

## Research Article

### MOBILE MONEY, FINANCIAL INCLUSION AND ECONOMIC DEVELOPMENT IN KENYA

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#### ABSTRACT

Mobile money has become a pivotal tool in advancing financial inclusion, particularly in regions where traditional banking infrastructure is sparse or entirely absent. This digital financial service allows users to conduct financial transactions via mobile devices, enabling access to financial services for those who are unbanked or under banked to finance the much need economic activities. The integration of mobile technology with financial services has catalyzed a profound shift in how financial inclusion is approached and achieved and what effect it has on economic development. The study had the objectives of determining the effect of mobile money on economic development in Kenya, establishing the effect of financial inclusion on economic development in Kenya, establishing the relationship between mobile money and financial inclusion in Kenya and investigating the effect of mobile money and financial inclusion on economic development in Kenya. Data was collected from the Central Bank of Kenya financial reports and from Economic Surveys published by the National Bureau of Statistics for the period 2017 to 2022. Descriptive statistics which estimated the means, the standard deviations, the skewness and kurtosis were undertaken. Correlation analysis was done to establish the relationships between the study variables. Regressions focusing on each of the four objectives were estimated. The regressions revealed that mobile money has a significant positive effect on economic development and financial inclusion has a significant positive effect on economic development. Both mobile money and financial inclusion positively and significantly influence each other. When analysed jointly the revelation was that both mobile money and financial inclusion jointly significantly influence economic development. Mobile money and financial inclusion are important to the economy and when formulating policies the economic managers cannot overlook incorporating policies for promoting mobile money and totally embracing financial inclusion to spur economic development. Transparency and accountability are also essential for ensuring that the members of the population have the requisite financial mechanisms which instils confidence of the financial market so as to enable access to finances for funding the much needed economic activities.

**Keywords:** Mobile money, financial inclusion, economic development, GDP, Statistics, Kenya.

#### INTRODUCTION

Mobile money is gaining ground in many economies as many transactions are currently being mobilized through mobile money transfers such as M-Pesa, M-Shwari, M-Kesho and other digital currencies such as internet banking. Ensuring that all individuals and businesses, regardless of their economic standing, have access to valuable and affordable financial services is not just a necessity but a priority for sustainable development (Smith & Thomas, 2024). These services, which include savings, loans, insurance, and payment systems, are crucial for the economic empowerment of the most vulnerable populations. By providing these groups with the tools needed for economic participation mobile money enables these groups to embrace financial inclusion which not only helps to reduce poverty but also stimulates broad economic development and stability. This inclusivity is especially vital in developing countries, where access to traditional banking can be limited, underscoring the importance of innovative financial solutions such as mobile money to bridge the gap in financial services (Tripathy & Singh, 2022).

Mobile money has revolutionized financial access across the globe, particularly in regions where traditional banking infrastructures are sparse or non-existent. This digital financial service allows users to perform monetary transactions through mobile devices, providing an essential gateway to financial services for millions (Sapre, 2021). Its impact is particularly pronounced in developing economies, where it transforms mobile phones into virtual wallets, enabling users to save,

send, and receive money with unprecedented ease and security (Osabutey & Jackson, 2024; Tengeh & Gahapa, 2020). This service is primarily accessible through USSD codes or smartphone applications, which is particularly valuable in areas with minimal traditional banking infrastructure. By transforming how financial transactions are conducted, especially in developing regions, mobile money offers a critical lifeline to financial services for those who might otherwise remain unbanked (Bersch *et al.*, 2021).

The key features of mobile money enhance its appeal and utility. Accessibility is a major advantage; it does not require a physical bank branch, allowing users in rural or underserved areas to perform transactions effortlessly from their phones (Etim & James, 2023). In terms of functionality, mobile money services are not limited to basic transactions but extend to deposits, withdrawals, transfers, bill payments, and purchases. Furthermore, some platforms expand their offerings to include loans, savings accounts, and insurance policies, broadening the scope of financial services available to users. Security measures such as PINs and encryption protect users against the loss of funds, adding a layer of safety that cash transactions lack (Acharya & Joshi, 2020). Even if a mobile device is lost or stolen, the security protocols in place ensure that the funds remain safe, and retrievable through customer service channels. Another significant benefit is cost-effectiveness; mobile money typically incurs lower costs than traditional banking, which often includes various fees and charges that can accumulate, particularly for low-income users (Maringo, 2023).

In Kenya, the impact of mobile money, most notably through Safaricom's M-PESA, Airtel mobile money and mobile money access from banks has been profound since its launch in 2007. Its widespread adoption was fueled by its simplicity and the extensive

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penetration of mobile phones across the country (Abdulhamid, 2020). In particular, M-PESA has been pivotal in driving financial inclusion, enabling millions of previously unbanked Kenyans to access financial services. It has also facilitated economic empowerment by aiding small and micro-businesses that operate outside the formal banking system, providing them with the means to manage finances more effectively and securely (Kiggundu & Ogola, 2019). The social impact of mobile money in Kenya includes enhancing household incomes through remittances that support families and reduce poverty levels. However, the journey is not without challenges. The regulatory environment needs to keep pace with the rapid evolution of mobile money to protect consumers effectively while encouraging innovation. Additionally, the effectiveness of mobile money relies on digital literacy and access to mobile devices, which can be a barrier for some potential users (Twumasi *et al.*, 2021).

Financial inclusion is a crucial aspect of economic development, aiming to provide individuals and businesses across socioeconomic backgrounds access to useful and affordable financial services (Ratnawati, 2020). These services include banking, loans, equity, and insurance, which are essential for full participation in the economy. The primary goal of financial inclusion is not only to reduce poverty but also to empower individuals and enable economic and social development. The significance of financial inclusion lies in its ability to offer individuals control over their financial affairs, leading to significant improvements in family welfare, and fostering overall economic growth (Ozili, 2020). It ensures that financial products and services are delivered in a responsible and sustainable way. Financial inclusion has been identified as an enabler for 7 of the 17 Sustainable Development Goals set by the United Nations, underscoring its broad impact on eradicating poverty, reducing gender disparities, promoting decent work, and fostering economic growth (Van Tulder *et al.*, 2021).

Globally, financial inclusion strategies are tailored to address the specific needs of those who are left out of the financial system. Various barriers to financial inclusion include lack of enough income, high transaction costs, lack of necessary documentation, and distance from financial institutions (Gabor & Brooks, 2020). Technology, particularly mobile banking and digital payments, has emerged as a transformative tool to overcome many of these barriers, providing widespread access to financial services at a reduced cost (Attia & Fund, 2020). In many developing countries, significant strides have been made to enhance financial inclusion through mobile money services, which allow users to perform financial transactions directly from their mobile devices without the need for a bank account. This innovation has been particularly successful in sub-Saharan Africa, where traditional banking infrastructure is limited and many people rely on mobile networks to conduct financial transactions (Tchouassi, 2022).

Mobile money has become a pivotal tool in advancing financial inclusion, particularly in regions where traditional banking infrastructure is sparse or entirely absent (Ahmad, Green & Jiang (2020). This digital financial service allows users to conduct financial transactions via mobile devices, enabling access to financial services for those who are unbanked or under banked. The integration of mobile technology with financial services has catalyzed a profound shift in how financial inclusion is approached and achieved (Nzyoka, 2020). The essence of mobile money's contribution to financial inclusion lies in its accessibility. With a simple mobile device, users can perform a variety of financial transactions such as sending and receiving money, paying bills, and purchasing goods and services (Amoah, Korle & Asiana, 2020). This accessibility is crucial in rural and remote areas, where residents may live miles away from the nearest bank branch but can still participate in the financial system

through their phones. Mobile money platforms, have shown remarkable success, expanding rapidly among populations previously excluded from financial services (Sapovadia, 2022).

Beyond mere transactional capabilities, mobile money also fosters economic empowerment by providing more sophisticated financial products. These include savings accounts, loans, and insurance products that are accessible directly from users' mobile phones (David-West, Iheanachor, & Umukoro, 2020). Such services can have transformative effects on individuals and communities, enabling small-scale entrepreneurs to grow their businesses, families to manage financial risks more effectively, and communities to increase their overall economic resilience. However, the integration of mobile money into the financial inclusion framework is not without challenges. Issues such as regulatory hurdles, cyber security threats, and the need for digital literacy among potential users can impede the effectiveness of mobile money services. Moreover, while mobile money can reach a vast network of users, the depth of financial inclusion it achieves often varies. Many users might only engage in basic transactions rather than utilizing the full suite of financial services available (Aker & Mbiti, 2023). This study will be guided by the Technology Acceptance Model (TAM) which entrenches mobile money as an aspect of technological advancement quivered at widening the scope of financial infrastructure, and the Innovation Diffusion Theory which recognizes the role of mobile money in digitization and financial innovations.

## Research Problem

Financial inclusion is vital for Kenya's economic development, aligning with the country's Vision 2030 and the Sustainable Development Goals (SDGs). It aims to provide accessible, affordable, and quality financial services to all population segments, thereby enhancing economic participation and growth. The benefits of such inclusivity are manifold, fostering a more equitable distribution of economic resources and enabling more comprehensive socio-economic development (United Nations, 2023). While Kenya has made considerable strides towards improving financial inclusion, significant challenges are eminent. Recent reports show that financial inclusion rates have improved markedly, with a substantial portion of the adult population now accessing some form of financial service. However, despite these gains, the inclusion rate is not yet universal, and significant disparities persist, particularly affecting women, the elderly, and residents of remote areas (Business Daily Africa, 2021). Data from the World Bank's Global Findex Report highlights a recent decline in account ownership between 2017 and 2021, indicating that about seven million Kenyan adults remain completely outside the financial system. This underscores persistent challenges, particularly among marginalized groups, and highlights the ongoing need for targeted financial inclusion efforts (United Nations, 2023).

Mobile money platforms have revolutionized financial access in Kenya, offering a range of services from money transfers to payment facilities, crucially extending financial services to previously underserved populations. The success of mobile money in enabling day-to-day financial transactions, even in remote areas, suggests it has significant potential to address some of the core barriers to financial inclusion (Business Today Kenya, 2022).

Existing studies have shown the transformative impact of mobile money on financial inclusion. Globally, the introduction of mobile money services has led to a significant increase in the number of adults with financial accounts. The World Bank's Global Findex data highlights a 50% increase in the worldwide share of adults with a financial account over the past decade, largely fueled by the rise in

digital financial services (World Bank, 2023). Avom, Bangaké and Ndoya (2023) assessed the effects of mobile money on financial inclusion across Africa, revealing a positive impact of mobile money adoption on financial inclusion, specifically noting an increase in financial inclusion rates by 12–14%. Kim (2020) assessed the role of mobile money in improving the financial inclusion of Nairobi’s urban poor and found that these urban poor populations have limited access to bank accounts compared to middle- and high-income groups but have a strong need for reliable savings service. However, while these studies underscore how mobile money has facilitated increased access to financial services, they also reveal limitations and gaps, particularly regarding the depth of its impact over the long term. This study seeks to address the research gaps by answering the question, what is the effect of mobile money on financial inclusion and economic development in Kenya?

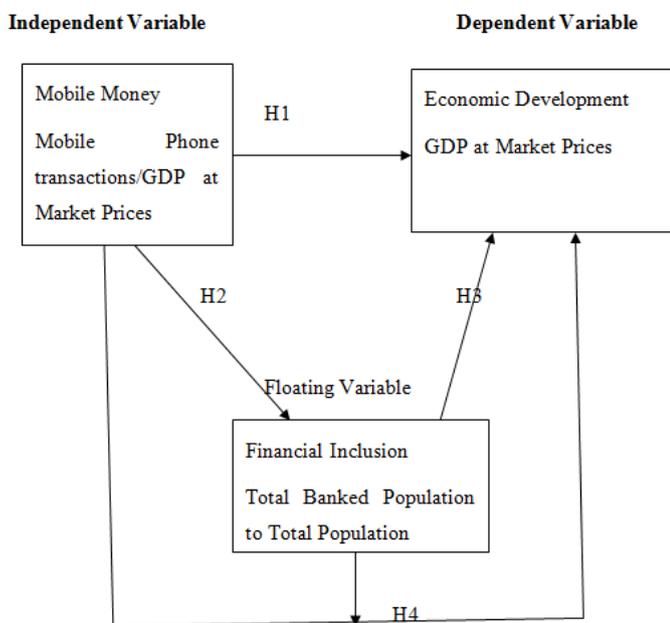
**Objectives of the Study**

The objectives of the study is to assess the effect of mobile money on financial inclusion and economic development in Kenya.

The specific Objectives are;

- i. To determine the effect of mobile money on economic development in Kenya
- ii. To evaluate the effect of financial inclusion on economic development in Kenya
- iii. To establish the relationship between mobile money and financial inclusion in Kenya
- iv. To investigate the effect of mobile money and financial inclusion on economic development in Kenya

**CONCEPTUAL FRAMEWORK**



**Figure 1: Conceptual Model**

Mobile money is presumed to positively impact on economic development as the more people who have access to mobile money, the more financial transactions they will effect and the more activities they will finance and the more developed the economy is expected to be. This is shown by H1. Mobile Money enhances financial inclusion as more people are able to access financial services. This is shown by H2. The higher the level of financial inclusion the more activities can be financed and the more developed the economy is expected to

be. This is shown by H3. Money coupled with financial inclusion is expected to move the economy to the next level in terms of economic development. The more entrenched the mobile money, the more financially included the citizens are and the more developed the economy is likely to be. This is shown by H4.

The summary hypotheses of the study are therefore;

- H0<sub>1</sub>:** The effect of mobile money on economic development is not significant
- H0<sub>2</sub>:** The effect of financial inclusion on economic development is not significant
- H0<sub>3</sub>:** The relationship between mobile money and financial inclusion is not significant
- H0<sub>4</sub>:** The effect of mobile money and financial inclusion on economic development is not significant

**MATERIALS AND METHODS**

The study employed a causal research design to establish the relationship between mobile money, financial inclusion and economic development in Kenya. The period under study ranged from 2015 to 2022 which was considered long enough to enable the researcher to derive conclusions and recommendations based on the study findings. Mobile money was measured using a ratio of total mobile money transactions /GDP at Market Prices. Financial inclusion was measured using total banked population to total population. Economic development which was in this case was the dependent variable was measured using GDP at market prices. The natural log of GDP at Market Prices was calculated as the measure of the variable on Economic Development. The study used secondary data which was extracted from the National Bureau of Statistics, and National Economic Surveys which were available at the Government of Kenya website. Descriptive statistics was used to test the magnitude of the study variables. Regression analysis was used to establish the effect of mobile money, financial inclusion and economic development in Kenya. Four regression models were estimated as shown below;

The first regression established the effect of mobile money on economic development.

$$Y = \alpha + \beta_1 X_1 \dots\dots\dots 1$$

Where Y is economic development, X<sub>1</sub> is mobile money, α is the constant term, and β<sub>1</sub> is the regression coefficient of predictor variable.

The second regression determined the effect of financial inclusion on economic development.

$$Y = \alpha + \beta_2 X_2 \dots\dots\dots 2$$

Where Y is economic development, X<sub>2</sub> is financial inclusion, α is the constant term, and β<sub>2</sub> is the regression coefficient of predictor variable.

To establish the relationship between mobile money and financial inclusion two regressions were estimated (Third Regression and Fourth Regression) aimed at estimating what courses what? Is it mobile money that drives financial inclusion or vice versa?

The third regression determined the effect of mobile money on financial inclusion.

$$X_2 = \alpha + \beta_1 X_1 \dots\dots\dots 3$$

Where  $X_2$  is financial inclusion,  $X_1$  is mobile money,  $\alpha$  is the constant term, and  $\beta_1$  is the regression coefficient of predictor variable.

The fourth regression estimated the effect financial inclusion on mobile money.

$$X_1 = \alpha + \beta_2 X_2 \dots\dots\dots 4$$

Where  $X_1$  is mobile money,  $X_2$  is financial inclusion,  $\alpha$  is the constant term, and  $\beta_2$  is the regression coefficient of predictor variable.

The fifth regression established the effect of mobile money and financial inclusion on economic development

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 \dots\dots\dots 5$$

Where  $Y$  is economic development,  $X_1$  is mobile money,  $X_2$  is financial inclusion,  $\alpha$  is the constant term, and  $\beta_1$  and  $\beta_2$  are the regression coefficients of predictor variables.

## DATA ANALYSIS AND RESULTS

### Descriptive Statistics

The variables of the study were economic development (dependent) and mobile money and financial inclusion (independent variables). The number of observations in the study were 32. In terms of statistical estimates, economic development had a minimum of 0 and a maximum of 2.876 and a mean of 1.891 while its standard deviation was 1.913. The standard deviation was higher than the mean which portrays a high level of variation. The data observations were skewed to the right (z-value=1.483) and the data observations were normally distributed (z-value=1.764).

Table 1: Descriptive Statistics

	N	Min Stat.	Max Stat.	Mean Stat.	Std Dev Stat.	Skew		Kurt		
<b>Statistics</b>							<b>Z-Value Stat.</b>	<b>Std Error</b>	<b>Z-Value Stat.</b>	<b>Std Error</b>
<b>Economic Development</b>	32	0	2.876	1.891	1.913	1.483	0.004567	1.764	1.94451	
<b>Mobile Money</b>	32	0	0.345	0.142	0.195	0.147	0.92784	1.408	2.91856	
<b>Financial Inclusion</b>	32	0	0.451	0.265	0.378	-1.018	1.83710	1.938	0.81953	

Source: Researcher 2025

Mobile money had a minimum value of 0 and a maximum value of 0.345 and averaged 0.142 with a significant variation of 0.195. The data observations on mobile money were skewed to the right (z-value=0.147) and the observations were normally distributed (z-value=1.408). Financial inclusion was 0 at its lowest and hit a high of 0.451 with a calculated mean of 0.265 and a standard deviation of 0.378. The skewness value of (z-value=-1.018) is interpreted to be skewness towards the left and the data was not normally distributed (z-value=1.938)

### Correlation Analysis

Table 2: Correlations

<b>Pearson Correlations</b>		<b>Economic Development</b>	<b>Mobile Money</b>	<b>Financial Inclusion</b>
<b>Economic Development</b>	Pearson Correlation	1	0.556	0.645
	Sign.		0.004	0.118
<b>Mobile Money</b>	Pearson Correlation	0.556	1	0.857
	Sign.	0.004		0.019
<b>Financial Inclusion</b>	Pearson Correlation	0.645	0.857	1
	Sign.	0.118	0.019	

Source: Researcher 2025

Table 2 shows that there was a significant positive relationship between mobile money and economic development (z-value=0.556, p-value=0.004). The relationship between economic development and financial inclusion was not significant although positive (z-value=0.645, p-value=0.118). As for the relationships for the mobile money variable, there was a significant positive relationship between mobile money and financial inclusion (z-value=0.857, p-value=0.019).

Regression Results

Table 3: Mobile Money and Economic Development

Model Summary								
Model	R	R Square		Adjusted R Square		Std. Error of the Estimate		
1	.0895 <sup>a</sup>	.0291		.0117		2.45314		
a. Predictors: (Constant), Mobile Money								
ANOVA <sup>a</sup>								
Model		Sum of Squares		Df	Mean Square	F	Sig.	
1	Regression	86.7620		1	84.662	60.851	.000 <sup>b</sup>	
	Residual	38.4911		31	1.095			
	Total	125.2531		32				
a. Dependent Variable: Economic Development (GDP at Market Prices)								
b. Predictors: (Constant), Mobile Money								
Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Beta	Lower Bound
1	(Constant)	-.387	.697		-1.167	.0981	-1.872	1.358
	Mobile Money	0.233	4.561	.1083	1.576	.0000	11.017	19.047
a. Dependent Variable: Economic Development (GDP at Market Prices)								

Source: Researcher, 2025

The R value shows that there was a positive relationship between mobile money and economic development as denoted by the positive 8.95% but was considered significant. The R<sup>2</sup> denotes that mobile money explains 2.91% of economic development meaning that 97.09% of economic development is explained by other factors other than mobile money.

The ANOVA shows an F-value of 60.851 and a significant p-value of 0.000 revealing that the effect of mobile money on economic development is significant. **We therefore reject the null hypothesis that the effect of mobile money on economic development is not significant.** The coefficient of the constant term is negative and is not significant (coefficient=-0.387, t=-1.167, p-value=0.0981). This is interpreted to mean that in the absence of financial inclusion economic development decreases with 0.387 for every unit though the decrease is not significant. The effect of mobile money on economic development is significant (coefficient=0.233, t=1.576, p-value=0.000). Therefore for every unit of economic development 0.233 comes from mobile money and this contribution is significant. However 0.767 for every unit of economic development comes from other factors other than mobile money.

Table 4: Financial Inclusion and Economic Development

Model Summary								
Model	R	R Square		Adjusted R Square		Std. Error of the Estimate		
1	.0654 <sup>a</sup>	.0357		.0218		2.6715		
a. Predictors: (Constant), Financial Inclusion								
ANOVA <sup>a</sup>								
Model		Sum of Squares		Df	Mean Square	F	Sig.	
1	Regression	74.432		1	64.852	41.671	.001 <sup>b</sup>	
	Residual	47.369		31	3.049			
	Total	121.801		32				
a. Dependent Variable: Economic Development (GDP at Market Prices)								
b. Predictors: (Constant), Financial Inclusion								
Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Beta	Lower Bound
1	(Constant)	-	.657		-1.734	.571	-2.435	1.378
	Financial Inclusion	.328	2.532	.784	1.546	.000	11.016	19.531
a. Dependent Variable: Economic Development (GDP at Market Prices)								

Source: Researcher, 2025

Table 4 reveals that there is a positive correlation between financial inclusion and economic development as denoted by 6.54% ( $R=0.0654$ ) of financial inclusion explaining economic development. Additionally, 3.54% of economic development is explained by financial inclusion ( $R^2=0.354$ ). The ANOVA portrays a significant F-value of 41.671 ( $p\text{-value}=0.001$ ). The study therefore **Rejects the null hypothesis that the effect of financial inclusion on economic development is not significant**. The coefficients reveals a constant term ( $\text{cons}=-0.328$ ) which is not significant ( $t=-1.734$ ,  $p\text{-value}=0.571$ ). This infers that in the absence of financial inclusion, economic development deteriorates by 32.8% but the statistics reveals that this is not significant. The coefficient of financial inclusion is significant ( $\text{coef}=0.493$ ,  $t=1.546$ ,  $p\text{-value}=0.000$ ) denoting that there is a significant positive effect of financial inclusion on economic development.

**Table 5: Mobile Money and Financial Inclusion**

Model Summary								
Model	R	R Square		Adjusted R Square		Std. Error of the Estimate		
1	.754 <sup>a</sup>	.496		.387		4.64516		
a. Predictors: (Constant), Mobile Money								
ANOVA <sup>a</sup>								
Model		Sum of Squares		Df	Mean Square	F	Sig.	
1	Regression	74.684		1	84.662	41.861	.003 <sup>b</sup>	
	Residual	37.656		31	2.085			
	Total	122.340		32				
a. Dependent Variable: Financial Inclusion								
b. Predictors: (Constant), Mobile Money								
Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.3491	.786		-1.359	.673	-1.672	1.458
	Mobile Money	0.7694	3.457	.634	1.569	.000	13.012	19.873
a. Dependent Variable: Financial Inclusion								

Source: Researcher, 2025

Table 5 shows that there is a positive relationship between financial inclusion and mobile money which is quite high of 75.4%. Additionally 49.6% of financial inclusion is explained by mobile money meaning that 50.4% of financial inclusion is explained by other factors other than mobile money.

The ANOVA reveals an F-Statistic of 41.861 which is significant ( $p\text{-value}=0.003$ ). **The study therefore rejects the null hypothesis that the effect of mobile money on financial inclusion is not significant**. The coefficients shows a constant term ( $\text{cons}=-0.3491$ ) which is not significant ( $t=-1.353$ ,  $p\text{-value}=0.673$ ) which means that without mobile money financial inclusion decreases at rate of 34.91%. This emphasizes the importance of mobile money in ensuring that a larger part of the population is included in the country's financial market economy. The effect of mobile money on financial inclusion reveals that mobile money positively and significantly impacts on financial inclusion ( $\text{coef}=0.7694$ ,  $t=1569$ ,  $p\text{-value}=0.000$ ).

**Table 6: Financial Inclusion and Mobile Money**

Model Summary								
Model	R	R Square		Adjusted R Square		Std. Error of the Estimate		
1	.785 <sup>a</sup>	.373		.285		2.54526		
a. Predictors: (Constant), Financial Inclusion								
ANOVA <sup>a</sup>								
Model		Sum of Squares		Df	Mean Square	F	Sig.	
1	Regression	54.842		1	64.842	45.781	.004 <sup>b</sup>	
	Residual	35.757		31	3.195			
	Total	90.599		32				
a. Dependent Variable: Mobile Money								
b. Predictors: (Constant), Financial Inclusion								
Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.468	.589		-1.278	.0351	-1.743	1.458
	Financial Inclusion	0.753	1.564	.759	2.576	.005	9.019	18.675
a. Dependent Variable: Mobile Money								

Source: Researcher, 2025

The relationships and effects of financial inclusion on mobile money is shown in Table 6. Table 6 portrays that there is a positive relationship between financial inclusion and mobile money (R=0.785). Additionally 37.3% of mobile money is explained by financial inclusion meaning that 62.7% of mobile money is explained by other factors other than financial inclusion. The ANOVA has an F-Statistic of 45.781 and a p-value of 0.004. These values reveals a significant effect of financial inclusion on mobile money. **The study hypothesis that the effect of financial inclusion on mobile money is not significant is rejected.** The coefficients estimates a constant term of 0.468 which is significant (t=-1.278, p=0.0351) which means that without financial inclusion there will still be mobile money possibly to make calls and other communication related activities. The coefficient of financial inclusion of (coef.=0.753, t= 2.576, p-value=0.005) and the p-value denotes that the effect of financial inclusion on mobile money is significant.

The results of Table5 and Table 6 reveals that mobile money has a significant effect on financial inclusion and on the converse financial inclusion has a significant effect on mobile money. This supports the slogan of “the chicken and the egg paradigm” in the sense that whether it is the chicken that came first or the egg, one must have given rise to the other for them to exist. The explanatory power of mobile money on financial inclusion was 49.6% compared to that of financial inclusion on mobile money which was 37.5%. Financial inclusion is a factor of other aspects other than mobile money. Commercial banks and informal financial institutions are important in enabling the country to attain financial inclusion. On the other hand mobile money is used for financial transactions but the mobile phone or cell phone is also used for communication. Therefore money transferred through the mobile phone also enables other activities to be facilitated through the mobile in the name of mobile money.

**Table 7: Effect of Mobile Money and Financial Inclusion on Economic Development**

Model Summary								
Model	R	R Square		Adjusted R Square	Std. Error of the Estimate			
1	.157 <sup>a</sup>	.106		.075	2.65987			
a. Predictors: (Constant), Mobile Money, Financial Inclusion								
ANOVA <sup>a</sup>								
Model		Sum of Squares		Df	Mean Square	F	Sig.	
1	Regression	86.572		2	43.231	21.374	.006 <sup>b</sup>	
	Residual	35.687		30	2.099			
	Total	122.259		32				
a. Dependent Variable: Economic Development (GDP at Market Prices)								
b. Predictors: (Constant), Mobile Money, Financial Inclusion								
Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Lower Bound	Upper Bound
1	(Constant)	.784	.618		-1.086	.0644	-1.679	1.579
	Mobile Money	0.925	7.346	-1.417	1.906	.044	-20.547	7.504
	Financial Inclusion	1.086	8.052	2.451	-1.958	.017	5.084	49.118
a. Dependent Variable: Economic Development (GDP at Market Prices)								

Source: Researcher, 2025

Table 7 reveals that there is a positive relationship between the predictor variables (mobile money and financial inclusion) and economic development (R=0.157). Mobile money and financial inclusion combined explains 10.8% of economic development inferring that 89.2% of economic development is explained by other factors other than mobile money and financial inclusion. The ANOVA reveals an F-Statistic of 21.374 and a p-value of 0.006 inferring that the effect of mobile money and financial inclusion on economic development is statistically significant. **The study therefore Rejects the Null Hypothesis that mobile money and financial inclusion have no significant effect on economic development.** The constant term is positive and not significant (cons=0.784, t=-1.086, p-value=0.0644) denoting that in the absence of mobile money together with financial inclusion the economy will still experience economic development to the level of 78. 4% but misses the significance mark with 0.014 (p=0.064) and therefore considered as not significant. This means that mobile money and financial inclusion are important in impacting on development of the economy but other factors that are important in spurring economic development should not be ignored. The effect of mobile money when combined with financial inclusion to influence economic development reveals coefficients which are positive and significant. The coefficient of mobile money (coef.=0.925, t=1.906, p=0.044) shows that mobile money spurs economic development significantly. Additionally financial inclusion has a positive significant effect on economic development (coef.=1.086, t=-1.958, p-value=0.017).

When the two variables (mobile money and financial inclusion) are combined together to predict economic development the explanatory power of both variables increase from 2.91% (mobile money as the only predictor) and from 3.57% (financial inclusion as the sole predictor) to 10.6% (mobile money and financial inclusion combined). Therefore combining the two variables increases the predictive power. When put together the predictor variables (mobile money and financial inclusion) retains the positive effect and both remain significant in influencing economic development whether individually or combined. The constant terms remain consistently insignificant.

## CONCLUSIONS AND RECOMMENDATIONS

The study sought to investigate the effect of mobile money and financial inclusion on economic development in Kenya. This broad objective was achieved by firstly, examining the effect of mobile money on economic development; secondly, evaluating the effect of financial inclusion on economic development; and third, by establishing the relationship between mobile money and financial inclusion. Fourth or lastly was to investigate the effect of mobile money and financial inclusion on economic development in Kenya. Data was analysed using descriptive statistics and regression model. The findings revealed that mobile money has a significant positive effect on economic development, financial inclusion has a positive significant effect on economic development and that mobile money and financial inclusion jointly have a significant positive impact on economic development. The effect of mobile money on financial inclusion was also estimated and revealed a strong positive relationship between the two study variables either way (the direct and the converse). What is commonly referred to as the "Cat and Mouse Game" in terms of "what causes what or what came first" infers a strong effect of each on the other and vice versa. Thus mobile money and financial inclusion are important to an economy in as they are both catalysts for economic development. Policies aimed at spurring economic development should include the financial sector while recognizing the importance of mobile money as a parameter that fast tracks financial inclusion. Additionally entrenching mobile money in an economy requires a vibrant financial sector that has embraced financial inclusion. For the economy to leverage on mobile money and financial inclusion to mobilize finances needed for economic development, the financial sector needs to be vibrant and the economy should be free of corruption for expenditures to be enough to finance the much needed economic activities.

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