in Kenya. The study investigated how innovation, franchising, customer loyalty, training development and government policy has contributed to the growth of mobile telephony with a case of Safaricom Ltd. However, this rapid growth is asymmetrical amongst the four cellular operators with Safaricom commanding 63.2% of the total market share. In today's telecoms environment five factors namely: innovation, customer loyalty, franchising, training development and government policy play crucial roles in order to realise growth. The study adopted a survey research with the target population of 790 respondents. The key findings of the study shall be used to enhance further studies that concern the growth of mobile telephony in Kenya.

Key Words: *Growth, innovation, customer loyalty, franchising, training development, government policy, mobile telephony*

Introduction

Mobile telephony growth has been driven primarily by wireless technologies which allowed for faster and cheaper rollout of mobile networks (Zhen & Rossotto, 2009). Locally, in Kenya the enactment of the government regulatory policy facilitated the liberalization and privatization of the telecommunication industry in Kenya (Sewe, 2010). As a result, innovation and competition were encouraged to stimulate efficiency and growth of the mobile sector (RoK, 2010). The current oligopoly structure of the mobile operators portrays an asymmetrical market share regardless of an overall upward trend of growth in the mobile telephony which prompts a study to investigate the mobile growth determinants.

The mobile telephony is today the most dominant service in the world amongst all other Information and Communication Technology (ICT) services (Frempong, 2009). The International Telecommunication Union (ITU) indicated that by the end of 2012, there were 6.8 billion mobile subscribers in the world with the Americas, Asia, Europe and Africa having 1.08 billion, 3.5 billion, 790 million and 545 million respectively (ITU, 2012). Williams, Solomon and Pepper (2012), defined mobile telephony as the provision of telephone services to phones which may move around freely rather than stay fixed in one location. The mobile telephone networks are available to many people irrespective of their physical locations. Mobile telephony popularity in most African countries has been fuelled by the poor penetration of fixed line networks (Frempong, 2009). In Kenya, there are hundred times as many mobile phones as landlines and 60 percent of the population has mobile phone coverage (Aker & Mtibi, 2010). Data from CCK indicated that the total mobile telephony subscription stood at 30.4 million by the end of the first quarter 2012/13 compared to 7.5 million subscriptions in the year 2003 (CCK, 2013). However, it is only Safaricom Ltd which has recorded growth among the four mobile operators in Kenya (Manica & Vescovi, 2009). The enactment of the government regulatory policy facilitated the liberalization and privatization of the telecommunication industry in Kenya. As a result, innovation and competition were encouraged to stimulate efficiency and growth of the mobile sector (RoK, 2010). The current oligopoly structure of the mobile operators portrays an asymmetrical market share regardless of an overall upward trend of growth in the mobile telephony. This study therefore sought to investigate the influence of innovation, franchising, customer loyalty, training development and government policy on the growth of mobile telephony in Kenya. In today's telecoms environment, effective growth factors need to be carefully chosen in order to succeed.

Statement of the Problem

World Bank (2012) reported that the growth of the mobile industry in Kenya has been on an upward trend since the year 2000 with a contribution of 7.6% to the Gross Domestic Product (GDP) in the financial year 2011/2012. Although the growth of mobile telephony in Kenya is generally on a positive trend, most mobile operators are struggling to survive in the market with the exception of Safaricom Ltd which dominates with a market share of 63.2% (Manica & Vescovi, 2009). Previous studies revealed that a proper government policy creates an enabling environment to the development and growth of the ICT industry Sewe (2010) and innovation significantly impacts the growth of the mobile telephony (Frempong, 2009).

Moreover, Manica and Vescovi (2009) did a general study on mobile telephony in Kenya. Again, Sewe (2010) did a study on factors affecting the strategic growth of ICT in Kenya. Etzo and Collender (2010) did a study on the mobile phone revolution in Africa. According to the researcher's knowledge there are little previous studies which investigated the specific determinants that influence the growth of mobile telephony in Kenya. This study will seek to bridge this gap.

Research Objectives

The general objective of the study was to investigate the determinants influencing the growth of mobile telephony in Kenya with a case of Safaricom Ltd.

Specific Objectives

1. To establish the influence of innovation on the growth of mobile telephony in Kenya.
2. To assess the effects of customer loyalty on the growth of mobile telephony in Kenya.
3. To determine the influence of franchising on the growth of mobile telephony in Kenya.
4. To find out the influence of staff training development on the growth of mobile telephony in Kenya.
5. To establish the effects of government policy on the growth of mobile telephony in Kenya.

Literature Review

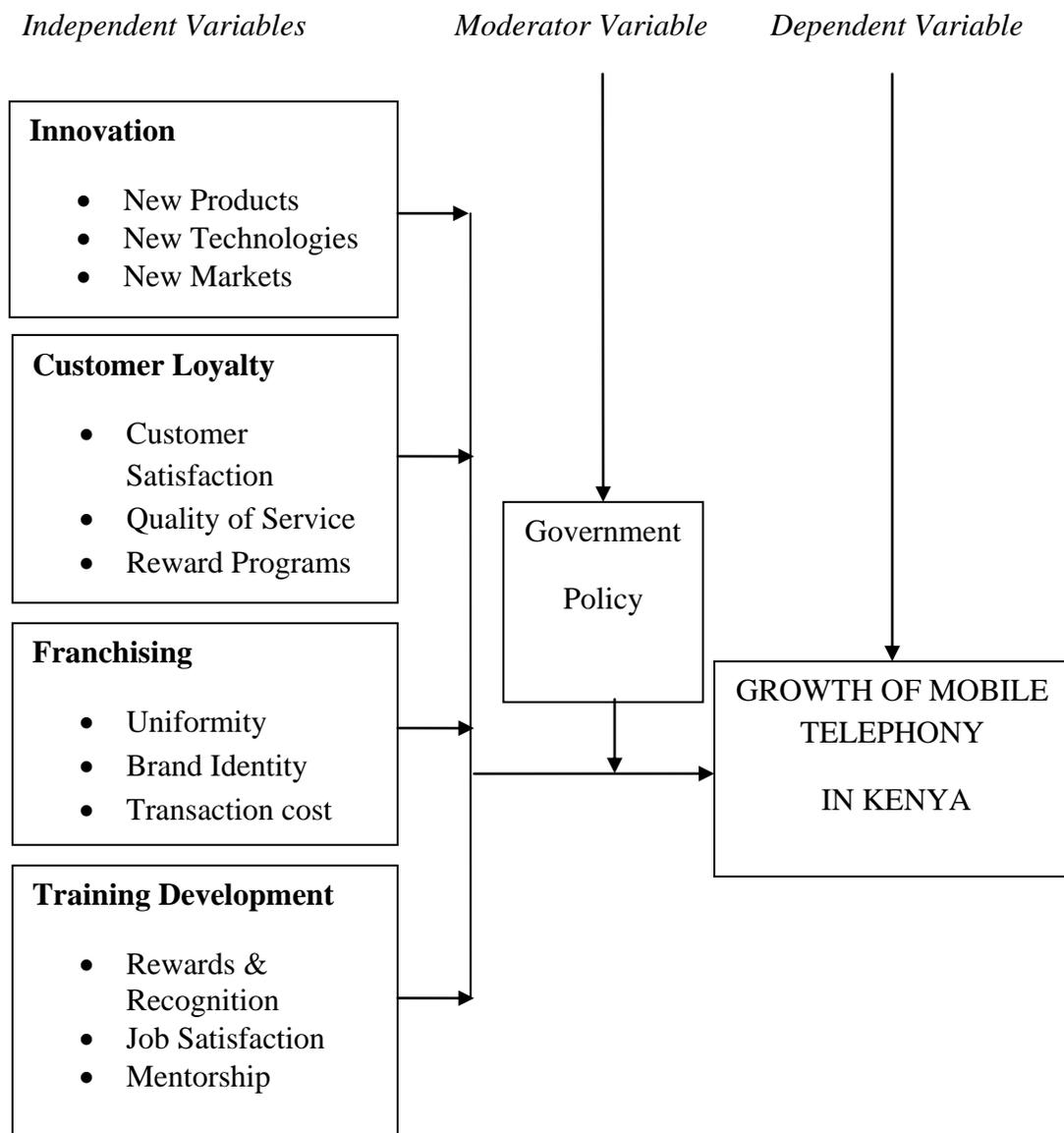
While there are many models which try to explain the reasons behind the growth of mobile telephony, this study however focus on a five factors i.e. innovation, customer loyalty, franchising, training development and government policy. The Schumpeterian theory on innovations argued that economic change revolves around innovation, entrepreneurial activities, and market power. In his study, Schumpeter (1934) identified innovation as the critical dimension of economic change. Innovation-originated market power could provide better results than the invisible hand and price competition. Schumpeter further stated that technological innovation often creates temporary monopolies, allowing abnormal profits that would soon be competed away by rivals and imitators to provide the incentive necessary for firms to develop new products and processes. Innovation phenomena must be at work in service firms (Gallouj, 1994).

On the other hand, the success of a business is based on loyal customers who have a bond with the business enterprise and this bond links the customer to the enterprise to such an extent that the customer develops a preference for the business enterprise (Hollensen, 2003). When true loyalty exists, customers will regularly conduct repeat purchase transactions with the business enterprise for the sole reason that customers have a strong preference for that business enterprise. Customer loyalty is not merely based on quality, price, physical facilities or satisfaction but is based more on customer feelings and perceptions about the business enterprise (Krell, 2006). The marketing maxim on customer loyalty is that it costs five times more to acquire a new customer than to retain an existing one (Gee et al., 2008).

Service providers adopt franchising in order to secure local distribution of their product with the main objective to achieve uniformity and reduced transaction cost without distortion of the brand identity (Dicke, 1992). Steven and Janet (2009) further noted that a distinguishing feature of the organizational form is that franchising typically occurs in businesses where there is a notable

service component that must be performed near customers. The result is that service-providing outlets must be replicated and dispersed geographically, creating a chain that offers uniformity in service provision. Furthermore, the study investigated training development as an important mobile telephony growth determinant which concurs with that of Monk and Ryding (2007) who believed that customer service quality is directly related to education and training provided effectively to employees. Moreover, the study extensively covered literature on government policy. It was observed that effective policy and regulation can help ensure market competition and intervention to address areas of market failure, where market mechanisms alone may be insufficient to achieve desired policy outcomes for example, in removing entry barriers which in the end contributes towards the growth of the sector.

Figure 1: Conceptual Framework Diagram



Research Design and Methodology

The study adopted a descriptive research survey design where self-administered questionnaires were distributed to a sample population of 80 respondents. A descriptive survey research was adopted because the study sought to obtain information that described existing phenomena by asking respondents about their perceptions, attitudes and values about the determinants influencing growth of mobile telephony in Kenya. A pilot study was conducted on 8 respondents to test the validity and reliability of the questionnaires. Normally, the pre-test sample is between 1% and 10% depending on the sample size (Mugenda & Mugenda, 2003). According to Cooper and Schindler (2003) reliability tests the stability, equivalence and internal consistency of an instrument. A Cronbach alpha, $\alpha < 0.5$ is unacceptable; $0.5 \leq \alpha < 0.6$ is poor and $0.6 \leq \alpha < 0.7$ is acceptable. While a coefficient of $0.7 \leq \alpha < 0.9$ is good and $\alpha \geq 0.9$ is excellent or high stake testing. So the higher the (α) coefficient the more reliable is the construct. In this study, Cronbach alpha was found to be above 0.6 for all the variables and therefore the construct was found to be acceptable. Validity is the extent to which a score truthfully represents a concept (Khalid et al., 2012). Again, multiple regression analysis was applied to test the strength of the study variables. Analysis of variance (ANOVA) was also used to test the overall significance of the model at 0.05, level of significance.

Results Analysis and Discussions

The study achieved a response rate of 72.5%. Nordin (2009) asserted that a response rate above 70% is adequate for satisfactory research findings.

Growth of mobile telephony vs. Innovation

The model results found out that innovation has positive significantly relation with the growth of mobile telephony in Kenya. It was deduced that reward and recognition of innovative employees has positive impact on their productivity which spurs growth. Equally, innovation of new products and services was found to be a key driver of mobile telephony growth. Moreover, the study found out that adoption of new technologies very greatly affects the growth of mobile telephony in Kenya. On the other hand, the developments of new markets, positively affects the growth of mobile telephony to a great extent. This is in agreement with the past study by Etzo and Collender (2010) that adoption of new technologies catalyse growth of mobile telephony. The findings reflected previous studies by Hult, Snow and Kandemir (2003) that mobile telephony service providers should invest in the welfare of innovative employees so as to foster faster growth of their businesses. The findings reflected those of Gruber and Koutroumpis (2010) that innovation in aggressive new marketing strategies and promotions also stimulates growth of service industries

Growth of mobile telephony vs. Customer Loyalty

The study revealed that there is a strong positive link between growth of mobile telephony and customer loyalty in Kenya. The study specifically found out that customer satisfaction, loyalty reward programs, quality of service and brand image contributed to customer loyalty which in turn influenced the growth of mobile telephony. The findings were in agreement with a previous study by Hughes and Lonie (2007) that the most important contribution to mobile growth in Kenya is due to customers who are very greatly satisfied with the offered services. Kotler and Armstrong (2006) found out that quality of service which is a factor of customer loyalty is the most important pillar to winning the customers' loyalty that subsequently drives the net sales and firm growth. The findings reiterated those of Boora and Singh (2011) that a good brand image helps to create loyal customers and in turn achieve growth.

Growth of mobile telephony vs. Franchising

The findings of the study indicated that franchising has a strong positive impact on the growth of mobile telephony in Kenya. It was revealed that dealers offer uniform services across the regions while promoting the brand identity of the mobile operators. Moreover, it was found out that franchising reduces the transaction costs and hence boosting the growth of the mobile telephony sector. However, breaking of cultural barriers as a factor of franchising has modest influence on the growth of mobile telephony in Kenya. The result is that service-providing outlets must be replicated and dispersed geographically, creating a chain that offers uniformity in service provision (Steven & Janet, 2009). The findings concur with those of Dicke (1992) and Bradach (1997) who found out that promotion of brand identity spurs growth of service industries. Moreover, the findings are in line with those of Boyle (1999) that franchised businesses achieve lower transaction cost than unfranchised and therefore catalyse the growth of service firms.

Growth of mobile telephony vs. Training Development

According to the findings of the study, training development significantly influence the growth of mobile telephony in Kenya. The equipping of personnel with ICT knowledge and skills is crucial to growth of the mobile telephony. Among the key factors that are driven by an effective training development strategy include mentorship programs, skill reward and recognition, job satisfaction and talent retention which therefore result in the growth of mobile telephony. Monk and Ryding (2007) found out that customer service quality is directly related to education and training provided effectively to employees. Rewards and recognition are two of many ways to display acceptance in the workplace because an employee that is accepted in the workplace is free to creatively engage and help in advancing the organization's mission and vision (Donaldson & Bond, 2004). The findings of the study concurred with those of Kotey and Folker (2007) who found out that an increase in adoption of formal, structured, and development-oriented training has an effect the firm size.

Growth of mobile telephony vs. Government Policy

The study findings showed a strong positive relationship between government policy and growth of mobile telephony in Kenya. The government regulatory policy is a moderator variable. From the study findings, an effective government policy creates an enabling environment by easing spectrum licensing, encouraging effective competition, pricing control and removal of industry entry barriers. The results of the study conformed to the national ICT policy paper, that there is need for a comprehensive policy, legal and regulatory framework to create an enabling environment to support ICT innovation and investment (RoK, 2010). In his study Wilson (2007) also found out that regulators may be expected to remove barriers to entry, monitor tariffs for instance, to identify predatory pricing strategies; manage interconnection settlements; apply numbering policies and regulate radio spectrum among others in order to spur growth. The findings also reflected those of Jessop (1997) who observed that the growth of telecommunication sector relies heavily on curing a market failure by regulatory intervention.

Overall effect of study variables

The study findings revealed that innovation, customer loyalty, franchising, training development and government policy have great influence on the growth of mobile telephony in Kenya. The overall linear regression model had a strong correlation coefficient(R) of 0.993 and a coefficient of determination (R^2) of 0.987. The ANOVA test found out that all the variables were significant to the study at a confidence level of 95%.

Table 1: Overall Model Summary

Model	R	R Square	Adjusted R Square
1	0.993	0.987	0.986

A correlation greater than 0.8 is generally described as strong, whereas a correlation less than 0.5 are generally described as weak. A correlation coefficient greater or equal to 0.6 will be accepted (George & Mallery, 2003). Therefore, the study variables displayed a strong positive correlation. Analysis of Variance (ANOVA) was used to test the overall significance of the model variations at 0.05, level of significance, as shown in Table 2. The F statistic was found to be 10.773, which is greater than 1 and p-value tending to zero i.e. 0.000^a, which is less than 0.05, level of significance. Thus the linear regression model, $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5$ was found to be significant.

Table 2: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.750	4	0.937	10.773	.000 ^a
	Residual	4.612	53	0.087		
	Total	8.361	57			

a. Predictors: (Constant), Innovation, Customer Loyalty, Franchising, Training Development and Government Policy

b. Dependent Variable: Growth of Mobile Telephony in Kenya

The t-value and p-value coefficients were also used to test the significance of the model. The results were shown in Table 3 below.

Table 3: T-value and p-value coefficients

Model		Unstandardized Coefficients(b)	t	p-value
1	(Constant)	0.319	9.756	
	Innovation	0.164	11.304	0.043
	Customer Loyalty	0.144	13.986	0.038
	Franchising	0.199	17.510	0.022
	Training Development	0.158	14.679	0.041
	Government Policy	0.168	18.113	0.019

Dependent Variable: Growth of mobile telephony in Kenya.

The researcher performed a multiple regression analysis so as to determine the relationship between the growth of mobile telephony and the five variables. The linear regression model ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5$) yielded an overall growth equation,

$$Y = 0.319 + 0.614X_1 + 0.144X_2 + 0.199X_3 + 0.158X_4 + 0.168X_5$$

As per the resultant regression equation, holding all the five variables constant at zero would yield a growth rate of 0.319 in Kenya. This is an indication that all the investigated independent variables have significant overall effect on the growth of mobile telephony when adopted within the mobile service provision sector. Innovation displayed the greatest effect while franchising, training development and government policy contributed modestly whereas customer loyalty had the least contribution. A unit increase in innovation will have a 0.614 increase in the growth of

mobile telephony in Kenya. Likewise, a unit increase in customer loyalty, franchising, training development, government policy will have a 0.144, 0.199, 0.158 and 0.168 increase in the growth of mobile telephony respectively.

Conclusions

The study established that innovation, customer loyalty, franchising, training development and government policy all positively affect the growth of mobile telephony in Kenya. With regard to innovation, the aspect of adoption of new technologies and development of new products influence the growth of mobile telephony to a very great extent, whereas creation of new markets and reward of innovative employees moderately affect the growth of mobile telephony. Additionally, the study concluded that customer satisfaction, loyalty reward programs, quality of service and brand image as dimensions of customer loyalty also affect the growth of mobile telephony. Loyal customers are core business assets. Moreover, the study concluded that franchising plays a critical role in the growth of mobile telephony in Kenya because it spurs growth through uniformity of services offered by dealers, promotion of brand identity, and reduction of transaction cost and addressing of resource scarcity. Again, the study concluded that training development positively affects the growth of mobile telephony through mentorship programs, skill reward and recognition, and job satisfaction enhancement. Moreover, the study established that government policy greatly influence the growth of mobile telephony by easing spectrum licensing, encouragement of effective competition, pricing control and removal of industry entry barriers.

Recommendations

The study made the following recommendations to all the stakeholders in the mobile telephony industry which included the policy makers, mobile operators, investors and academia:

- 1) The mobile operators in Kenya should embrace innovation through investment in new technologies, development of new products, creation of new markets and rewarding of innovative employees in order to stimulate their growth.
- 2) The mobile operators should build a strong and vast base of loyal customers through adoption of loyalty reward programs, customer satisfaction enhancement, offering of good quality services and promotion of their brand image so as to control a considerate proportion of market share. It is notable that mobile operators with loyal customers have recorded growth in Kenya.
- 3) The mobile operators also should adopt franchising as a mode of expansion for their businesses so as to ensure uniformity of services offered by dealers, promote their brand identity, reduce the transaction cost and address the scarcity of resources.
- 4) The mobile operators should invest in training development of their work force through mentorship programs, online and instructor led trainings. They should also consider the skilled employees for reward and recognition. Training development boosts job satisfaction

and it enhances talent retention. A well trained work force is productive and thus influences the growth of the mobile telephony firms.

- 5) The telecommunication policy makers and government regulators should encourage effective competition, ease spectrum licensing, control interconnection pricing and remove unnecessary industry entry barriers so as create an enabling environment for the mobile telephony sector to thrive and grow. An effective government policy sets up a fair play ground and ensures that there is a market intervention to address areas of market failure, where market mechanisms alone may be insufficient to achieve desired policy outcomes.
- 6) It is recommended that future research can be extended to cover other determinants of mobile telephony growth that were not covered in this study. Again, future studies can be carried out to cover the East African region as the community moves towards integration into one economic block with the knowledge that mobile telephony plays a vital role in socio-economic development regardless of geographical boundaries.

References

- Aker, J. & Mbiti, I. (2010). Mobile phones and economic development in Africa. *The Journal of Economic Perspectives*, Vol.24, No.3, pp. 207-232.
- Boora, K. & Singh, H. (2011). Customer loyalty and its antecedents: A conceptual framework. *Asia Pacific Journal of Research in Business Marketing*, 2(1), 151-164.
- Boyer, R. (1990). *The regulation school: A critical introduction*. New York: Columbia University Press.
- Bradach, J. L. (1997). Using the plural form in the management of restaurant chains. *Administrative Science Quarterly*, Vol. 42, No.4, pp. 276-303.
- Communication Commission of Kenya, CCK. (2013). Sector statistics report Q1 2012/2013. Retrieved from <http://www.cck.go.ke/resc/statcs.html>. [Accessed: June 10, 2013].
- Cooper, D. R. & Schindler, P. S. (2003). *Business research methods* (8th Ed.), New York: McGraw-Hill.
- Dicke, T.S. (1992). *Franchising in America: The development of a business method, 1840–1980*. Chapel Hill, NC: University of North Carolina Press.
- Donaldson, E. J. & Bond, F. W. (2004). The relative importance of psychological acceptance and emotional intelligence to workplace well-being. *British Journal of Guidance & Counselling*, 32(2), 187-203.
- Etzo, S. & Collender, G. (2010). The mobile phone revolution in Africa: rhetoric or reality? *African affairs*, 109 (437), 659-668. Doi:10.1093/afraf/adq045.
- Frempong, G. (2009). Mobile telephone opportunities: The case of micro- and small enterprises in Ghana. *Emerald Group Publishing Limited*, Vol. 11, No. 2, pp. 80-82.

- Gallouj, F. (1994). Economics of innovation in services: Editions L'Harmattan, Logique Économique, Paris.
- Gee, R.C. & Nicholson, G. M. (2008). Understanding and profitably managing customer loyalty. *Journal Marketing Intelligence, Plan*, 26 (24): 359-374.
- George, D. & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference*. (4th Ed.). Boston: Alyn and Bacon.
- Gruber, H. & Koutroumpis, P. (2010). Economic policy: *Mobile telecommunications and the impact on economic development* (52nd Economic Policy Panel). London, UK: CES Press.
- Hughes, N. & Lonie, S. (2007). M-PESA, Mobile money for the "Unbanked": Turning cell-phones into 24-hour tellers in Kenya. *MIT Press Journal: Innovations* Vol. 2 No. (1-2), pp. 63-81.
- Hult, G. M., Snow, C. C. & Kandemir, D. (2003). The role of entrepreneurship in building cultural competitiveness in different 548 Kayhan, Tajeddiru, Myfanwy Trueman and Gretchen Larsen Organisational Types. *Journal of Management*, Vol. 29, No. 3, pp. 401.
- Hollensen, F. (2003). *Marketing management, a relationship approach*, London: Pearson Education Limited.
- International Telecommunications Union, ITU. (2012). *Transmission systems, media digital systems and networks*. Retrieved from <http://www.itu.int/standardization.html>. [Accessed: Aug 15, 2013].
- Jessop, B. (1997). Survey article: the regulation approach. *Journal of Political Philosophy*, 5(3), 287-326.
- Khalid, M., Rehman, C. & Ashraf, M. (2012). Exploring the link between Kirkpatrick (KP) and context, input, process and product (CIPP) training evaluation models, and its effect on training evaluation in public organizations of Pakistan. *African Journal of Business Management*, 6(1), 274-279.
- Kotey, B. & Folker, C. (2007). Employee learning in SMEs: Effect of size and firm type - family and non-family, *Journal of Small Business Management*, 45(2), 214-238.
- Kotler, P. Armstrong, G. (2006). *Principles of marketing*. New Jersey: Pearson-Education.
- Krell, E. (2006). Branding together. *HR Magazine*, October, 2006. 51 (10): 33-40.
- Manica, L. & Vescovi, M. (2009). Mobile telephony in Kenya; *Is it making the life better?* Retrieved from http://www.it46.se/projects/nts/ICT4SD_manica_vescovi.pdf.

- Monk, D. & Ryding, D. (2007). Service quality and training. Retrieved from <http://www.emeraldinsight.com>.
- Mugenda, O.M. & Mugenda, A. G. (2003). Research methods: *Quantitative & qualitative approaches*. Nairobi, Kenya: Acts Press.
- Nordin, N. (2009). Consumers' attitude towards counterfeit products in Malaysia. Faculty of Business and Accountancy, University of Malaysia, MBA Thesis.
- Republic of Kenya, ROK. (2010). *Ministry of Information and Communication*. Nairobi: Government Printer.
- Schumpeter, J. A. (1934). The theory of economic development. Cambridge, MA: Harvard University Press.
- Sewe, F. (2010). Factors affecting the strategic growth of information communication technology (ICT) in Kenya: A case study of ICT providers in Kenya. Available at SSRN 2101171.
- Steven, C. M. & Janet, B. E. (2009). A strategic look at the organizational form of franchising. Vol.1 Issue: 26, pp.193 – 220.
- Williams, C., Solomon, G. & Pepper, R. (2012). What is the impact of mobile telephony on economic growth: *A report for the GSMA*. Retrieved from <http://www.gsma.com/publicpolicy/wp-content/uploads/2012/11/gsma-deloitte-impact-mobile-telephony-economic-growth.pdf>.
- Wilson, J. (2007). Digital opportunities in Pakistan. Input for the DOF 2006, OECD, Geneva.
- World Bank, WB. (2012). Overview of information and communications for development 2012: *Maximizing mobile*. Washington, DC: Creative Commons.
- Zhen, C. Q. & Rossotto, C. M. (2009). Economic impacts of broadband, in information and communications for development: *Extending reach and increasing impact*. World Bank, Washington D.C., 35-50.