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Financial Technology And Profitability Of Small And Medium Enterprises In Trans Nzoia County, Kenya

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Abstract:** SMEs have continued to face various challenges despite its vital role in the economy. Most African countries depends heavily on SMEs for economic development and industrialization. The government of Kenya has identified the creation of SMEs as a strategy of achieving vision 2030. However, Republic of Kenya Baseline Survey (2019) found out that 65% of SMEs' fail within the first three years of their operations despite the provision of interventions. The thriving economy of Trans Nzoia County is comprised largely of SMEs which are the main income earners in the region. However, the income generation of these SMEs has been dwindling and consequently, their ability to spur economic growth in the growing metropolis may be affected. The recent report from the county government of Trans Nzoia indicates that net profit margin of SMEs in the county declined from 11.3% in 2018 to 4.4% in 2022. This trend resulted directly in unemployment which then heightens social inequities and rate of crime. As such, this study sought to explore the influence online banking services on financial performance of SMEs in Trans Nzoia, County, Kenya. This study adopted and based its findings on a descriptive research design whose target population constituted of 3610 SMEs registered by ministry of trade, commerce and industry of Trans Nzoia County, Kenya. By using the Cochran, (1977) criterion, the researcher selected a sample frame of 347 SME. Stratified sampling technique was applied to group SMEs while purposive sampling technique was adopted to select respondents. The main research instrument used was the semi-structured questionnaire and included information for both dependent and independent variables .The study was anchored on Technology Acceptance Model. The researcher utilized Likert scale to gather information from questionnaires. Data collected for the research was edited, evaluated and analysed using descriptive statistics and inferential statistics with the help of statistical package for social sciences (SPSS) 24. The results indicated that online banking services significantly affects profitability of SMEs in Trans Nzoia County, Kenya. According to the study's findings, financial institutions should develop more banking agents in rural areas, because they are the most favored and used by SMEs.

***Keywords:** Financial Technology, Profitability, Small and Medium Enterprises*

I. INTRODUCTION

SMEs have continued to face a myriad of challenges despite its vital role in the economic growth. Most African countries depends heavily on SMEs for economic development and industrialization. The government of Kenya has identified the creation of SMEs as a strategy of achieving vision 2030. However, Republic of Kenya Baseline Survey (2019) found out that 65% of SMEs' fail within the first three years of their operations despite the provision of interventions. According to the survey, 64.3% of the SMEs were in trade, 14.8% in service, and 13.4% in manufacturing while 7.7% engaged in other activities. The Majority of these enterprises (66%) are located in rural areas. World Bank (2019) averred that SMEs have high mortality rates with most of them not surviving to see beyond their third anniversary. A survey conducted by KIPPRA (2019) indicated that Trans Nzoia County SMEs rate of survival was at 4.2 percent while access to digital credit was as low as 1.23 percent. This has resulted in a weak base for industrial take off and sustainable development.

Development and advancement of digital era, technology has continued to play a vital role in the financial sector (Chatchai & Ho-don Yan, 2019). With evolution of digital economy where by the entire world is unified through use of systems, financial institutions are expected to converge with the technology in providing services to their customers in order to meet their expectations. Financial institutions are able to develop unique goods / solutions for various companies using FinTech technologies, such as mobile money, online banking, digital lending, and adviser sites such as robo, block chains, and cloud data storage (Huang & Huang, 2018).

Adoption of new technology has been associated with improved services and better returns for SMEs across the word. Most small and medium enterprises (SME's) have little choice but to embrace technology advancements as the digital economy grows (Chong *et al.,* 2019). Improved receipts and payment systems, online invoicing and billing systems, and excellent customer relationship management have all resulted in novel business models. All of this is aimed at giving SMEs a competitive edge, expanding economic prospects and activities, and boosting the country's economic growth (Chatchai & Yan, 2019).

STATEMENT OF THE PROBLEM

Small and medium enterprises play a critical role in any economy of creating employment and contribution to the GDP. However, Republic of Kenya Baseline Survey (2019) found out that 65% of SMEs' fail within the first three years of their operations despite the provision of interventions. According to the survey, 64.3% of the SMEs were in trade, 14.8% in service, and 13.4% in manufacturing while 7.7% engaged in other activities. The Majority of these enterprises (66%) are located in rural areas. World Bank (2019) averred that SMEs have high mortality rates with most of them not surviving to see beyond their third anniversary. This has resulted in a weak base for industrial take off and sustainable development.

Statistics indicate that the rate of small business failure is high with only 3 out of 5 business surviving 5 months to one year after formation and those that survive 80% of them collapse before the fifth year due to poor net profit margin (World Bank, 2019). A survey conducted by KIPPRA (2019) indicated SMEs in Trans Nzoia County rate of survival was at 4.2 percent and have experienced a decline in their operating profit margin for the last 5 years. The Report from the county government of Trans Nzoia indicates that in 2018 the operating profit margin were 11.3%, 10.9% in 2019, 5.2% in 2020, and 4.4% in 2021 (County government of Trans Nzoia, 2022) Adoption of technology provides an avenue for SMEs to improve their profitability which would reduce the failure rate. Financial technology was key in driving competitiveness, more profits and greater productivity to unlock the potential of many SMEs (McEvily, 2020).

OBJECTIVES OF THE STUDY

- ✓ To determine the effect of online banking services on Profitability of Small and Medium Enterprises in Trans Nzoia County, Kenya.

RESEARCH HYPOTHESES

$H_{02:}$ online banking services has no significant effect on Profitability of Small and Medium Enterprises in Trans Nzoia County, Kenya.

THEORETICAL FRAMEWORK

The Technology Acceptance Model (TAM) was first proposed by Davis, Bagozzi and Warshaw (1989) to examine the conceptual model of the intention of user or the degree to which information systems or new technology has been done. The model is established in the Theory of Reasoned Action (TRA). The model is viewed as the most compelling and ordinarily utilized hypothesis portraying an individual acknowledgment data framework (Lee et al., 2003). Initially, the model was made with four factors; saw helpfulness, saw simplicity to utilize, demeanour toward utilizing and real framework employments. Later two factors were included, the model which was outside factors and social expectation (Eramus et al., 2015). Likewise the hypothesis recommends that apparent convenience and saw usability are influenced by outer factors (Alharbi & Drew, 2014).

As indicated by the model, perceived usefulness is a key motivation to technology adoption. Outside factors demeanour towards utilizing, genuine utilize apparent handiness saw usability, conduct expectation. The normal advantages to SMEs incorporate, lower organization cost, expanded interior proficiency, upgraded relationship with colleagues, improved competitiveness, improved nature of data, access to financial balance, subsidize move just as bill instalment (Riyadh *et al.,* 2009). The model hypothesized that the mentality of usability is the significant determinant of whether the client would utilize or dismiss the framework. The client accepts that the framework which is simpler to utilize is progressively valuable to their activity execution. Seen convenience decides both saw handiness and mentality towards utilizing the framework. As per TAM both saw of value and saw convenience impacts the clients' mentality toward portable cash administrations.

Subsequently valuable and straightforwardness to utilize at that point build up an uplifting demeanour toward administrations (Fethena *et al.,* 2015). In this investigation convenience of portable cash administrations had effect on the development of SMEs. As the research model, this study used TAM and considered factors such as usage, accessibility, low cost and safety. By demonstrating how small business owners have incorporated modern technologies in the conduct of their companies, this theory is central to the analysis. This is especially the case where small businesses use financial technology in their money transactions, leading to quick, safe and more accessible cash transactions. Also It's not just enough for SMEs to come up with innovative technologies but they must be accepted and adopted by owners and clients. The researcher used this theory to establish if the SME entrepreneurs in Trans Nzoia County have embrace and adopted use of Fintech in undertaking their business operations. The variables supported by this theory are mobile payment, online banking, digital credit and Insurtech services.

EMPIRICAL LITERATURE REVIEW

Online banking usage may include confirmation of bank balances, payments from the bank account, transfer of money from bank to mobile phone, loan requests among others. All these services are undertaken through use of mobile phone or Personal Digital Assistant (PDA). There has been significant contribution to the SMEs by the use of mobile money as was discovered by Nyaga, (2019) on his study “the impact of mobile money services on the performance of SMEs”. It has evidently proven that majority of the traders are more oriented towards mobile/online banking on their daily transactions rather than formal banking sector. This is due to its efficiency and effectiveness in settling transactions between the customers and the business. Secondly, SME operators have continued to embrace mobile/online banking services due to the continued exposure and dynamics towards growth in the digital economy activities where one does not need to visit their branches physically to perform the transactions. The study did not conduct the inferential analysis to determine the correlation and regression coefficients. The current study conducted both descriptive and inferential analysis.

The study by Otiso *et al.*, (2018) studied the effect of online banking on financial performance of SMEs in Kenya. The study established that, a significant number of the SMEs have aligned themselves in use of mobile banking in place of traditional banking, since they are in a position to obtain both information and transactional services in their mobile phones. Secondly, SMEs have been able to access mini statement as well as the information relating to their personal and company bank accounts. Managers of the SMEs have been able to focus more on their key objective of generating more income to enhance growth, since the traditional long queuing has been eliminated through use of Mobile banking. In addition, SMEs have been able to outstanding bills to their suppliers’ as well utility bills at the convenience of their office; hence reduction on the conveyance cost as well as cash related risks. The problem of the study was on financial performance as indicated by return on assets. The current study was on financial performance of SMEs as indicated by operating profit margins.

Njenga (2017) assessed the effect of online banking on financial performance of SMEs in Kiambu County, Kenya. SMEs argued that the demand of high M-banking usage depend on wide network coverage and quality network connections. This enhances easy, speedy and cheap access mobile transactions available and affordable to all prospective partakers. Most of the SMEs in remote areas of Kiambu County do not have enough network coverage and causes a hindrance in using M-banking services. The problem of the study was on financial performance as indicated by return on assets. The current study was on financial performance of SMEs as indicated by operating profit margin.

Okiro (2016) studied the effect of digital financial access to credit on growth of small and Medium Enterprises in Nairobi County-Kenya. The study employed a descriptive and causal research design that relied on questionnaires as the main research instrument. The county of Nairobi was stratified into 17 constituencies then proportional sampling procedure was employed to determine sample size in each strata. Simple random sampling was then employed to select the target sample units. The perceptions of SMEs towards digital financial platforms contributed negatively to credit access via digital platforms. Most of the respondent who had not accessed any credit facility via a mobile phone associated digital financing options with high costs. Statistical outcomes reveal that there was a weak but significant relationship between the extents of business growth in terms of turnover associated with the frequency of access to credit on digital financial platforms. Also there was a significant positive relationship between access to credit via digital platforms and business growth in terms of cash flow. As such the greatest effect of access to credit was on cash flow which in turn influenced business growth. The study presents conceptual gap on the diverse operationalization of financial performance of SMEs and digital financial access. The gap will be filled by operationalization of financial performance using NPM.

II. RESEARCH METHODOLOGY

The study employed a descriptive research design to assess the impact of financial technology usage on the profitability of SMEs in Trans Nzoia County, Kenya. Descriptive research, encompassing surveys, interviews, and observational studies, is apt for obtaining detailed and unbiased information about the characteristics of a phenomenon (Mugenda & Mugenda, 2016). This design facilitates a thorough description of respondents and findings, aiding in the precise answering of the research question (Bulmberg, Cooper, & Schindler, 2011). Given the need for current, detailed information on the usage of financial services and their impact on SME profitability, this approach was deemed most suitable.

The target population comprised 3,610 registered SMEs in Trans Nzoia County, with data sourced from the county government (County Government of Trans Nzoia ADP, 2022). Proprietors, owners, or managers of these SMEs were the primary respondents. A stratified sampling method was used to select a sample size of 347 SMEs, ensuring representation across different subgroups within the population (Mugenda & Mugenda, 2016). Cochran's formula, adapted for smaller populations, was used to determine the sample size (Cochran, 1977). Within each category, purposive sampling identified respondents with significant insights and understanding of the phenomena (Palys & Atchison, 2008).

Data collection involved a semi-structured questionnaire, incorporating both open-ended and closed-ended questions, which allowed for a comprehensive understanding of respondents' perspectives (Baker & Ponton, 2013). To ensure the validity and reliability of the research instruments, a pilot study involving 35 respondents was conducted, with expert reviews and Cronbach's alpha used for validation and reliability testing (Cooper & Schindler, 2011). Data analysis, conducted using SPSS version 24, included both descriptive statistics and multiple linear regression analysis to estimate the impact of various financial technology components on SME profitability. The findings provided valuable insights into the relationships among variables, tested at a 5% significance level, with the model evaluated at a 95% confidence interval (Allison, 1999; Bevans, 2023).

III. RESEARCH FINDINGS AND DISCUSSION

The section presents results relating to online banking usage by Small and Medium Enterprises in Trans Nzoia County, Kenya. The result were presented in Table 1.

	Mean	Std. Dev
I can trace bank transactions using online banking.	4.3359	.63589
I can check the balance of my account on my phone.	4.4375	.52018
I may use mobile banking to make direct deposits to my bank account.	4.2461	.73430
I rely on online banking for all of my bank transactions	4.4141	.49352
The availability of online banking has prevented theft of money that would have been kept on the premises.	4.3086	.71021
When it comes to transaction speed and cost, online banking is convenient.	4.4375	.49705
I can trace bank transactions using online banking.	4.3047	.69799

Source: Researcher (2023)

Table 1: Descriptive Analysis on Online Banking Usage

The result in table 1 indicates that on average online banking was highly utilised by the SMEs in Trans Nzoia Coiunty, Kenya. The SMEs were able to trace bank transactions using online banking (Mean=4.3359, STD=0.63589). The SMEs owners were able to check the balance, make direct deposits to the bank and do various bank transactions using online banking as evidenced by a mean of 4.3359, 4.4375, 4.2461 and 4.4141 respectively. The result further indicated that the availability of online banking has prevented theft of money that would have been kept on business premises (4.3086). Majority of the SMEs found the online banking convenient from its transaction speed and cost (Mean=4.4375) and can trace bank transactions using online banking (Mean=4.3047). It was evidently proven that majority of the traders were more oriented towards mobile/online banking on their daily transactions rather than formal banking sector. This is due to its efficiency and effectiveness in settling transactions between the customers and the business. SME operators have continued to embrace mobile/online banking services due to the continued exposure and dynamics towards growth in the digital economy activities where one does not need to visit their branches physically to perform the transactions.

The study agrees with Nyaga, (2019) that SME operators are increasingly using mobile/online banking services because of the ongoing expansion and changes in the digital economy. This allows them to conduct transactions without the need to physically visit bank locations. Further, the result agrees with Otiso *et al.*, (2018) that a significant number of the SMEs have aligned themselves in use of mobile banking in place of traditional banking, since they are in a position to obtain both information and transactional services in their mobile phones. Additionally, Njenga (2017) found that SMEs have been able to access mini statement as well as the information relating to their personal and company bank accounts. The study disagrees with Okiro (2016) that most of the SMEs who had not accessed any credit facility via a mobile phone associated digital financing options with high costs.

IV. PROFITABILITY OF SMALL AND MEDIUM ENTERPRISES IN TRANS NZOIA COUNTY, KENYA

The SMEs result on profitability was presented in Table 2. Profitability indicator was the operating profit margin which considered operating income and revenue collected by SMEs in Trans Nzoia County, Kenya.

	N	Minimum	Maximum	Mean	Std. Deviation
Operating Margin	256	-.3960	.3410	.089414	2.1556260
Valid N (listwise)	256				

Table 2: Descriptive Statistics Operating Profit Margin

The operating margin quantifies the profitability of a firm by calculating the amount of profit generated per shilling of sales, after deducting variable production expenses like salaries and raw materials, but before accounting for interest or taxes. The calculation involved dividing a company's operational income by its net sales. Higher ratios often indicate more efficiency in a company's operations and a stronger ability to convert revenues into profits. The result indicated that the minimum operating profit margin was -39.6% and the maximum was 34.10%. The mean operating profit margin was 8.9414% and the standard deviation was 2.1556260. The operating margin was small and shows the inability of the SMEs selected in the study to meet fixed interest expenses. The operational margin measured the profitability of a SMEs's primary activities. Greater profit margins are seen as superior to smaller margins and may be compared across comparable rivals, but not across disparate sectors.

REGRESSION COEFFICIENTS

The study employed T-test in testing of null hypotheses at 95% confidence level (p-value=0.05) and results presented in table 3.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.071	2.227		7.667	.000
	Online Banking Usage	1.358	.070	.695	19.511	.000
a. Dependent Variable: Operating Profit Margin						

Source: Researcher (2023)

Table 3: Coefficients[a]

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The objective of the study was to determine the effect of online banking on Profitability of Small and Medium Enterprises in Trans Nzoia County, Kenya and the findings are as shown in table 3. To achieve this objective a null hypothesis, H03, that Online banking services has no significant effect Profitability of Small and Medium Enterprises in Trans Nzoia County, Kenya was formulated. In table 3 the coefficient of online banking services β=1.358, p=0.000<0.05 this shows a positive statistically significant relationship between online banking services and profitability of Small and Medium Enterprises in Trans Nzoia County, Kenya. Henceforth the null hypothesis that online banking services have no significant effect on Profitability of Small and Medium Enterprises in Trans Nzoia County, Kenya was rejected at 5% level of significance. As per the results in table 4.18 the model coefficients were fitted in this model equation: $Y= 17.071 + 1.358X2 + e$.

V. CONCLUSION OF THE STUDY

The study concluded that online banking services have significant effect Profitability of Small and Medium Enterprises in Trans Nzoia County, Kenya. Henceforth the null hypothesis that online banking services have no significant effect on Profitability of Small and Medium Enterprises in Trans Nzoia County, Kenya was rejected at 5% level of significance.

VI. RECOMMENDATIONS OF THE STUDY

According to the study, online banking services have a significant role in profitability. As a result, when it comes to performing financial transactions and paying bills, users should use online banking services. It was discovered that online banking services benefit customers by being time efficient, preventing money theft on business premises, allowing users to view account balances at any time, and allowing users to track transactions simply and at any time. As a result, transaction costs must be reduced, as internet banking has the greatest impact on the expansion of the profitability index for SMEs.

SUGGESTIONS FOR FURTHER

Based on these findings, the study suggests that future research examine the extent to which Fintech has influenced the adoption of traditional financial institutions' products in suburban areas, as well as the effects of Fintech in general. Moreover, similar studies could include more Fintech solutions in order to determine their impact on profitability in the country as a whole. Because Fintech has only been around for a few years, this study also recommends that more research be done on Mobile money services and its effect on SMEs financial inclusion.

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