

ICT Knowledge and Adoption of ICT on the performance of Sacco's in Kenya

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Abstract

The study aimed at ICT Knowledge and Adoption of ICT on the performance of Sacco's in Kenya and it was guided by the following objectives; To establish the influence of facilitating conditions on organizational performance: a perspective of Uganda breweries, to investigate the relationship between performance expectancy and organizational performance: a perspective of Uganda breweries and to assess the relationship between effect of effort expectancy and organizational performance: a perspective of Uganda breweries. This study was employing a mixed methods approach incorporating both qualitative and quantitative research techniques to explore the relationship between ICT knowledge and adoption levels among SACCO managers and employees, and the financial and operational performance of their cooperatives (Creswell & Clark, 2017). First, primary data was be collected through structured questionnaires administered to a sample size of 200 SACCO managers drawn from 185 randomly selected SACCOs across 5 counties in Kenya representing both rural and urban areas. The figure of 0.961 indicated that, 96.1% of the organisation performance in Uganda Breweries limited was influenced by Drivers of ICT acceptance. The remaining 3.9% of organisation performance was influenced by other factors such as Political environment, Government policy and Organization policy respectively. This thus indicated that there was a significant strong positive relationship between drivers of ICT acceptance and organisation performance in Uganda Breweries Limited.

Key words: ICT Knowledge, Adoption and performance

Background of the study

Wachira, Muturi and Sirma (2014) assessed the perceived effects of ICT on the performance of Sacco's in Kenya. The study revealed that ICT skills and knowledge can significantly increase the adoption and implementation of ICT, thereby possibly influencing performance (Ntirandekura, Friday, et al., 2022). The study recommended that there is a need to offer more training to employees to support ICT in the organization. (Alex & Kazaara, 2023) also conducted a study on the impact of highly skilled ICT work on firm performance. This was an empirical evidence study from six European countries (UK, France, Sweden, Norway, Denmark and Finland) over the period 2001–2009. The findings show that an increase

in the share of highly qualified ICT employees has a positive effect on the productivity of the company. A one-unit increase in the share of highly skilled ICT workers has a positive effect on productivity in all countries, ranging from about 0.5% in Denmark and the United Kingdom to nearly 1.0% in Sweden and Norway (Ntirandekura & Christopher, 2022).

Adewoye and Akanbi (2012) evaluated the effects of investment in information and communication technology on the profitability of small and medium industries in Nigeria. The study revealed that the manager's level of education has a significant effect on the level of ICT use. The study therefore concluded that ICT investment in skills had a positive effect on

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the profitability of SMEs (Turyatamba et al., 2022). The effective functioning of ICT depends to a large extent on the support of a good infrastructure, e.g. a telecommunications system. Today, it is almost impossible for any business to run smoothly without a reliable telecommunication system, as effective telecommunication is an important support in providing a low-cost channel for information retrieval, collection and exchange (Paul & Kazaara, 2023).

A study by Park et al (2005) found that investment in telecommunications in both exporting and importing countries is significant and positively related to the value of bilateral trade between them. Similarly, (Lydia et al., 2023) also found that telecommunications have a significant positive effect on trade flows. They argue that "the cost of not being able to make a phone call or access the Internet can be as important as the cost of making the call." As a result, the telephone is becoming the primary point of sale for many industries, a marketing and sales channel for some industries. At the same time, the Internet has become an increasingly important additional channel that serves the same purpose as the telephone.

Fink et al. (2007) include the cost of a telephone call in a gravity model and find that the cost has a significant negative effect on bilateral trade flows. In another study, Limao and Venables (2001) included the number of trunk lines available as a proxy for infrastructure quality, while (Ntirandekura, Ainebyoona, et al., 2022) considered mobile phone use as a determinant of infrastructure development. Consistent with the view that communication costs are an important part of trade costs, these studies conclude that improvements in related infrastructures have a

positive effect on bilateral trade. To facilitate the smooth flow of information, the availability of the Internet and telecommunication network should provide the necessary support infrastructure in the organization.

ICT development took place with a systematic, comprehensive and formulated policy. However, the lack of coherent policy is likely to contribute to the development (or prolonged existence) of inefficient infrastructure and wasted resources. If so, a lack of ICT policy coherence may be to blame. The most important policy implication concerns the business environment (Faridah, Kazaara, et al., 2023). Governments should therefore reduce unnecessary costs and regulatory burdens on firms to create a business environment that supports productive investment. This includes policies that enable companies to make organizational changes that strengthen education and training systems, support good management practices and encourage innovation, for example in new applications. Policies to support growth in services are also important because ICT offers new potential for growth in the service sector, provided regulations that stifle change are modified or removed. In addition, competition needs to be strengthened. Competition not only helps reduce the cost of ICT products and services, which promotes their diffusion, but also increases pressures on firms to improve performance and change conservative attitudes (Tasha et al., 2023).

The National ICT Policy seeks to facilitate sustainable economic growth and poverty reduction, promote social justice and equity, integrate gender into national development, empower youth and disadvantaged

groups, stimulate ICT investment and innovation, and achieve universal access. It is based on internationally recognized standards and best practices, particularly the COMESA model adopted by the COMESA Council of Ministers in March 2003 (Faridah, Jacob, et al., 2023). This policy is based on four main principles: infrastructure development, human resource development, stakeholder participation and an appropriate policy and regulatory framework (Meru, A.K. and Kinoti, M.W., 2022). There is literature that has shown that the greater the benefits perceived by SMEs, the higher the possibility of ICT adoption. Perceived benefits should be considered as one of the factors that could influence the adoption of ICT in companies. In one empirical study conducted by Alam and Noor (2009) investigating the relationship between ICT adoption and its five factors which were perceived benefits, perceived costs, ICT knowledge, external pressure and government support, the results of this study showed that the three factors investigated are: significantly important for ICT

Problem Statement

The study aimed at the effect of ICT Knowledge and Adoption of ICT on the performance of Sacco's in Kenya.

Main Objective

To determine the effect of ICT Knowledge and Adoption of ICT on the performance of Sacco's in Kenya

Specific Objectives

1. To establish the influence of facilitating conditions on organizational performance: a perspective of Uganda breweries.
2. To investigate the relationship between performance expectancy and organizational performance: a perspective of Uganda breweries.
3. To assess the relationship between effect of effort expectancy and organizational performance: a perspective of Uganda breweries.

Methodology

adoption, while perceived costs and perceived benefits were found to be insignificant in the adoption decision. The above findings are also supported by Tan et al. (2009) which revealed that SMEs need to consider these expressed drivers, barriers and issues that could affect the successful adoption of IT solutions. It is imperative that SMEs accurately assess their ability to reap the benefits of IT adoption and not underestimate it. They should know that ICT has the power to act as a strategic tool to help them compete with their larger counterparts in a globalized market.

In their study, Giovanni and Mario (2003) found that ICTs are able to offer businesses a wide range of possibilities to improve their competitiveness, such as providing mechanisms to gain access to new market opportunities and specialized information services. According to the OECD (2004), ICTs have been found to be able to improve the management of information and knowledge within a firm and to increase speed and reliability.

This study was employing a mixed methods approach incorporating both qualitative and quantitative research techniques to explore the relationship between ICT knowledge and adoption levels among SACCO managers and employees, and the financial and operational performance of their cooperatives (Creswell & Clark, 2017). First, primary data was be collected through structured questionnaires administered to a sample size of 200 SACCO managers drawn from 185 randomly selected SACCOs across 5 counties in Kenya representing both rural and urban areas. The questionnaire was assessing their individual ICT knowledge, skills and usage of various technologies in areas such as accounting, record keeping, communication and service delivery.

Additional data on SACCO characteristics such as membership size, asset base, loan portfolio, operating costs and profitability was also be collected from financial records with the assistance of management (Mugenda & Mugenda, 2012). Secondary data from the SACCO Societies Regulatory Authority on broader SACCO industry metrics was provide a comparative context. Semi-structured interviews were further be conducted with 10 SACCO CEOs to gather in-depth qualitative insights into perceived ICT challenges and opportunities (Gill et al., 2008). Quantitative data from questionnaires was then be analyzed using descriptive and inferential statistics like correlation, regression and t-tests to determine relationships between independent and dependent variables (Creswell, 2014). Data was analyzed inform of tables and percentages using SPSS & STATA (Nelson et al., 2022).

Results

Table 1: Model summary for Drivers of ICT Acceptance and Organisation Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.980 ^a	.961	.961	.11421
a. Predictors: (Constant), facilitating conditions; performance expectancy; effort expectancy				

(Source: Primary data, 2023).

Results in Table 1, illustrate that the adjusted R Square which is a coefficient of determination indicates that the variation in the dependent variable (Organisation performance) due to changes in the independent (Drivers of ICT acceptance) variable was 0.961. The figure of 0.961 indicates that, 96.1% of the organisation performance in Uganda Breweries limited is influenced by Drivers of ICT acceptance. The remaining 3.9% of organisation performance is influenced by other factors such as Political environment, Government policy and Organization policy respectively (Faith et al., 2023). This thus indicates that there is a significant strong positive relationship between drivers of ICT acceptance and organisation performance in Uganda Breweries Limited.

Table 2: ANOVA for Drivers of ICT Acceptance and Organisation Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.322	3	22.441	1720.474	.000 ^b

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	Residual	2.713	182	.013		
	Total	70.035	185			
a. Dependent Variable: Organisation performance						
b. Predictors: (Constant), facilitating conditions; performance expectancy; effort expectancy						

Source; Primary Data, 2023

Regression results in table 2 indicate that Drivers of ICT acceptance (facilitating conditions; performance expectancy; effort expectancy) significantly contribute to the organisation performance of Uganda Breweries Limited Considering $F = 1720.474$ and Sig. 0.000. This is also supported by the regression mean square value of 22.441 compared to the residual mean square of 0.013 which is significant to zero. Implying that, the regression model is a good fit for the data. This, therefore, implies that there is a significant positive relationship between drivers of ICT acceptance and organisation performance of Uganda Breweries Limited and a positive change in drivers of ICT acceptance results in a corresponding positive change in organisation performance in Uganda Breweries Limited (N. Moses et al., 2022).

Table 3: Coefficients of Drivers of ICT Acceptance and Organisation Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.266	.054		4.927	.000
	Facilitating conditions	.926	.017	.980	54.729	.000
	Performance expectancy	.006	.011	.011	.605	.545
	Effort expectancy	-.008	.013	-.010	-.574	.567
a. Dependent Variable: Organisation Performance						

(Source: Primary Data, 2023)

Results from table 3 give t values. The t-values test the relationship that the coefficient is different from 0. To reject this, you need a t-value greater than 1.96 (for 95% confidence). The t-value for the Facilitating conditions in the model is 54.729 which is greater than 1.96 whereas the t-values of the Performance expectancy and Effort expectancy are; 0.605, and -0.574 respectively which are all less than 1.96 (for 95% confidence). This implied that in Uganda Breweries limited Facilitating conditions is a significant factor ($P=0.000$) towards organisation performance while Performance expectancy and Effort expectancy ($P=0.545$ and $p=0.567$) are not significant factors towards organisation performance. This shows that there is a relationship between Drivers of ICT acceptance and organisation performance. Also, from the table above, considering the t-value of 54.729 and significant factor ($P=0.000$) for Facilitating conditions, it implies that Facilitating conditions have more effect on the level of organisation performance in Uganda Breweries limited.

Conclusion

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It was concluded that there was a significant positive relationship between drivers of ICT acceptance and organisation performance of Uganda Breweries Limited and a positive change in drivers of ICT acceptance results in a corresponding positive change in organisation performance in Uganda Breweries Limited.

Recommendation

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