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Mobile money services and the growth of the Jua Kali enterprises in Makueni county

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Abstract

This study investigated the influence of mobile money transfer on the growth of Jua Kali enterprises in Makueni County, Kenya. Mobile money platforms such as M-Pesa have become integral to informal sector businesses, enabling faster, safer, and more convenient financial transactions while expanding access to credit and savings. Using a correlational research design, primary data were collected from a stratified sample of 342 Jua Kali entrepreneurs, with 266 valid responses analyzed through descriptive statistics and multiple regression. Results show that 76.7% of respondents received more than half of their business revenue via mobile money, with a mean perceived sales improvement score of 3.93 on a five-point scale. Regression analysis revealed a significant positive relationship between mobile money usage and enterprise growth ($B = 0.470$, $p < 0.001$), confirming that greater integration of mobile money into business operations enhances revenue performance. The findings highlight mobile money as a key driver of financial inclusion and growth within Kenya's informal sector, aligning with the Technology Acceptance Model and Financial Inclusion Theory. The study recommends expanding digital infrastructure, reducing transaction costs, and providing targeted training to help entrepreneurs maximize mobile money benefits. These insights contribute to policy and practice aimed at strengthening the resilience and competitiveness of Jua Kali enterprises.

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1. Introduction

The rapid spread of mobile money services has reshaped everyday financial life across sub-Saharan Africa, opening new opportunities for financial inclusion, enterprise development, and poverty alleviation prospects. In

Kenya, adoption of mobile money, especially M-Pesa, has changed the way people and companies receive, pay and save money. Instead of relying to traditional banking systems, mobile money operates based on the network of agents and mobile phones where users can send and receive money, pay bills and manage cash without the need to have a formal bank account. This innovation has been particularly significant in rural communities, where there are very few banks and informal businesses are the main economy (Nzyoka, 2020).

Yet, the link between mobile money use and the success of microenterprises is not always straight forward. Some researches indicate that mobile payments present a high level of financial performance, which increases cash flow, decreases transaction costs, and improves efficiency of the Small and Medium Enterprises (Kambi & Onyiego, 2022). Other researches warn that the advantages are possibly over-reported or skewed, particularly in those regions with little digital literacy or limited access to mobile phones. Besides, the detailed means through which mobile money can enhance the business, whether through enhancing working capital, improving supplier relations or enhancing customer retention are usually proposed but not wholly tested.

The informal economy in Kenya, mainly composed of the micro and small enterprises (MSEs), operate outside the regulated economy especially in the open-air markets, roadside workshops, and temporary buildings commonly known as the Jua Kali sector. The term "Jua Kali" literally means "hot sun" in Kiswahili, reflecting the sector's origins in outdoor artisanal and small-scale activities such as metalwork, carpentry, tailoring, mechanics, and other service-based or production-oriented enterprises (Magambo & Omwenga, 2020).The term "Jua Kali" literally means "hot sun" in Kiswahili, reflecting the sector's origins in outdoor artisanal and small-scale activities such as metalwork, carpentry, tailoring, mechanics, and other service-based or production-oriented enterprises (Magambo & Omwenga, 2020). According to the Micro and Small Enterprises Authority (MSEA), these businesses are characterized by low capital investment, limited access to formal credit, and reliance on household or community labor, with microenterprises employing fewer than 10 people and small enterprises employing between 10 and 49 people (MSEA, 2023). Similarly, the United Nations Industrial Development Organization (UNIDO) points out that these businesses are the backbone of employment and income-generating activities in developing economies, particularly within the informal sector (United Nations Industrial Development Organization, 2024). Therefore, Jua Kali businesses in Kenya are micro and small businesses, which operate in the informal economy and they are key in employment creation, poverty reduction, and in advancing local innovations.

This paper attempts to address the gaps by examining the impact of mobile money transfer services on revenue growth among Jua-Kali enterprises in rural Kenya. It acknowledges that mobile money is not just a tool for sending and receiving money but also a financial structure that can influence business decision making, risk management strategies, and investment selection. Particularly, it looks at whether regular use of mobile money is related to higher monthly revenues, while taking into account the size of the enterprise, type of business, and the characteristics of the owner. It also examines how financial literacy and perceptions of risk shape this relationship, adding a behavioral dimension on digital finance adoption.

The theoretical foundation of this paper is based on the field of digital finance and development, which suggests that entrepreneurial potential can be unlocked when appropriate financial tools are used. Mobile money has the potential to allow microenterprises to become more flexible and adaptive to shocks and reinvest profits more efficiently, as it allows them to make real-time payments, and reducing their dependence on cash. However, these are not guaranteed benefits. They rely on knowledge of users, the quality of mobile networks and accessibility of complementary services like digital loans, savings and insurance. Mobile money is therefore to be regarded as a component of a bigger process of financial access and not a solution to it.

Kenya provides a unique setting for this analysis. The relationship between digital finance and enterprise activity is both robust and lively as mobile money usage is over 80 percent of the adult population and the informal sector is active. Nzyoka (2020) reported how the application of mobile money has allowed SMEs in Mavoko Sub-County to get financial services in an easier manner. Kambi and Onyiego (2022) also demonstrated that mobile banking, electronic money, agency banking, and digital banking applications have all made a significant contribution to the growth of MSMEs.

This study contributes to the literature in three important ways. To begin with, it examines the utilization of mobile money transfers to facilitate sales on microenterprises and whether this utilization is linked to the increase in revenues. Secondly, it measures the perceived extent to which mobile money has increased sales, using a structured scale that captures business owners' direct experiences. Thirdly, it explores the proportion of total sales received through mobile money, providing an enterprise-level view of digital finance adoption and its role in day-to-day business operations.

By focusing on the actual usage of mobile money in sales transactions, the paper provides practical evidence of how digital finance tools influence microenterprise revenue. It highlights the extent to which business owners perceive mobile money as contributing to increased sales and quantifies the share of sales conducted through mobile money platforms. This makes the study valuable for policymakers, financial service providers, and enterprise support organizations seeking to understand how mobile money is shaping business operations in rural Kenya.

The remainder of the paper is structured as follows. Section 2 reviews the existing literature on mobile money and Jua-Kali enterprise development. Section 3 explains the methodology, including data sources,

sampling, and analytical framework. Section 4 presents the results, Section 5 discusses their implications for policy and practice, and Section 6 concludes with recommendations for future research.

2. Literature Review

Mobile money refers to the use of mobile devices to perform financial transactions such as deposits, withdrawals, transfers, savings, and payments without requiring a formal bank account. It has emerged as one of the most transformative financial innovations in the 21st century, particularly in developing economies where access to formal banking infrastructure remains limited (N'dri & Kakinaka, 2020). Unlike traditional banking, mobile money leverages telecommunication networks and agent-based systems to provide affordable and accessible services. Globally, the spread of mobile money has been rapid and far-reaching. Talom and Tengeh (2020) reports that there are over 1.35 billion registered mobile money accounts worldwide, with transactions valued at over USD 1 trillion annually. Sub-Saharan Africa accounts for nearly half of the world's mobile money users and close to two thirds of transaction values throughout the world. Africa has experienced the development of mobile money due to low banking coverage, high mobile phone coverage and regulatory environments that have allowed digital finance solutions to flourish.

Kenya, in particular stands out as the global pioneer of mobile money innovation. The launch of M-Pesa in 2007 marked a financial services revolution by extending affordable financial services to millions of previously unbanked citizens. The M-Pesa service is utilized by more than 80 per cent of the adult population in Kenya today, and transactions conducted by the system occupy over 50 per cent of the national GDP every year (Kenya National Bureau of Statistics (KNBS), 2023; Wachira & Njuguna, 2023). Mobile money systems such as M-Pesa and other mobile payment services are currently providing various services such as merchant payments, microloans, savings accounts, and international remittances. To businesses, mobile money has emerged to be a crucial resource in terms of payment options, ease of liquidity, supplier payments and customer reach. The Jua Kali market which consists of small-scale craftsmen, merchants, and other informal service providers in the Kenyan setting has particularly been benefiting from mobile money transfers. These businesses are usually unable to access formal banking sector because of lack of collateral, informality and structures. The mobile money offers them a safe, flexible and affordable medium of conducting their day-to-day businesses. As Onyango, Eijdenberg, Obange, and Masurel (2023) observe, mobile money enables informal entrepreneurs to operate transactions more effectively, attract more customers, and get access to digital loans and savings services. Therefore, mobile money is not just the provision of financial service but the lifeline of entrepreneurship survival and expansion.

Access to low-cost and trusted financial services by every socio-economic group has been recognized as a cornerstone in poverty alleviation, entrepreneurship and economic expansion. It has been acknowledged by the World Bank and the United Nations as one of the principal facilitators of the Sustainable Development Goals, and specifically SDG 1 (No Poverty), SDG 8 (Decent Work and Economic Growth), and SDG 9 (Innovation and Infrastructure). Mobile money has emerged as a driver of financial inclusion. Evidence from Burkina Faso, for instance, shows that mobile money increased household welfare by instituting remittances and providing smooth consumption (N'dri & Kakinaka, 2020). Similarly, Osabutey and Jackson (2024) found that mobile money improves financial inclusion at personal and business levels by reducing the cost of entry into the financial services. Kenya's experience is illustrative. Nzyoka (2020) showed that mobile money increased SMEs' access to secure and affordable financial services in Mavoko Sub-County. Kambi and Onyango et al. (2023) reported that digital finance tools like mobile money directly improved liquidity and financial growth among MSMEs. Furthermore, Mbithi and Mwikya (2021) observed that mobile payments explained 60% of MSME performance in Kitengela, underscoring the centrality of digital platforms in enterprise success.

Nonetheless, the literature also reveals constraints to financial inclusion through mobile money. Aluoch (2021)noted that high transaction fees and service downtimes limited the effectiveness of mobile money in Nakuru's hospitality industry. Karanja (2020) found that structural and demographic factors such as business size, owner gender, and distance to banks shaped utilization of mobile money in Kiambu County. Njuguna (2023) similarly observed that although affordability and availability of mobile money services enhanced SME performance, their overall effectiveness was not statistically significant. These findings suggest that although mobile money is a major inclusion factor, its usage and its positive effects vary depending on the context, sector and demographic characteristics of users.

On the question of relationship between mobile money and the growth of an enterprise, studies have revealed that mobile money transfers affect revenue growth, profitability, efficiency in operations and customer base increase. Mobile money promotes the growth of the enterprise by enhancing the number of customer transactions, better cash flow management, customer retention, and increased market reach. Research shows that there are solid relationships between mobile money and sales performance. For instance, Talom and Tengeh (2020) found that mobile money services contributed to 73 percent of the change in SMEs in Douala, Cameroon. Similarly, Mararo (2020) established that mobile payments played a major role in SME growth in Nakuru. These results imply that mobile money will improve the sales performance by providing the customers with convenience and which boosts the level of transactions.

Mobile money also makes a contribution in efficient cash flow management. Mbithi and Mwikya (2021) note that mobile money transfer assisted MSMEs in boosting their liquidity and allowing suppliers to receive payments on time. Makhandia, Miroga, and Otinga (2022) also found that the mobile money service such as savings and credit enhanced financial growth among Kakamega SMEs. Mobile money enhances working capital management and operation costs of enterprises by cutting the time taken to make transactions as well as guaranteeing secure transaction transfer. Mobile money adoption also helps to retain and attract the customer. Onyango et al. (2023) demonstrated that SMEs in Busia Town used mobile transfer services such as M-Pesa to increase customer confidence, improve the speed of service provision, and develop relationships with customers in the long term. As mentioned by Parashar, Gupta, Sharma, and Bandyopadhayay (2023) ease of use, security and familiarity were good predictors of continued use of the mobile app, which indirectly generated customer loyalty. These results indicate that mobile money improves the customer satisfaction and promotes repeat patronage.

Further evidence links Mobile money with market growth. Khorow (2023) established a strong relationship between mobile money payments, financing, and competitiveness of SMEs in Garissa County. Similarly, Njuguna (2023) found that the provision of value-added services in mobile money platforms enabled the expansion of SMEs to new markets. Mobile money enables even the informal business to access new clients and grow their businesses by overcoming geographic and infrastructural barriers. Collectively, all these studies affirm that mobile money is a powerful enterprise growth driver though its impact remains shaped by sector-specific dynamics and contextual challenges.

Despite its transformative potential, mobile money faces challenges that prevent its effectiveness. First, Mobile money charges are higher than those of traditional banking, and they are still high in comparison to the small profit margins of informal businesses (Aluoch, 2021). Secondly, SIM swap fraud, identity theft, and cybercrime are examples of fraud and security risks that have eroded the confidence of users in digital platforms (Osabutey & Jackson, 2024). The liquidity constraints of the agents, especially in the rural regions, introduce the efficiency inefficiency in the deposits and withdrawals (Onyango et al., 2023). Digital literacy gaps also limit entrepreneurs from benefiting from advanced services such as digital savings or loans (Karanja, 2020). Additionally, gender imbalances, where women entrepreneurs are regularly disadvantaged by cultural practices and income gaps, which influence phone access and phone usage of services (Njuguna, 2023) is another factor limiting entrepreneurs. These issues underscore the need to have enabling policies, infrastructural development, and customized solutions to ensure the use of mobile money to maximize enterprise growth.

From the theoretical standpoint, the Technology Acceptance Model (TAM) and Financial Inclusion Theory are used to explain the theoretical basis of mobile money adoption. According to TAM, the perceived ease of use and usefulness are the aspects that determine technology adoption. Ariffin and Lim (2020) have identified trust to mediate adoption of mobile payment among young professionals in Malaysia and Parashar et al. (2023) revealed that ease of use was the most important predictor of further app usage during the Covid-19 period. TAM is a useful framework in the Jua Kali context, which involves adoption of mobile money services which is convenient, useful, and trusted by the entrepreneurs. The Financial Inclusion Theory therefore emphasizes on quality, access, and usage of financial services as enabler to economic growth.

It views financial access as a pathway to poverty reduction and enterprise development (Osabutey & Jackson, 2024). Applying this theory underscores mobile money's role in democratizing finance and enabling marginalized enterprises to participate in the economy. Together, TAM and Financial Inclusion Theory explain both the behavioral and structural dimensions of mobile money adoption among Jua Kali enterprises.

Although evidence strongly links mobile money to enterprise growth, several gaps remain in the literature. Much of the research has focused on urban formal SMEs (Mararo, 2020; Mbithi & Mwikya, 2021) neglecting informal microenterprises in rural areas. While aggregate impacts of mobile money on financial performance are established, few studies have disaggregated these effects into specific dimensions such as customer transactions, cash flow efficiency, retention, and market expansion. Contextual variations are also underexplored. While Aluoch (2021) and Njuguna (2023) highlight urban challenges, little is known about rural Jua Kali sectors where infrastructure gaps and informality are more severe. This study addresses these gaps by focusing on Jua Kali enterprises in Makueni County, disaggregating mobile money into four indicators, and analyzing their specific effects on enterprise growth

3. Methodology

3.1. Research Design

The study adopted a correlational research design within a quantitative research approach. This design was appropriate for assessing the nature and strength of the relationships between the mobile money transfer and the growth of Jua Kali enterprises. The design supported the use of inferential statistical techniques, particularly multiple regression analysis, to test whether variations in digital finance usage predict variations in enterprise growth.

3.2. Target Population and Sampling

The target population consisted of 2,350 registered Jua Kali entrepreneurs in Makueni County (Makhandia et al., 2022). These entrepreneurs are involved in various sectors, including carpentry, construction, shoe-making, car wash services, food vending, and welding. According to Mugenda and Mugenda (2015) selecting a target population with a clear connection to the research focus ensures that the data collected is relevant and accurately reflects the phenomena under investigation.

A stratified random sampling technique was used to ensure representation of various sectors in the population. To ensure fair representation, the number of respondents sampled from each sector was taken proportionate to its actual size in the target population. This study focused on entrepreneur's using mobile money transfer services. The study employed purposively sampling to select respondent's who agreed that they use mobile money transfer services in there business transactions as shown in Table 1.

Table 1. Sample size.

Category	Population	Sample size
Carpentry	502	72
Construction and materials production	622	89
Shoe and leather goods making	146	21
Car wash and repair services	202	31
Street food vendors	548	82
Traditional art (Wood carvings, beadwork, paintings)	168	24
Painting and decorating services	162	24
Total	**2350**	**342**

3.3. Data Collection

A structured questionnaire was employed to collect primary data. This approach was considered appropriate as it allows for standardization of questions and, thus, consistency and comparability of the answers (Saunders, Lewis, & Thornhill, 2019). The questionnaire comprised closed-ended, structured questions that were in line with the study variables, making it possible to capture quantifiable data that was relevant to the study objective.

3.4. Data Processing and Analysis

The data collected were analyzed using both descriptive and inferential statistics to provide a comprehensive understanding of the role of digital finance in the development of Jua Kali businesses in Makueni County. A linear regression analysis was employed to determine the effect of mobile money transfers on the growth of Jua Kali enterprises. The regression equation was expressed as.

$$Y = \beta 0 + \beta 1X1 + \epsilon \quad (1)$$

Where;

Y – Growth.

β1 – Regression Coefficient.

X1 – Mobile Money Transfer.

ϵ - Error term.

4. Results and Discussion

4.1. Introduction

A total of 342 questionnaires were issued to the study participants. Among these 266 were completed and returned, yielding a response rate of 77.7%, which is robust and sufficient for statistical inference. Also, the test for reliability recorded a Cronbach's Alpha of 0.877, which was acceptable.

Table 2. Demographic analysis.

Characteristic	Category	Percentage (%)
Gender	Male	74.1
	Female	25.9
Age group (Years)	26–35	48.5
	Others	51.5
Education level	Secondary education	41.0
	University degree	6.0
	Others (Primary, vocational, etc.)	53.0
Business experience	1–3 Years	57.5
	Others	42.5
Type of enterprise	Construction & materials production	26.3
	Street food vending	24.4
	Carpentry	22.2
	Car wash & repair services	9.4
	Painting & decorating	6.8
	Traditional art	6.0
	Shoe/Leather goods	4.9

4.2. Demographic Analysis

Table 2 represents demographic analysis of Jua Kali entrepreneurs. The results indicate that the majority of respondents were male (74.1%), while females accounted for 25.9%. Most participants were aged between 26 and 35 years (48.5%), reflecting a youthful entrepreneurial population. In terms of education, 41.0% had attained secondary education, whereas only 6.0% held university degrees, suggesting relatively low formal education levels among the respondents. Business experience data revealed that 57.5% of entrepreneurs had been operating for one to three years, indicating that most enterprises were relatively young. Regarding enterprise types, construction and materials production (26.3%), street food vending (24.4%), and carpentry (22.2%) were the most common, while smaller proportions engaged in car wash and repair services (9.4%), painting and decorating (6.8%), traditional art (6.0%), and shoe/leather goods (4.9%). These findings underscore the diversity of Jua Kali enterprises and highlight the importance of flexible digital finance solutions tailored to their varied needs.

4.3. Mobile Money Transfer and Growth of Jua Kali Enterprises

The study applied descriptive statistical analysis to examine perceived impact of mobile money transfers on revenue growth using four indicators: increase in customer transactions, cash flow efficiency, frequency of repeat customers, and customer base expansion. These were measured on a five-point Likert scale, where 1 represented a very small extent and 5 represented a very great extent, to capture the degree to which mobile money contributes to enterprise operations.

Table 3. Perceived impact of mobile money transfers.

Indicator (Mobile money services)	Mean
Increase in customer transactions	3.80
Cash flow efficiency	3.95
Frequency of repeat customers	4.10
Customer base expansion	3.87
Composite mean	3.93

The pertinent results are presented in Table 3. The mean for increase in customer transactions was 3.80, which indicates that mobile money transfers were perceived to have contributed positively to sales volumes and the number of customer transactions, albeit to a moderate extent. This suggests that while the convenience of mobile money reduces payment barriers and enables smoother transactions, it does not necessarily translate into a dramatic surge in new sales for most enterprises. The effect may be limited by production capacity, customer purchasing power, or the fact that mobile money often substitutes cash transactions rather than generating entirely new demand.

Cash flow efficiency recorded a mean of 3.95, reflecting a strong perception that mobile money improved the management of financial inflows. This finding implies that enterprises benefited from quicker and more reliable access to working capital, reduced risks associated with handling cash, and improved tracking of payments through mobile records. Such efficiency enables timely procurement of inputs and payment of workers, which in turn stabilizes business operations. However, issues such as transaction costs and occasional network challenges may moderate the overall impact on liquidity.

The highest mean score was observed for frequency of repeat customers, at 4.10. This indicates that mobile money has been most influential in enhancing customer loyalty and encouraging repeat purchases. The convenience of cashless payments, coupled with the trust built through digital receipts and secure transactions, appears to foster long-term relationships between enterprises and their clients. This suggests that mobile money not only facilitates one-time sales but also plays a vital role in sustaining customer retention, which is crucial for steady revenue growth.

Customer base expansion registered a mean of 3.87, signifying that mobile money has moderately enabled enterprises to reach new customers, particularly those outside the immediate locality. The ability of customers to pay remotely or at their convenience reduces geographical barriers, thereby extending the market reach of small enterprises. Nonetheless, the effect is less pronounced compared to customer retention, possibly due to limited logistics and delivery options or constraints related to digital literacy among some potential customers.

Overall, the composite mean of 3.93 suggests that respondents generally perceived mobile money services as contributing to revenue growth to a great extent. These results highlight that mobile money plays a significant role in strengthening the operational efficiency of Jua Kali enterprises, particularly through improved cash flow management and customer loyalty, while its effects on expanding sales volumes and attracting new customers, though positive, remain relatively moderate.

In addition, integration depth was assessed by asking respondents to indicate the proportion of their total business revenue received through mobile money platforms, using predefined percentage categories (0%, 1–25%, 26–50%, 51–75%, and 76–100%). This dual approach combined subjective perceptions of mobile money's usefulness with an objective measure of its integration into business operations.

Table 4. Percentage of business revenue received through mobile money transfer.

Response	Frequency	Percentage
0	10	3.8%
1–25%	15	5.6%
26–50%	37	13.9%
51–75%	132	49.6%
76–100%	72	27.1%
Total	**266**	**3.8%**

Table 4 further shows that 49.6% of respondents reported receiving between 51% and 75% of their total income via mobile money, while 27.1% received between 76% and 100%. Only 3.8% of enterprises reported not using mobile money at all. These results confirm that mobile money services are not only widely adopted but also deeply embedded in the financial practices of Jua Kali enterprises in Makueni County.

The combination of a relatively high composite mean score and the large proportion of revenue being processed via mobile money underscores its centrality as both a payment mechanism and a driver of growth. The disaggregation of mobile money into four dimensions adds further nuance, showing that beyond sales improvement, entrepreneurs particularly value security and trust, speed of transactions, and expanded customer reach. These results highlight how mobile money contributes holistically to the operational capacity of informal enterprises, supporting efficiency, market expansion, and financial stability.

4.4. Regression Analysis

When the four indicators of mobile money were entered separately into the regression model, each demonstrated a positive and statistically significant relationship with enterprise growth, with coefficients ranging between 0.115 and 0.120 as shown in Table 5.

The coefficient for increase in customer transactions was 0.120 ($p = 0.051$), suggesting that an improvement in customer transactions through mobile money was associated with an increase in enterprise growth. Although the p-value is marginally above the conventional 0.05 threshold, it still indicates a near-significant influence, implying that easier and more frequent transactions facilitated by mobile money can translate into business expansion.

Cash flow efficiency recorded a coefficient of 0.118 ($p = 0.043$), which is statistically significant at the 5% level. This finding underscores the role of mobile money in enhancing liquidity and enabling enterprises to manage their financial operations more effectively. Efficient cash flow allows businesses to settle obligations promptly, reinvest earnings, and avoid disruptions in operations, thereby supporting growth.

The coefficient for frequency of repeat customers was 0.115 ($p = 0.045$), also statistically significant at the 5% level. This implies that enterprises that reported higher repeat patronage through mobile money enjoyed measurable growth benefits. Repeat customers contribute to consistent revenue streams, reduced marketing costs, and stronger business sustainability, indicating that mobile money enhances not only transactional convenience but also customer loyalty.

Finally, customer base expansion had a coefficient of 0.117 ($p = 0.053$), which is positive but marginally above the significance threshold. This result suggests that while mobile money helps enterprises tap into new

markets by reducing geographic barriers and broadening reach, its effect on growth is somewhat weaker compared to customer retention and cash flow efficiency.

Taken together, the results indicate that all four mobile money indicators contribute positively to enterprise growth, with cash flow efficiency and customer loyalty emerging as the most statistically robust predictors. The consistency of coefficients, all clustered between 0.115 and 0.120, reinforces the conclusion that mobile money services have a broad-based yet relatively balanced influence across different dimensions of enterprise operations. Although two predictors fell slightly short of conventional significance, their positive coefficients suggest practical relevance, pointing to the need for enterprises and policymakers to strengthen mobile money adoption strategies as a pathway for supporting growth in the informal sector.

Table 5. Regression coefficients.

Model	Unstandardized coefficients	Standardized coefficients	t	Sig.	Collinearity statistics
	B	Std. error	Beta		
1	(Constant)	-0.132	0.512	—	-0.258
Increase in customer transactions	0.120	0.061	0.154	1.967	0.051
Cash flow efficiency	0.118	0.058	0.149	2.034	0.043
Frequency of repeat customers	0.115	0.057	0.145	2.018	0.045
Customer base expansion	0.117	0.060	0.151	1.950	0.053

Note: a. Dependent Variable: Growth

Regression analysis was further conducted using the composite mobile money score (Mean of the four indicators) as the predictor variable. The results were presented in Table 6. The regression coefficient for mobile money use was $\beta = 0.470$, $p < 0.001$, indicating a strong and statistically significant effect. This means that for every one-point increase on the Likert scale measuring mobile money integration, monthly revenue growth increases by 0.470 points, holding all other variables constant. The descriptive findings are supported by the high coefficient, with majority of over three-quarters (76.7%) of the respondents indicating that over half of their total revenue was received through mobile money transfer platforms. This highlights the important role of mobile money as a primary channel for business transactions.

Table 6. Regression coefficient.

Coefficients[a]								
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
1	(Constant)	-0.145	0.506		-0.287	0.775		
	Mobile Money	0.470	0.056	0.603	8.350	0.000	0.564	1.773

Note: a. Dependent Variable: Growth

5. Conclusion and Recommendations

The main research problem of this study was to determine how mobile money transfer services contribute to the growth of Jua Kali enterprises in Makueni County, Kenya. The paper focused on four key objectives which include: growth of customer transactions, efficiency of cash flows, repeat customer frequency, and growth of customer base while examining their role in the development of the enterprise. The results provided strong evidence through both descriptive and regression analysis that mobile money is deeply integrated in the financial activities of Jua Kali enterprises and plays a central role in the growth of these enterprises. Descriptive findings showed that 76.7% of the respondents make over 50% of their overall revenue using mobile money transfer platforms. Furthermore, the aggregate mean score of 3.93 across the four indicators suggest that to a large extent, the entrepreneurs perceive mobile money to be a key financial tool contributing to the growth of the Jua Kali enterprise.

Among the indicators, frequency of repeat customers recorded the highest mean score (M = 4.10), pointing to the role of mobile money in cultivating loyalty and sustaining long-term customer relationships. Cash flow efficiency was also rated highly (M = 3.95), reflecting the ability of mobile money to facilitate timely liquidity, reduce delays in payments, and improve financial planning. Increase in sales and expansion of the customer base had slightly lower means (3.80 and 3.87 respectively), though still within the "great extent" category, indicating that while entrepreneurs recognized growth benefits, the direct impact on expanding markets and increasing absolute sales volumes was more modest.

Regression analysis confirmed that each of the four indicators contributed positively to enterprise growth, with coefficients ranging between 0.115 and 0.120. While increase in customer transactions and customer base expansion were only marginally significant at the 5% level, their positive coefficients highlight their practical importance in the growth process. The regression model using the composite score produced a coefficient of $\beta = 0.470$ ($p < 0.001$), underscoring a strong and statistically significant relationship between mobile money adoption and enterprise growth. This evidence aligns with Financial Inclusion Theory, which posits that access to financial services enhances economic participation, and with the Technology Acceptance Model, which emphasizes the roles of perceived usefulness, trust, and ease of use in driving adoption.

These findings are consistent with prior research in both Kenyan and international contexts. Talom and Tengeh (2020) identified that in Cameroon mobile money transfers explained 73 percent of SME turnover, this finding is comparable to the strength of the coefficient in this study. Similarly, Mbithi and Mwikya (2021) demonstrated that mobile money payments and transfers represented 60 percent of MSME performances in Kenya, which supports the notion that digital financial tools are the key to business success. On the same note, Mugenda and Mugenda (2015) confirmed that mobile money transfers, savings, and credit services significantly promoted financial growth of SMEs in Kakamega, whereas Khorow (2023) established a strong positive correlation between mobile money services and the performance of SMEs in Garissa County. Taken together, and considering the current research into the context of the existing literature, one can observe that the mobile money is an important motivator of financial inclusion and business growth in a wide variety of settings.

Further insights were gained after looking closely to each indicator. The frequency of repeat customers had a high mean score, which indicates that mobile money improves customer loyalty by making transactions convenient, secure, and efficient. The chances of customers coming back to businesses that employ mobile money payment methods increase, since the risks and inconveniences linked to handling cash are reduced. This finding is consistent with Onyango et al. (2023) who reported that mobile money transfers increased customer trust in Busia Town. Another advantage of mobile money was cash flow efficiency. Irregular cash flow and the inability to access credit can lead to liquidity problems for the majority of the informal enterprises. Therefore, Mobile money solves this problem by providing instant payment receipt, prompt settlement of suppliers, and improved record keeping. The findings are in line with the study by Mbithi and Mwikya (2021) who observed that mobile transfers boosted liquidity and financial planning among MSMEs.

By contrast, the lower and yet positive averages recorded for increased customer transactions and expansion of customer base highlight to the important nature of the influence of mobile money. Although mobile money transfers make transactions easier, its contribution towards sales volumes and market growth might be checked against the competition, quality of products and local demand. Karanja (2020) points out that the size of the business, gender, and geographic coverage are structural and demographic elements that determine how far mobile money can translate to new market opportunities. Therefore, while mobile money provides the infrastructure for growth, other enterprise-level and contextual variables determine how effectively it translates into increased sales and market penetration.

Taken together, these results support the conclusion that mobile money transfers substantially and positively affect the growth of Jua Kali enterprises in Makueni County. Its contributions are most evident in strengthening customer relationships and improving liquidity, both of which are crucial for enterprise resilience in the informal sector. The findings affirm that mobile money is more than a transaction tool; it is a financial infrastructure that sustains competitiveness, resilience, and growth in informal economies. Based on these findings, the study makes several recommendations directed at policymakers, financial institutions, mobile service providers, and entrepreneurs themselves.

At the policy level, there is a need to expand digital infrastructure into the rural counties. Network instability and liquidity shortages among the agents operating mobile money shops is one of the major challenges affecting the implementation of mobile money, especially in the rural areas (Onyango et al., 2023). Improving reliability and accessibility requires investment in stable mobile networks, better agent float management and regulatory policies that promote competition amongst the service providers. Moreover, implementing policies that minimize transaction costs would position mobile money to be less costly to the microenterprises that operate with a very thin margin. Aluoch (2021) emphasized that high transaction charges significantly affect the adoption in the hospitality industry in Nakuru; the same forces may limit informal businesses in the rural settings like Makueni County.

Another important recommendation is investment in capacity building. The Jua Kali business operators have a low level of digital financial literacy, which means that they are unable to maximize the use of mobile money services in their business operations, except through performing basic transfers. Training programmes need to be designed such that they can be trained on how to utilize mobile platforms in paying suppliers, keeping records and accessing mobile loans and savings. Kambi and Onyiego (2022) pointed out that financial literacy is the key to converting the mobile money adoption into sustainable benefits in business. Such capacity-building initiatives can be incorporated in the enterprise development activities at county level, with a special focus on informal enterprises.

For financial institutions and mobile service providers, product innovation should be aligned with the unique needs of informal enterprises. Beyond providing payment platforms, service providers should develop

tailored solutions such as micro-insurance, enterprise credit facilities, and digital bookkeeping tools integrated into mobile money platforms. These services would enhance the capacity of informal enterprises to manage risk, access working capital, and formalize their operations. Safaricom's recent integration of business-to-business payments into M-Pesa provides a good starting point, but further innovation is needed to reach microenterprises that often operate at the edge of formal markets.

Entrepreneurs themselves also have a role to play. Adoption of mobile money should be accompanied by broader efforts to improve customer service, product quality, and market competitiveness. Mobile money creates opportunities for financial management and customer engagement, but without complementary business practices, its full benefits cannot be realized. Encouraging Jua Kali entrepreneurs to adopt record-keeping habits, use mobile money data for credit applications, and leverage digital platforms for marketing would amplify the gains from mobile money adoption.

Beyond immediate recommendations, this study points to several areas for future research. First, while this study focused on growth indicators such as transactions, liquidity, retention, and base expansion, future studies should examine broader dimensions of performance such as profitability, employment generation, and resilience to economic shocks. Second, comparative studies across counties would shed light on contextual differences, particularly between rural and urban enterprises. Third, longitudinal research designs are needed to establish causal pathways between mobile money adoption and enterprise growth. Cross-sectional studies, such as the present one, provide valuable insights into associations but are limited in capturing long-term impacts. Fourth, research should consider the gendered dimensions of mobile money adoption, given evidence that women entrepreneurs often face barriers to full participation (Njuguna, 2023).

The study also contributes to theory. By affirming the central role of accessibility, trust, and perceived usefulness in mobile money adoption, the findings reinforce the propositions of the Technology Acceptance Model. The evidence that mobile money enhances inclusion and supports enterprise sustainability validates Financial Inclusion Theory in the context of rural informal enterprises. However, the study also extends these theories by demonstrating that adoption is not uniform across indicators. Entrepreneurs may prioritize certain benefits, such as liquidity and customer retention, over others like market expansion, suggesting that theoretical models should account for differential adoption outcomes.

In conclusion, the study affirms that mobile money is not merely a financial tool but an institutional infrastructure underpinning the growth of informal enterprises. In Makueni County, its role is evident in sustaining liquidity, fostering customer loyalty, and modestly expanding market reach. These contributions are indispensable for the survival and growth of Jua Kali enterprises, which form the backbone of Kenya's informal economy. By integrating mobile money into their operations, entrepreneurs can enhance resilience, competitiveness, and long-term sustainability. However, to unlock its full potential, supportive policies, tailored financial products, and targeted capacity-building initiatives are essential. Mobile money has already proven to be a transformative force; the task ahead is to deepen its integration into enterprise development strategies to ensure that informal businesses not only survive but thrive in a digital financial ecosystem.

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