

# Moderating Effect of Government Policies on the Relationship between Mobile Technology Services and Performance of Deposit-Taking Saccos in Kenya

Dr. David Muchangi Mugo<sup>1</sup>, Dr. Stephen Muathe<sup>2</sup>, Dr. Stephen Titus Waithaka<sup>3</sup>

<sup>1</sup>School of Pure and Applied Sciences, University of Embu, Kenya

<sup>3</sup>School of Engineering and Technology, Kenyatta University

<sup>2</sup>School of Business, Kenyatta University, Kenya

Email: davemugo2005@gmail.com

**Abstract :** *The study sought to determine the moderating effect of government policies on the relationship between mobile technology services and performance of Deposit-Taking Savings and Credit Cooperative Societies (SACCOs) in Kenya. Descriptive and explanatory research designs were adopted based on a sample of 86 Deposit-Taking SACCOs. A structured questionnaire administered to two managers in each SACCO was used for data collection. The study found that government policies positively moderates the relationship between mobile technology services and performance of Deposit-Taking SACCOs implying that appropriate government policies that are favourable for the Deposit-Taking SACCOs should be formulated.*

**Keywords:** Deposit-Taking SACCO, Mobile Technology Services, Government Policies

## I. Introduction

The savings and credit cooperative societies (SACCO) subsector in Kenya comprises of Deposit-Taking and non-Deposit-Taking SACCOs. Deposit-Taking SACCOs are licensed, supervised and regulated by SACCO Societies Regulatory Authority (SASRA) under the SACCO Societies Act of 2008 (Mumanyi, 2014). Deposit-Taking SACCOs unlike non Deposit-Taking SACCOs offer front office services activities (FOSA) which allow them to provide simple banking services to their members/customers (such as taking deposits, payment services, automated teller machines and other quasi banking services) thus improving their working capital.

Kenya's Vision 2030 under the economic pillar requires a vibrant and a stable financial system to mobilize savings, and to allocate resources more efficiently in the economy (Government of Kenya, 2013). Deposit-Taking SACCOs are expected to play a key role towards the realization of this vision especially by connecting people who have been financially excluded by major banks to financial services. Given that only about 19 percent of Kenyans have access to services offered by commercial banks, Deposit-Taking SACCOs are expected to be vital towards

enhancing the reach and access to financial services particularly for citizens living in rural areas (Olando, Mbewa & Jagongo, 2012).

Despite their role in the economy, Deposit-Taking SACCOs continue to face a number of challenges. They face stiff competition for membership from other deposit taking institutions particularly commercial banks (Matumo, Maina & Njoroge, 2013). They also experience efficiency challenges characterized by poor information delivery channels and high operational costs due to inadequate information and communication technologies as noted by Mugambi, Njeru, Memba and Ondabu (2015). In addition, they also face high demands for loans which they are unable to meet due to liquidity shortages and given that they cannot seek credit from the Central Bank of Kenya (CBK) like other commercial banks (Mugambi *et al.*, 2015). This compromises their profitability as much of SACCOs' profits is generated from interests charged on disbursed loans (Mugambi *et al.*, 2015).

Challenges faced by SACCOs have necessitated them to come up with innovative ways aimed at ensuring their sustainability while enhancing their performance. One of these innovative ways has been adoption and utilization of mobile technology services including mobile banking, mobile web services, mobile communication and Sacolink debit card services. Although various scholars have asserted that mobile technology services have the potential to cause business performance outcomes including organizational efficiency, increased number of customers, service quality in business, competitive advantage, cost savings, increased productivity, increased knowledge sharing, employee satisfaction, increased profitability, increased amount of data processing and operational performance (Kagan, Acharya, Rao & Kodepaka, 2005; Zhang & Mao, 2008; Abadi, Kabiry & Forghani, 2013; Aboelmaged & Gebba, 2013; Maina & Gekara, 2014; Stoica *et al.*, 2015), these benefits are yet to be confirmed in studies covering Deposit-Taking SACCOs. Additionally, the role of government policies in the utilization of mobile technology services in the Deposit-Taking SACCOs has not been previously studied.

### 1.1 Role of Government Policies

Government participation in ensuring focused telecommunication industry is visible in many countries. Obaji and Olugu (2014) argued that government policies were critical towards encouraging entrepreneurial undertakings by organizations including the utilization of new technologies. They further indicated that government policies determined the general entrepreneurial success of any nation underscoring the role of government policies towards adoption and utilization of new technologies. For instance, through appropriate government policies enacted by Chinese Government, China has been experiencing rapid development of high technology businesses (Cullen, Calitz & Chandler, 2014). Government policies towards development of technology-oriented businesses has also resulted into the success of Brazilian entrepreneurship movement as indicated by the emerging high technology oriented organizations (Etzkowitz, 2002).

In the financial sector, government policies guide against money laundering, fraud and security risks posed by electronic banking and mobile banking services (Aduda & Kingoo, 2012). In Kenya, regulatory authorities like Central Bank of Kenya are charged with coming up with these policies. Communication Authority of Kenya also develops policies on telecommunication sector to guide the sector. These government policies can have an effect on the way mobile technology services are used within organizations. Government of Kenya (2014) for instance is actively encouraging growth of ICT sector and adoption of ICT services through national initiatives such as Kenya's Vision 2030, ICT Master Plan and the recent deployment of nationwide fiber-optic network infrastructure which directly or indirectly influence the utilization of mobile technology services within organizations and across various sectors of the economy.

Harash, Al-Tamimi and Al-Timimi (2014) indicated that based on political policies, governments regularly change laws necessitating financial institutions to respond to changes in the legal frameworks. In the case of Kenyan SACCO sector, the government came up with policies which were meant to provide minimum operational regulations and prudential standards required in the sector (Otieno *et al.*, 2013). According to the policies, SACCOs were supposed to benefit by having streamlined accounting processes, budgets and budgetary control systems, procedures in procurement and disposal of assets, investment policy and external borrowing policy. SASRA (2012) has posited that with proper government interventions, SACCOs are likely to perform much better and with a lot of discipline. This follows the fact that regulation enhances financial performance of cooperatives that would operate in a non-prudent

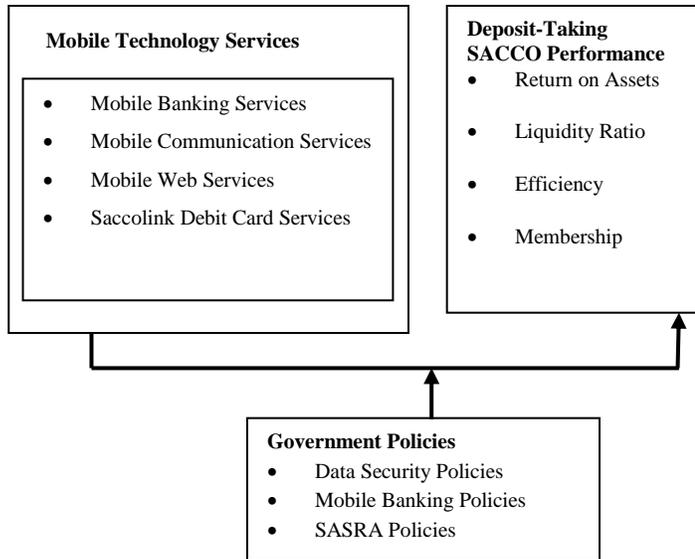
way without regulation, a position supported also by Akinwumi (2006).

In their study, Otieno *et al.* (2013) found that there was a positive but weak significant relationship between the level of financial performance of Savings and Credit Cooperatives Societies in Kisii, Kenya and the government regulations. Borges, Hoppen and Luce (2009) also indicated that government policies directly affected performance of companies. Harash *et al.* (2014) found that government policies directly impacted on the competitiveness of SMEs. Further, they noted that profitability of SMEs in Iraq was a function of prevailing government policies. Harash *et al.* (2014) also pointed out that governments in various countries create the rules and frameworks which may hinder or catalyze the performance of organizations based on their nature and scope. Nguyen, Alam, Perry and Prajogo (2009) additionally noted that whether in developed or developing countries, favourable government policies that provide support are critical for organizational performance.

Ngugi and Mutai (2014) found that government policies play an important role in the growth of mobile telephony. They noted that an effective government policy creates an enabling environment for the growth of mobile telephony by encouraging effective competition, pricing control, easing spectrum licensing and removal of industry entry barriers. The important role played by government policies has also been confirmed in a study on evaluating factors affecting broadband readiness in Kenya conducted by Mugeni, Wanyembi and Wafula (2012). Nevertheless, Muthure, Ofafa, Muathe and Muli (2013) found government regulations to be insignificant on m-payment systems. Given the contradiction, it was found necessary to investigate whether government policies had a moderating effect on the relationship between mobile technology services and performance of Deposit-Taking SACCOs in Kenya.

## II. Methodology

This study adopted positivism philosophy as it aimed at testing hypotheses derived from a predetermined conceptual framework. The conceptual framework is shown below:



**Figure 1: Conceptual Framework**

Descriptive and explanatory research designs were adopted using quantitative approach to data collection, analysis and reporting. Using simple random sampling, the study was based on a sample of 86 Deposit-Taking SACCOs drawn from a target population of 110 Deposit-Taking SACCOs that were licensed by SACCO Societies Regulatory Authority as at 31<sup>st</sup> December 2011. A structured questionnaire administered to two managers (from information technology and finance departments) in each Deposit-Taking SACCO was used to collect primary data.

To analyze the moderating effect of government policies on the relationship between mobile technology services (independent variable) and performance of SACCOs (dependent variable), the independent variable was interacted with the moderating variable (government policies) in line with the recommendation by Aiken and West (1991) as shown in the model below:

$$Y = \beta_0 + \beta_1 X_i + \beta_2 P + \beta_3 X_i P + \epsilon$$

Where,

Y = Composite index representing performance of Deposit-Taking SACCOs

P = Government Policies

$\beta_0$  = Constant term

$X_i$  = Composite index representing Mobile Technology Services

$\beta_1$  = Coefficient of the independent variable (Mobile Technology Services)

$\beta_2$  = Coefficient measuring the direct effect of government policies on performance of SACCOs

$\beta_3$  = Coefficient measuring the moderating effect of government policies on the relationship between mobile technology services and performance of SACCOs

To run the regression model, arithmetic mean was used to obtain composite indices for performance of Deposit-Taking SACCOs, government policies and mobile technology services. In the model above, the coefficient  $\beta_3$  was used to indicate the effect of the moderating variable (government policies) on the relationship between mobile technology services and performance of SACCOs. If  $\beta_3$  was statistically different from zero, it was concluded that there is a significant moderation effect of government policies on the relationship between mobile technology services and performance of Deposit-Taking SACCOs.

### III. Results

From the regression model, the value of adjusted  $R^2$  was 0.577 which implied that 57.7 percent of the variability in the dependent variable was explained by the predictor variables. Thus, the remaining 42.3% was due to other extraneous factors that were not factored in this study. The overall regression model was also checked for significance using F-Statistic.  $F_{(3,64)}$  statistic was 31.435 with a p-value of 0.000 implying that the overall model was significant in making inferences on the effect of moderating variable and other predictor variables on the dependent variable. The table below shows the regression coefficients obtained after running the regression model:

**Table 1: Regression Coefficients**

Variable	Coefficient	t	Sig.
(Constant)	.492	.554	.581
Mobile Technology Services ( $X_i$ )	1.179	4.339	.000
Government Policies (P)	.760	2.634	.011
Interaction Variable ( $X_i P$ )	.192	2.308	.024

The results of the regression model shown in Table 1 can be summarized using the following estimated equation:

$$Y = 0.492 + 1.179X_i + 0.760P + 0.192X_i P$$

From the regression analysis results shown in Table 1, the moderating variable (government policies) when interacted with independent variable (mobile technology services) had a coefficient of 0.192 with a p-value 0.024. As the p-value of the coefficient was less than the significance value (0.05), the null hypothesis was rejected. It was therefore concluded that there

existed a positive statistically significant moderating effect of government policies on the relationship between mobile technology services and performance of Deposit-Taking SACCOs in Kenya.

#### IV. Conclusion

The study concluded that government policies moderated significantly the relationship between mobile technology services and performance of Deposit-Taking SACCOs in Kenya. Therefore, the Kenyan Government should be at the helm of encouraging mobile technology use through continuous formulation and review of its policies on data security through Communications Authority of Kenya, mobile banking policies through the Central Bank of Kenya and Deposit-Taking SACCOs regulations through the SACCO Societies Regulatory Authority.

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#### References

- i. Abadi, H. R., Kabiry, N. & Forghani, M. H. (2013). Factors affecting Isfahanian mobile banking adoption based on the Technology Acceptance Model. *International Journal of Academic Research in Business and Social Sciences*, 3(5), 611-623
- ii. Aboelmaged, M. G. & Gebba, T. R. (2013). Mobile Banking Adoption: An Examination of Technology Acceptance Model and Theory of Planned Behavior. *International Journal of Business Research and Development*, 2(1), 35-50
- iii. Aduda, J. & Kingoo, N. (2012). The relationship between electronic banking and financial performance among Commercial Banks in Kenya. *Journal of Finance and Investment Analysis*, 1(3), 99-118
- iv. Aiken, L. S. & West, S. G. (1991). *Multiple Regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- v. Akinwumi, J. (2006). Road map to re-engineering Cooperatives in Nigeria; A paper presented at the South West Cooperative Leaders Conference, organized by cooperative federation of Nigeria South west zone at Obisesan Hall, Ibadan
- vi. Borges, M., Hoppen, N. & Luce, F.B. (2009). Information technology impact on market orientation in e-business. *Journal of business research*, 62(9), 883-890.
- vii. Cullen, M., Calitz, A. & Chandler, L. (2014). Business incubation in the Eastern Cape: a case study. *International Journal for Innovation Education and Research*, 2(5), 76-89.
- viii. Etzkowitz, H. (2002). Incubation of incubators: innovation as a Triple Helix of University-industry-government networks. *Science and Public Policy*, 29(2), 115-128.
- ix. Government of Kenya (2013). Kenya Vision 2030. Available online: [Http://www.theredddesk.org/sites/default/files/vision\\_2030\\_brochure\\_july\\_2007.pdf](http://www.theredddesk.org/sites/default/files/vision_2030_brochure_july_2007.pdf); Last accessed: 5th April 2014
- x. Harash, E., Al-Tamimi, K. & Al-Timimi, S. (2014). The relationship between government policy and financial Performance: A study on the SMEs in Iraq. *China-USA Business Review*, 13(4), 290-295
- xi. Kagan, Acharya, Rao & Kodepaka (2005). Does Internet Banking Affect the Performance of Community Banks? Presented at the American Agricultural Economics Association Annual Meeting, Providence, Rhode Island, July 24-27, 2005
- xii. Maina, J. M. & Gekara, M. G. (2014). Effects of mobile money transfer services on small and medium enterprises financial performance: a case of Nairobi County in Kenya. *International Scientific Research Journal in Business and Management*, 2(2), 15-27
- xiii. Matumo, N. G., Maina, K. E. & Njoroge, N. N. (2013). The impact of front office Sacco activity on Sacco performance in Kenya; A case of study of Meru South and Maara district in Tharaka Nithi County in Kenya. *Global Advanced Research Journal of Management and Business Studies*, 2(5), 285-290
- xiv. Mugeni, G. B., Wanyembi, G. W. & Wafula, J. M. (2012). Evaluating Factors Affecting Broadband Readiness in Kenya: A Pilot Study. *International Journal of Information and Communication Technology Research*, 2(6), 491-498
- xv. Mumanyi, E. A. L. (2014). Challenges and opportunities facing SACCOs in the current devolved system of government of Kenya: A case study of Mombasa County. *International Journal of Social Sciences and Entrepreneurship*, 1(9), 288-314.
- xvi. Muthure, M. P., Ofafa, G. A., Muathe, S.M.A. & Muli, J. (2013). An empirical investigation on the relationship between technological infrastructure and government regulations on effective operations of m-payment systems in Kenya. *International Journal of Arts and Commerce*, 2(1), 186-196
- xvii. 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.
- xviii. Nguyen, T. H., Alam, Q., Perry, M., & Prajogo, D. (2009). The entrepreneurial role of the state and SME growth in Vietnam. *Journal of Administration & Governance*, 4(1), 60-71.
- xix. Obaji, N. O. & Olugu, M. U. (2014). The role of government policy in entrepreneurship development. *Science Journal of Business and Management*, 2(4), 109-115
- xx. Olando, C. O., Mbewa, M. O. & Jagongo, A. (2012). Financial Practice as a Determinant of Growth of Savings and Credit Co-Operative Societies' Wealth. *International Journal of Business and Social Science*, 3(24), 204-219
- xxi. Otieno, S., Okengo, B. O., Ojera, P. & Mamati, F. (2013). An Assessment of Effect of Government Financial Regulations on Financial Performance in Savings and Credit Cooperative Societies (SACCOs): A study of SACCOs in Kisii Central, Kenya. *International Journal of Business and Social Science*, 4(3), 196-207
- xxii. SASRA (2012). SACCO Supervision Report 2012. Available online: <http://www.sasra.go.ke>. Last accessed: 20<sup>th</sup> September 2015.
- xxiii. Stoica, O., Mehdian, S. & Sargu, A. (2015). The Impact of internet banking on the performance of Romanian Banks: DEA and PCA approach. *Procedia Economics and Finance*, 20, 610– 622
- xxiv. Zhang, J. & Mao, E. (2008). Understanding the Acceptance of Mobile SMS Advertising among Young Chinese Consumers. *Psychology & Marketing*, 25(8), 787–805.