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Kambi, E. N., & Onyiego, G.

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[1] Kambi, E. N., & [2] Onyiego, G.

[1] MSc. Student, Jomo Kenyatta University of Agriculture & Technology (JKUAT), Kenya
[2] Doctor, Lecturer, Jomo Kenyatta University of Agriculture & Technology (JKUAT), Kenya

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ABSTRACT

Digital financial services offer wider scale, scope and reach of financial services, and are essential to closing the remaining gaps in financial inclusion. Digital financial inclusion involves the deployment of the cost-saving digital means to reach currently financially excluded and underserved populations with a range of formal financial services suited to their needs that are responsibly delivered at a cost affordable to customers and sustainable for providers. The purpose of this study was to determine the effect of digital financial inclusion on financial growth of MSMEs in Kenya. The specific objectives weare: to determine the effect of mobile phone banking on financial growth of MSMES in Kenya, to establish the effect of electronic money banking on financial growth of MSMES in Kenya, to assess the effects of agency banking on financial growth of MSMES and to determine the effect of digital banking apps on financial growth of MSMES in Kenya. The study was anchored on four theories namely: The financial intermediation theory, the theory of innovation, the agency theory and the technology acceptancy theory. The study used both descriptive survey and inferential statistics. The research used Secondary data collection method , sourced from the Kenya National Bureau of Statistics (KNBS) economic survey 2021, The CBK Micro Small & Medium Enterprises (MSME) and FinAcess Business survey 2021. The researcher piloted on a census data of a five year period (2016-2020) on financial performance of the MSMEs in Kenya. Research hypothesis was used and tested the significance of the independent variables to the dependent variable.The data collected was coded, entered and analyzed descriptively using Statistical Package for Social Sciences (SPSS 25). The results revealed that the independent variables (mobile banking, electronic banking, agency banking and banking apps) affect growth of MSMEs in Kenya. From ANOVA it was established that mobile banking, electronic banking, agency banking and banking apps affected growth of SMEs in Kenya significantly. Policy makers were recommended to take note of the findings of the study. Though the study explored four components of digital financial inclusion; it was recommended for further studies to be done to assess the other contributing factors of financial inclusion.

Key Words: *Mobile Phone Banking, Electronic Money, Agency Banking, Digital Banking*

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INTRODUCTION

The practice of giving disadvantaged groups, such as women and low-income people, with affordable access to financial services and credit when they need it is known as financial inclusion (Chen & Divanbeigi, 2019). Financial inclusion is defined as having access to financial products and services such as bank accounts, insurance, remittance and payment services, and financial advisory services. It enables individuals to plan for future stability; a large bank deposit provides a stable deposit base as well as opportunities to save, invest, and receive credit (Evans, 2018). Digital finance is a financial service provided by mobile phones, personal computers, the internet, or cards linked to a secure digital payment system. Customers have more influence over their accounts because to digital finance, which allows them to make quick financial decisions and send and receive payments (Ozili, 2018).

Digital financial inclusion is defined as the use of cost-effective digital means to reach currently financially excluded and underserved communities with a variety of formal financial services tailored to their needs that are responsibly provided at a cost that is affordable to consumers and sustainable for providers (Kapadia, 2019). Individuals, households, and companies can also save, make payments, obtain credit, and obtain insurance in a cost-effective and straightforward manner using digital technologies. Financial services digitalization helps banks to access and serve their target market at a minimal cost (Rasheed, Siddiqui, Mahmood & Khan, 2019).

Mobile banking, internet banking, e-wallets, credit and debit cards, and other digital financial services are examples of digital financial services. While digitalization has a huge impact on people's lives around the world, it also poses issues for both developed and developing countries (Evans, 2018). Governments and authorities emphasize the significance of digitization in order to compete in the market, but unfavorable expectations are hindering countries from transitioning to a technological era with less powerful systems (Ali, 2019). Furthermore, challenges like as limited network coverage, higher transaction costs, and a lack of knowledge stymie technological advancement in the banking industry (Rasheed, Siddiqui & Rahman, 2018).

Kenya is East Africa's most developed country; with its industrial sector accounting for 14% of GDP (Evans, 2018).The importance of SMEs is emphasized in Kenya Vision 2030, a development strategy aimed at transforming Kenya into an industrialized, middle-income country by 2030. This is in line with the United Nations' 2030 Agenda for Sustainable Development, which encourages the formalization and growth of micro, small, and medium-sized businesses (GSM, 2021) In order to accomplish Kenya Vision 2030, the government's Third Medium-Term Plan (2018–2022) recognizes the SME sector as a priority area for development (GOK, 2019) This entails passing laws and putting in place a National Loans Guarantee Scheme to help MSMEs get financing (Yangdol & Sarma, 2019).

The Kenya Micro and Small Enterprise Act of 2012, which established legislative and institutional frameworks to foster micro and small firms, is also incorporated into Kenya Vision 2030. Among them are the Micro and Small Enterprise Authority (to put the Act into action), the Office of the Registrar of Micro and Small Enterprise Associations (to legalize and register MSMEs), a tribunal (to decide disputes), and a fund (to address financing issues). Any DFS system is built on the foundation of agents (KNBS, 2020). Customers can access their accounts from any tiny kiosk or rural store, where they can deposit and withdraw money without having to use traditional physical banking infrastructure (which is notorious for its restricted reach and expensive operating expenses) (GOK, 2019). Because agents are the front line of the DFS sector, providers rely heavily on commission incentives to encourage activation and transactions for potential customers (Ouma, Odongo & Were, 2017)

The 2019 study findings, according to GSM (2021), clearly illustrate that Kenya's financial inclusion

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landscape has changed since 2006. Formal financial inclusion has increased to 82.9 percent, up from 26.7 percent in 2006, and full exclusion has decreased to 11.0 percent, down from 41.3 percent. In addition, differences in financial access between the rich and the poor, men and women, and rural and urban areas have all decreased significantly. The growth of mobile money, government initiatives and assistance, and advances in information and communications technology are all key drivers of these shifts (Ouma et al, 2017). These have aided in the expansion of financial inclusion by allowing people to overcome infrastructural barriers to access, particularly in rural areas (Yangdol & Sarma, 2019)."Bridge builders" are application developers who specialize in DFS interfaces for banking and payment services, such as Kopo Kopo, a Kenyan startup that allows retailers to accept mobile payments (GOK, 2019). At the time of its launch, Safaricom had a 79 percent market share in Kenya.

As a result of its dominant position in Kenya, Safaricom was able to use its large customer base, which is widely seen as one of the key drivers of M-success. PESA's MSMEs employ more than 80% of Kenya's working population, according to the Ministry of Trade, Industry, and Co-operatives, and hence play a significant role in the country's economic and growth ambitions.

MSMEs account for 80% of all firms in Kenya, according to the Small and Medium Entrepreneurial Resource Centre's website. MSME's account for 60% of total GDP (Safaricom, 2020, GOK, 2019).

The Kenya National Bureau of Statistics baseline survey (KNBS, 2019), two-thirds of MSMEs are located in rural areas, whereas only one-third are based in urban areas. According to the survey, Nairobi, Kenya's capital, and Mombasa, Kenya's second largest city, account for 16 percent of the country's MSMEs. The bulk of these MSMEs (70 percent) work in the trade sector (buying and selling goods and commodities), with 15 percent working in the service sector and 13 percent in the manufacturing sub-sector. Other service providers, such as hotels and restaurants, accounted for only 6% of MSMEs in Kenya, while construction MSMEs made up less than 2% of the country's total (KNBS, 2017; GOK, 2019).

Statement of the problem

Micro, small and medium-sized enterprises (MSMEs) are generally plagued by difficulties with financing. The root of the problem lies in natural deficiencies of current traditional financial system in serving MSMEs or private enterprises. MSMEs have difficulties obtaining external financing from traditional financial institutions due to objective reasons such as a lack of historical valid financial data, collateralizable assets, and implicit government guarantees; thus, financing constraints further limit MSMEs' financial growth

Many individuals and small businesses in emerging markets have limited or no access to formal financial services due to lack of an integrated banking systems regardless of in possession of internet gadgets. Even in developed countries, consumers have a limited number of cost-effective financial options to choose from when it comes to meeting their financial needs (Owen & Pereira, 2018).

The traditional banking systems require physical presence with a domestic banking license. Typically, they require Face-to-face or one-to-one customer service The financial institutions will need large number of staff to manage and meet the client at the ground; resulting to huge operation and administrative costs which in return banks compensate the same by charging high interest rates and more hidden charges in their products and services. Notwithstanding, this aspect poses lower accessibility as customers are subjected to more strict KYC/AML requirement (Evans, 2018). Another challenge is the inability to do business with some countries due to legislation barriers and tax policies. Additionally, it is time consuming as longer time is needed to visit a branch, remains in long ques for one to transact which is also limited to the business hours only.

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Digital financial inclusion is a mean to an end, not an end in and itself. It is universally recognized as critical to reducing poverty and promoting inclusive economic growth (Sun, 2018).When opposed to saving money at home or carrying cash, digital financial inclusion offers greater comfort, protection, and security to consumers (Voorn, Genugtem & Thiel, 2019). Digital technology financing understand the need of small and medium-sized companies for flexible products and solutions that adapt to their everyday business life. Accounts can easily be opened online. Thanks to modern video ID procedures, you save yourself the trip to the post office. One can do banking online – on your PC in the office or on the road on your smartphone or tablet. You can even apply for a loan online: Without long waiting times, the money you need to invest in your business is available within a very short time and increases your financial flexibility. While established banks often neglect their customers' desire for more flexibility, digital financial inclusion provide solutions make exactly this flexibility possible and save customers a lot of additional time through good usability(Mitchell & Scott, 2019).

Past research has revealed that emerging and developing economies continue to face challenges in achieving financial inclusion due to a range of issues (Owen & Pereira, 2018). Several studies have been carried out; however the results have been inconclusive. Agufa (2016) wanted to know how digital finance affects financial inclusion in Kenya's banking system. For China's new third-board market listed companies, Yang and Zhang (2020) researched the link between digital financial inclusion and long-term growth of small and micro businesses and discovered a positive correlation. Awinja and Fatoki (2021) were curious about the impact of digital financial services on SMEs' growth in Kenya.

Very little or no research effort has been done to investigate elements of integrated digital financial inclusion and financial growth SMES. There are numerous studies regarding the determinants of mobile and computer internet-based banking, however, little similar research has been done regarding digitalisation of financial inclusion. So far, research has focused on determinants of financial inclusion and usage or influence of financial inclusion on client loyalty and satisfaction. Therefore, the purpose of this study was to analyse the effects of digital financial inclusion on financial growth Micro, Small and Medium Enterprise. It analysed the availability, simplicity, and cost effective integrated digital financial inclusion and its impact to financial growth of the MSMEs sector in Kenya. To the best of the researchers' knowledge, no study has looked directly at the impact of digital financial inclusion on financial growth of micro, small, and medium businesses in Kenya.

Research Objectives

The general objective of this study was to determine the effect of digital financial inclusion on financial growth of small & medium enterprises in Kenya. The specific objectives were;

- To determine the effect of Mobile Phone Banking on the financial growth of MSMEs in Kenya.
- To establish the effect of Electronic Money Banking on the financial growth of MSMEs in Kenya
- To identify the effect of Agency Banking on the financial growth of MSMEs in Kenya
- To determine the effect of Digital Banking Apps on the financial growth of MSMEs in Kenya

The study was guided by the following research hypotheses:

- H_{01}: Mobile Phone Banking has no significant effect on financial growth of MSMEs in Kenya.
- H_{02}: Electronic Money Banking has no significant effect on financial growth of MSMEs in Kenya
- H_{03}: Agency Banking has no significant effect on financial growth of MSMEs in Kenya
- H_{04}: Digital Banking Apps has no significant effect on financial growth of MSMEs in Kenya

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LITERATURE REVIEW

Theoretical Framework

Financial Intermediation Theory

Leland and Pyle developed the financial intermediation theory in 1977. The function of financial intermediaries in financial systems was highlighted in the theory (Arp, Adisa & Adisa, 2017). They identified four categories of financial intermediaries: categories of liabilities (deposits) that are specified for a fixed sum that is unrelated to portfolio performance, short-term deposits, and a large proportion of their liabilities are chequeable, and liabilities and assets that are not transferable. According to the theory, the role of intermediaries is to ensure a consistent flow of funds from surplus units to deficit units (Chepkiyeng, 2017; Evans, 2018).

Theory of Financial Innovations

In 1983, Silber proposed the financial innovations theory, which is founded on the idea that the growth of money-related foundations is the basic basis for financial inclusion (Li J wu, 2020). The idea claims that defects in the money-related business sector, such as erroneous data, office expenses, and currency rates, are the driving forces behind new inventions (Owen & Pereira, 2018). According to the theory, financial-related innovations could be extremely original solutions or merely typical ways for supplying the most recent component of development, bolstering companies' liquidity and raising the quantity of new applicants due to their qualifications for the job (Mader, 2018).

Agency Theory

Jensen and Meckling came up with the theory in 1976. The emphasis is on the behavioral interaction between the owners (principals) and persons recruited by the owners to execute actions on the principal's behalf (agents) (agents). The concept of agency is founded on the assumption that managers' goals are not aligned with the interests of shareholders (Voorn, Genugtem & Thiel, 2019) According to agency theory, the primary (owners) goal is different from and in contradiction with the agents' goal. Financial corporate governance is a structure that is designed to cut agency costs and is strengthened by managers who operate in their own best interests rather than the shareholders' (Evans, 2018) Corporate governance, according to Zhang (2017), is a system of internal and external checks and balances that ensures firms perform their mandate responsibly and socially.

Technology Acceptance Model

The Technology Acceptance Model (TAM), as proposed by Davis in 1989, is backed by an emphasis on technical issues. People's behavioral goals and how they use technology are the focus of this idea. It is hypothesized that a person's actual behavior is dictated by his behavioral intent to use, which is impacted by the consumer's impression of the value of the technology. The ease of use, on the other hand, influences both attitude and perceived utility (Nadri, Rahimi, Lotf, Samadbeik & Garavand, 2018). End-users' utility and user-friendliness criteria are taken into account when the TAM model is adopted (Okafor, Nico & Azman, 2016) The utility and perceived simplicity of use of this model influence consumer attitudes about any service. According to Evans (2018), evaluating user specifications based on perceived usefulness and simplicity of use of the technology is more important than using other quantitative measurements.

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Conceptual Framework

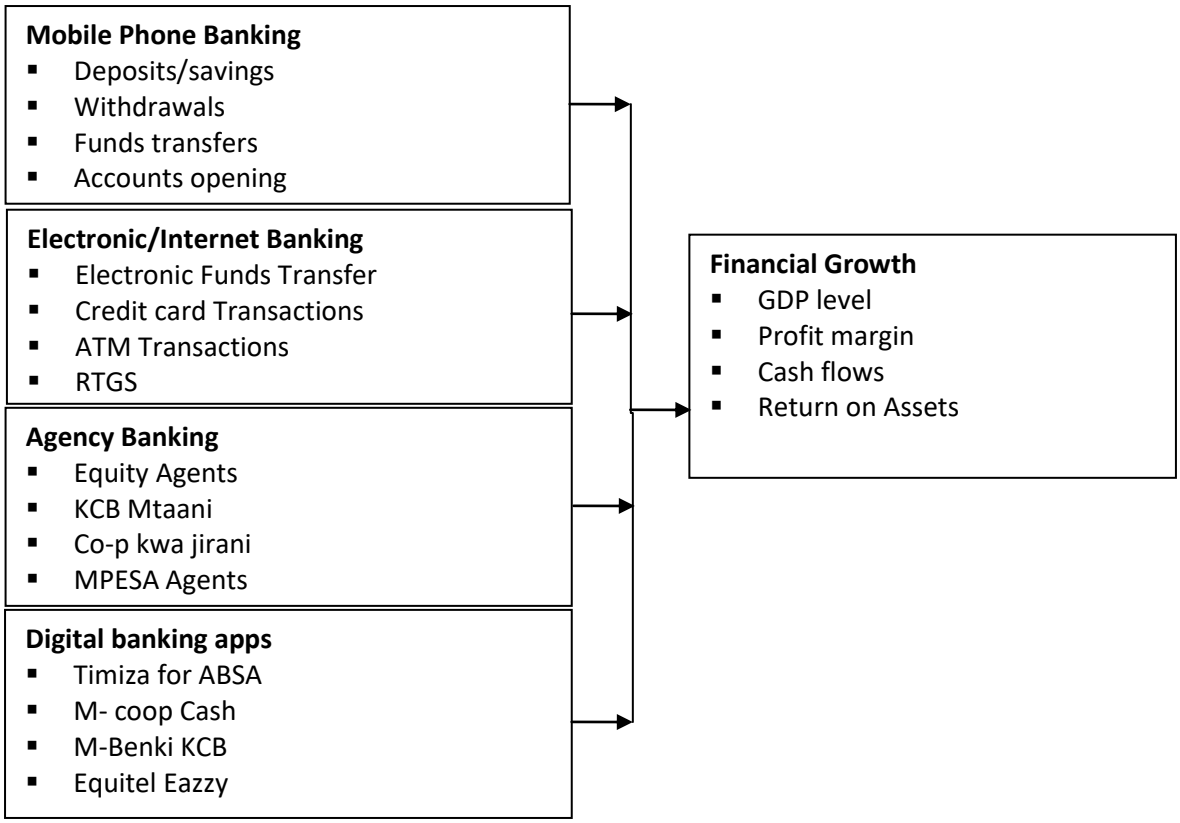

Figure 1: Conceptual Frame work

Empirical Review

Yang and Zhang (2020) researched digital financial inclusion and sustainable growth of small and micro enterprises using China's new third board market listed firms. The findings imply that increasing digital financial inclusion helps small and micro businesses thrive in the long run, especially in high-tech industries and competitive markets. The effect mechanism of this development avoids any financial crises induced by small and micro enterprises' capital structure imbalance and capital liquidity problems by reducing financing limits and enabling sustainable growth (Ozili, 2018). In the context of China's high-quality development, continuous promotion of digital financial inclusion and reshaping of the financial industry's ecological pattern can provide steady financial support for the sustainable growth of small and micro enterprises, as well as realize the healthy development of micro enterprises and macro economy (Tsai, 2017).

Shofawati (2019) investigated the significance of digital finance in enhancing financial inclusion and SMEs' growth in Indonesia. Indonesia, with its unique terrain of many islands, requires rapid product or service delivery, particularly for MSME (Small and Medium Enterprise) funding, which is the backbone of the Indonesian economy (Shetty & Vans, 2018) The significance of digital finance in strengthening financial inclusion and MSME growth in Indonesia is that the availability of digital finance can create financial inclusion, allowing for easier access to funding, particularly for SME, the majority of which are not bankable. MSME can receive money and financing for operating, investment, and growth opportunities based on financial inclusion based on digital finance (Owen & Pereira, 2018)

The influence of digital microfinance on MSMEs' financial inclusion was investigated by Rasheed, Siddiqui, Mahmood, and Khan (2019). Secondary study shows that, in compared to industrialized countries, developing countries have been slow to embrace digital banking technologies. On the other side, Pakistan is in a similar situation. Pakistan is not achieving the expected results in terms of financial inclusion when compared to other emerging countries (Yi, Zhang & Guo, 2018). According to the report, in order to support the MSME sector for economic growth, it is necessary to lower the cost of accessing digital financial services and extend the financial product portfolio available on digital platforms (GSM, 2021)

In Kenya's banking system, Agufa (2016) evaluated the impact of digital finance on financial inclusion. The study discovered a weak negative relationship between financial inclusion and agency banking, as measured by the number of agents, mobile banking, as measured by the number of mobile banking transactions, and internet banking, as measured by the number of internet banking transactions, in Kenya's banking industry (Kapadia, 2019) According to the study, digital finance has no impact on financial inclusion in Kenya's banking sector because banks use digital financial services to lower the costs of opening and operating branches in order to improve their profitability and financial performance, not to foster financial inclusion. According to the survey, banks should improve awareness of digital financial services and offer them at a reduced cost in order to increase their use and acceptance.

The hype and reality of digitalization, as well as its influence on MSMEs in Sub-Saharan Africa, were examined by Disse and Sommer (2020). Technical collaboration and information exchange in Sub-Saharan Africa could aid in the development of national legislative frameworks for digital money. International regulators and standard-setting bodies, relevant international forums and platforms, as well as bilateral cooperation, should promote knowledge exchange and the spread of best practices on the one hand, while improving the coordination and harmonization of digital finance regulations on the other (Evans, 2018). If these requirements are met, digital advancements in finance can only support inclusive and sustainable economic development. Vulnerable groups, disadvantaged entrepreneurs, and small enterprises must benefit from digital financial services so that the financial system's digitalization promotes pro-poor growth, does not undermine social cohesion, and may even contribute to it. More research is needed to better understand these connections and establish a link between digital financial markets and social cohesiveness (Yi, Zhang & Guo, 2018)

METHODOLOGY

This research was in the form of a descriptive survey. This research targeted the 2016 -2020 periodic financial output data for all thirty one (31) sector activity contributors of all the licensed MSMES in Kenya, as per the KNBS Economic Survey 2021, The National Micro, Small and Medium Enterprise Survey Report 2021, Fin Access Household Survey 2021. The analysis was primarily based on secondary data for the study. Before being given for review, the material gathered was categorized, graded, and coded. Descriptive and inferential statistics was used to analyze the data collected. The data was examined using descriptive, correlational, and regression methods (Nickson, 2019). In this study, multivariate regression analysis was used to investigate the relationship between the dependent and independent variables using inferential statistics (Davis & Craven, 2016). The researcher used the data acquired to do a regression analysis to determine the extent of the link between digital financial inclusion and SMEs' performance (Ouma, Odongo & Were, 2017). As a result, the following multiple regression model was be employed in the analysis:

$$Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where,

β0, β1, β2, β3 and β4are the regression co-efficient

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Y – Financial Growth of SMEs
X_1 – Mobile Phone Banking
X_2 – Electronic Money Transaction
X_3 – Agency Banking
X_4 – Digital Banking Apps
β0 - Constant.
$\beta_1, \beta_2, \beta_3, \beta_4$= Beta coefficients.
ε = Error term

RESULTS AND FINDINGS

Descriptive Statistics of Digital Financial Inclusion

The descriptive statistics of digital financial inclusion and its factor variables is analysed as below.

Five Year Averages of Digital Financial Inclusion

The five year averages of electronic banking, mobile phone banking, agency banking and banking apps were presented. From the results, mobile phone banking had the highest average compared to the rest showing that mobile phone banking was used mostly by the MSMEs towards digital financial inclusion. Next with the second highest average was electronic banking, followed by agency banking and banking apps. Agency banking less than half of electronic banking while Banking apps were less than a quarter of electronic banking and mobile phone banking.

Growth of MSMEs compared to Digital Financial Inclusion

Growth of MSMEs was much higher than the digital financial inclusion component that is mobile phone banking, electronic banking, agency banking and banking apps. Results showed that there were other major factors that influenced the growth of MSMEs which need further investigation.

Mean and Standard Deviation of the Variables

The summarised descriptive data for the five years period in the MSME sector was collected and analysed. The independent variables depict the averages and standard deviation of the units' factor contribution to growth in the whole period. The financial growth was analysed on the averages of revenues generated by the MSME sector for the same period. This summary on the findings of this study is shown in Table 1 below.

Table 1: Mean and Standard Deviation

Variables	Minimum	Maximum	Mean	Std. Deviation
Electronic Banking	2,569.00	189,006,527.00	14,869,771.7097	39,727,958.75930
Mobile Banking	885.00	182,716,771.00	18,247,618.5806	38,351,935.41537
Agency Banking	879.00	59,906,166.00	5,586,447.4839	12,133,191.85778
Banking Apps	23.00	24,883,226.00	2,290,787.4815	5,417,754.05761
Growth kshs 'Million'	96.00	1,698,585.00	129,563.2903	306,578.92152

The Populated data indicates that there are huge variances between the minimum and maximum points resulting to the higher standard deviations. In this case this study adopted the mean to explain the findings of the study.

Mobile banking had the highest mean at 18,247,618.60 in terms of units of factor contribution to growth, indicating that it was the most and frequently used of the digital financial inclusion variables. Electronic banking was second highest at 14,869,771.70 showing it was the second highest used. Agency banking was a distant third at 5,586,447.48 while banking apps were last at 2,290,787.4815 showing it was least used towards digital financial inclusion.

Diagnostic Tests

Before the analysis, the data was treated to a variety of diagnostic tests in order to facilitate further studies. Skewness and Kurtosis were used to test normality, Durbin-Watson Statistic was used to test autocorrelation, and Variance Inflation Factors were used to test multicollinearity (VIFs). The next sections go over all of the results from the various tests.

Tests for Normality

Normality tests can be measured using the Z-values of skewness and Kurtosis which should be between -1.96 and+ 1.96. Kurtosis and Skewness were used in this study. Table 2 showed a measure of skewness 0.124 Standard Error (SE) of 0.501 and Kurtosis measure of -0.477 (SE 0.972). The values for skewness and Kurtosis are all within the span of -1.96 to 1.96. This shows that the data is slightly platykurtic and is not significantly different from normality. Therefore, the study asserts that the data is normally distributed.

Table 2: Tests for Normality

		Statistic	Std. Error
Mean		2.8333	.07387
95% Confidence Interval for Mean	Lower Bound	2.6792	
	Upper Bound	2.9874	
5% Trimmed Mean		2.8294	
Median		2.7500	
Variance		.115	
Std. Deviation		.33850	
Minimum		2.25	
Maximum		3.50	
Range		1.25	
Interquartile Range		.50	
Skewness		.124	.501
Kurtosis		-.477	.972

Tests for Autocorrelation

Autocorrelation was measured using the Durbin-Watson value where a value of between 1.5 and 2.5 indicates that there exists no autocorrelation. The Durbin- Watson value for the data was 1.359, thus this indicated that there was no autocorrelation for the study variables.

Table 3: Tests for Autocorrelation

Model	Durbin-Watson
1	1.359

a. Predictors: (Constant), Banking Apps, Electronic Payment Systems, Agency Banking, Mobile Banking
b. Dependent Variable: Growth

Test for Multicollinearity

Multicollinearity was assessed using the variable inflation factor (VIF) and tolerance statistics which were demonstrated in table 4 below.

Table 4: Test for Multicollinearity

		Collinearity Statistics
Variable	Tolerance	VIF
Mobile Banking	.425	2.354
Electronic Payment Systems	.942	1.062
Agency Banking	.388	2.580
Banking Apps	.278	3.603

When VIF is larger than 10 and Tolerance is less than 0.2, multicollinearity arises. Because the VIF

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was less than 10 and most of the tolerance statistics were greater than 0.2, there was no evidence of multicollinearity on the research variables.

Correlation Analysis

To determine the strength of the association between the variables, the Pearson Correlation coefficient was used. Quantifying the strength of the link and the direction of the variables is the task at hand. This is presented in Table 5. Mobile banking was found to be positively correlated with SMEs' growth, with a correlation coefficient of 0.909 and a significance level of 0.0000.05 at the 5% level of significance. In Kenya, increased mobile banking leads to increased SME growth. Electronic payment systems were shown to be positively connected with SMEs' growth, with a correlation coefficient of 0.618 and a significance level of 0.0000.05 at the 5% level of significance. In Kenya, an increase in electronic payment systems leads to an increase in MSME growth.

With a value of 0.791 and a significance of 0.0000.05 at the 5% level of significance, agency banking was found to be positively correlated with MSMEs' growth. This means that a rise in agency banking in Kenya leads to an increase in SME growth. Banking applications were shown to have a positive correlation with MSMEs' growth, with a value of 0.910 and a significance level of 0.0000.05 at the 5% level of significance. This means that as the number of people using banking apps grows, so does the number of small businesses in Kenya.

Table 5: Pearson Correlation

		(X_1)	(X_2)	(X_3)	(X_4)	Y
Mobile Banking(X_1)	Pearson Correlation					
	Sig. (2-tailed)					
	N	31				
Electronic Payment Systems(X_2)	Pearson Correlation	.534**				
	Sig. (2-tailed)	.000				
	N	31	31			
Agency Banking(X_3)	Pearson Correlation	.754**	.478**			
	Sig. (2-tailed)	.000	.000			
	N	31	31	31		
Banking Apps(X_4)	Pearson Correlation	.933**	.483**	.768**		
	Sig. (2-tailed)	.000	.000	.000		
	N	31	31	31	31	
Growth(Y)	Pearson Correlation	.909**	.618**	.791**	.910**	
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	31	31	31	31	31

**. Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis of the Study Variables

The linearity of the relationship between the studies's dependent and independent variables was determined using regression analysis. As demonstrated in the subsections below, the results were tallied and discussed.

Multiple Regression Model Summary

Table 6 shows the value of Adjusted R-square of 0.871 implies that 87.1% of the total variance of growth of MSMEs is explained by the model. This means that 12.9% of the total variance of growth of MSMEs in Kenya cannot be explained by the model. Hence the results reveal that the independent variables (mobile banking, electronic payment systems, agency banking and banking apps) affect growth of MSMEs in Kenya. The table 6 below shows the results for variations between the dependent and independent variables.

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Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.942a	.888	.871	.14802	1.359

a. Predictors: (Constant), Banking Apps, Electronic Payment Systems, Agency Banking, Mobile Banking
b. Dependent Variable: Growth

Analysis of the Variance (ANOVA) of the Study Variables

The residuals are positive, indicating that the dependent and independent variables in the study had a substantial association. Mobile banking, electronic payment systems, agency banking, and banking apps have all had a substantial impact on MSMEs' growth in Kenya, according to ANOVA Table 7 $F_{critical}$at (4, 30) degrees of freedom is 2.69< $F_{calculated}$ 51.657 at 5% level of significance. The ANOVA table was generated from the Analysis.

Table 7: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.527	4	1.132	51.657	.000[b]
Residual	.570	26	.022		
Total	5.097	30			

a. Dependent Variable: Growth
b. Predictors: (Constant), Banking Apps, Electronic Payment Systems, Agency Banking, Mobile Banking

Coefficients of the Regression Model

The co-efficient of the regression model were obtained from the analysis and presented. The regression equation is as shown below;

$\mathbf{Y=0.557+0.312X_1+0.209X_2+0.030X_3+0.293X_4}$

Y –Growth of SMEs

$\mathbf{X_1}$–Mobile Banking

$\mathbf{X_2}$–Electronic Payment Systems

$\mathbf{X_3}$ –Agency Banking

$\mathbf{X_4}$–Banking Apps

Table 8 presents the regression coefficients results for the standard multiple regression that was conducted for the study.

Table 8: Coefficients of the Regression Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	.557	.183		3.047	.005		
Mobile Banking($\mathbf{X_1}$)	.312	.069	.452	4.499	.000	.425	2.354
Electronic Payment Systems($\mathbf{X_2}$)	.209	.048	.292	4.324	.000	.942	1.062
Agency Banking($\mathbf{X_3}$)	.030	.080	.039	.368	.716	.388	2.580
Banking Apps($\mathbf{X_4}$)	.293	.083	.440	3.534	.002	.278	3.603

a. Dependent Variable: Growth (**Y**)

When all of the independent variables are zero, the growth rate of MSMEs in Kenya is 0.557 units. The growth of MSMEs in Kenya improves by 0.312 units for every one unit increase in mobile banking. The growth of MSMEs in Kenya improves by 0.209 units when electronic payment systems expand by one unit. The growth of MSMEs in Kenya improves by 0.030 units when agency banking grows by one unit. Finally, as the number of banking apps grows

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by one unit, the number of MSMEs in Kenya grows by 0.293 units.

Hypothesis Testing

The first null hypothesis stated that mobile phone banking has no significant effect on financial growth of MSMEs in Kenya. The results indicated that mobile phone banking had a significant effect on the growth of MSMEs in Kenya as shown in the results (B_1=0.452, t=4.499 & p=0.000<0.05). Hence the study rejected H_{01} leading to the conclusion that mobile phone banking has a significant effect on the financial growth of MSMEs in Kenya.

The second null hypothesis stated that electronic payment systems have no significant effect on the financial growth of SMEs in Kenya. The results indicated that electronic payment systems had a significant effect on the growth of SMEs in Kenya as shown in the results (B_2=0.292, t=4.324 & p=0.000<0.05). Hence the study rejected H_{02} leading to the conclusion that electronic payment systems has a significant effect on the financial growth of MSMEs in Kenya in Kenya.

The third null hypothesis stated that agency banking has no significant effect on the financial growth of MSMEs in Kenya in Kenya. The results indicated that agency banking had a significant effect on the financial growth of MSMEs in Kenya as shown in the results (B_3=0.039, t=0.368 & p=0.716<0.05). Hence the study failed to H_{03} leading to the conclusion that agency banking does not have a significant effect on the financial growth of MSMEs in Kenya in Kenya.

The fourth and final null hypothesis stated that banking apps has no significant effect on the financial growth of MSMEs in Kenya in Kenya. The results indicated that banking apps had a significant effect on the growth of MSMEs in Kenya as shown in the results (B_4=0.440, t=3.534 & p=0.002<0.05). Hence the study rejected H_{04} leading to the conclusion that banking apps has a significant effect on the financial growth of MSMEs in Kenya in Kenya.

Table 9 presented the research hypotheses results on the role of digital financial inclusion on the financial growth of MSMEs in Kenya in Kenya based on the multiple regression analysis conducted in this study.

Table 9: Results of Tests of Hypotheses

Research Hypotheses	B	t	p-value	Decision
H_{01}: Mobile phone banking has no significant effect on the financial growth of SMEs in Kenya in Kenya.	.452	4.499	.000	H_{01} rejected since p=<0.05
H_{02}: Electronic payment systems have no significant effect on the financial growth of SMEs in Kenya in Kenya.	.292	4.324	.000	H_{02} rejected since p=<0.05
H_{03}: Agency banking has no significant effect on the organizational financial growth of SMEs in Kenya in Kenya.	.039	0.368	.716	H_{03} failed to reject since p=>0.05
H_{04}: Banking Apps has no significant effect on the organizational financial growth of SMEs in Kenya in Kenya.	.440	3.534	.002	H_{04} rejected since p=<0.05

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Discussion of Major Findings

Before the analysis, the data was treated to a variety of diagnostic tests in order to facilitate further studies. Shapiro Wilk was used to test normality, Durbin-Watson was used to test autocorrelation, and Variance Inflation Factors were used to test multicollinearity (VIFs). Because the sig. values were all less than 0.05, the Shapiro Wilk Test values for mobile banking, electronic payment systems, agency banking, banking apps, and the dependent variable financial growth all showed normality. The Durbin-Watson value was used to test autocorrelation. The data had a Durbin-Watson value of 1.359, which was within 1.5 and 2.5, indicating that the research variables had no autocorrelation. Variance inflation factors were used to examine the multicollinearity of predictor variables (VIFs). Multicollinearity is an undesirable scenario in which there are substantial correlations between the independent variables. When VIF is larger than 10 and Tolerance is less than 0.2, multicollinearity arises. Because the VIFs were less than 10 and the tolerance statistics were more than 0.2, there was no evidence of multicollinearity on the research variables.

Increased mobile phone banking leads to a boost in MSMEs' financial growth. This is in line with prior research (Ozili, 2018; Mader, 2018), which found that financial institutions can use mobile banking to reach out to new consumers, expand their market, and so develop financially. The use of electronic payment methods is increasing, which leads to increased financial growth for SMEs. According to a report by Chinoda and Kwenda(2019), electronic payment usage will enable SMEs to gain better global access and lower transaction costs, as well as enjoy significant benefits from higher efficiencies and revenue. Increased use of agency banking leads to a boost in SMEs' financial growth; although the relationship is insignificant Chikalipah (2017) investigated the usage of agency banking by Kenyan commercial banks and discovered that it increased bank performance. They looked at the influence of agency banking on commercial banks in their research. The use of banking apps is increasing, which leads to a boost in SMEs' financial growth. ICT may play a crucial role in meeting a number of objectives on the ICT development agenda, according to GSM(2021), by providing enterprises with a variety of options to increase their competitiveness: They provide tools (banking apps) to help people reach their goals.

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that mobile phone banking has a significant effect on the financial growth of SMEs in Kenya. The relationship between mobile phone banking and financial growth of SMEs was found to be positive. Increased mobile phone banking leads to a boost in MSMEs' financial growth. This is in line with prior research (Ozili, 2018; Mader, 2018), which found that financial institutions can use mobile banking to reach out to new consumers, expand their market, and so develop financially.

The study concluded that an electronic payment system has a significant effect on the financial growth of MSMEs in Kenya. The relationship between electronic payment systems and financial growth of SMEs was found to be positive. The use of electronic payment methods is increasing, which leads to increased financial growth for MSMEs. According to a report by Chinoda and Kwenda(2019), electronic payment usage will enable MSMEs to gain better global access and lower transaction costs, as well as enjoy significant benefits from higher efficiencies and revenue.

The study concluded that agency banking does not have a significant effect on the financial growth of MSMEs in Kenya. Although the relationship between agency banking and financial growth of MSMEs was found to be positive, increased use of agency banking leads to a boost in MSMEs' financial growth; although the relationship is insignificant Chikalipah (2017) investigated the usage of agency banking by Kenyan commercial banks and discovered that it increased bank performance. They looked at the influence of agency banking on commercial banks in their research.

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The study concluded that banking apps has a significant effect on the financial growth of SMEs in Kenya. The relationship between banking apps and financial growth of MSMEs was found to be positive. The use of banking apps is increasing, which leads to a boost in MSMEs' financial growth. ICT may play a crucial role in meeting a number of objectives on the ICT development agenda, according to GSM(2021), by providing enterprises with a variety of options to increase their competitiveness: They provide tools (banking apps) to help people reach their goals.

This study was confined to investigating the digital financial inclusion on growth of MSMEs in Kenya. The dimensions of digital financial inclusion looked at were mobile phone banking, electronic payment systems, agency banking and banking apps which accounted for 87.1 per cent variation in growth of MSMEs. It is on this basis that the researcher recommends a study be carried out to look at other digital financial inclusion dimensions not factored in the current study to ascertain the extent to which they affect growth of MSMEs.

Suggestion for further Study

The study focused on four variables of digital financial inclusion to establish their effects on financial growth MSME in Kenya. However, it is known that there are other components of financial inclusion apart from the digitalization of these four variables. This study suggested an independent examination of each of the four components of the digital financial inclusion to establish their individual effects to growth of the MSME sector, and further establish the other variables of financial inclusion.

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