



# The Social-Economic Impact of the Growth of Mobile Money Business in Kasama Town, Zambia

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**Abstract:** The paper looks at the social-economic impact brought about by the flourishing mobile money business in Kasama town. Zambia, like many other African countries such as Kenya, Nigeria and Ghana has embraced the new financial paradigm to enhance trade, job creation and economic growth. Over a few years after its inception in Zambia, mobile money business has shown some great signs of growth and expansion. The study therefore evaluates how this growth has translated into improvement of the well beings of the participants. The study broadly attempted to assess the social-economic impact of mobile money business on mobile money booth operators and their customers in Kasama town. Narrowly, the study wanted to assess the contribution of mobile money business to employment creation in Kasama town, increase in the levels of withdraws and deposits with time as a sign of business growth and also identify other social-economic factors that have been improved by mobile money business. The study used primary data that was obtained from both mobile money booth operators and their customers through researcher administered questionnaire. The study excluded from participation all customers that were not currently residents of Kasama town. Multivariate regression analysis was used with the consideration of four dependent variables: service satisfaction, number of withdraws, number of deposits and great job opportunity which were regressed on the predictor variables: mobile network and clientele. In making inference, we considered the following parameter of reference from regression findings: correlation coefficient, standard error and coefficient of determination ( $R^2$ ). We further considered significant F from the ANOVA to see how statistically significant are our results were. We considered a P-value of 0.05 as a threshold for rejecting our set null hypotheses. The findings were basically that mobile network and clientele had positive impact on job creation, service satisfaction and the levels of deposits and withdraws. The study establishes that, mobile money business has created about 64% of employment to youths within the sector. On the other hand, the study infers that the mobile networks and growth in the clientele of certain mobile money booth don't necessarily imply a one-way direction; increase in the number of deposits or withdraws. An operator may have an increase in either withdraws or deposits following an increase in clientele. These findings are vital and give a conjecture of easy prediction of what may be expected if the sector continues with innovative transitions.

**Keywords:** Mobile Network, Mobile Money, Booths Ownership, Employment, Withdraws, Deposits, Clientele

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## 1. Introduction

The birth of mobile phones on the African continent has significantly improved human life in many angles. To have efficient and effective communication was the main driver of the introduction of mobile phone networks. However, with time and increase in technological advancement, the birth of new needs that may depend on this technology has been seen. Mobile phones service improvement has been seen because of the growth, improvement and innovation recorded in information and communication technology area. R.

Duncombe [7] in "Understanding the Impact of Mobile Phones on the Livelihoods in Developing Countries." postulates that facilitating communication and enabling capital formation, have been identified as a key innovative technology in support of livelihoods, notably in Information and Communication Technology for Development (ICT4D).

Unlike in the developing world where there has been a greatly recorded growth in both technological and scientific development and advancement resulting in many related

developments, African countries have continued to lag behind in these areas, leading to many failures in many areas that require development. Technology relating to financial services has been one area in which there has been both low growth and sluggish innovation, leading to slow per capita improvement and collective financial growth.

Financial service innovations and improvement have arguably led to many successes in countries where they have been achieved. The birth and sustainability of mobile money applications and services in Zambia and many African countries will mean increased efficiency in the financial sector as it enables financial transactions from one account to another electronically.

Kasama town in the Northern part of Zambia is the regional headquarters with an estimated district population of 91,056, is generally a rural province like Northwestern, Western, Muchinga and Luapula provinces that have not seen a significant growth in the banking sector as the major financial sector, given their low economic activities and very few high-income individuals and businesses. This means that the birth of mobile money business that has low capital requirement and speedy financial transactions may create a new financial and economic narrative.

Mobile money transactions usually take many forms in which they are effected. Groupe Spéciale Mobile Association (GSMA); a global administrator of Type Allocation Code (TAC), which is used as a modality for creating the International Mobile Station Equipment Identity Number (IMSEIN) has been tracking the progress of the mobile money industry through the State of the Industry Report on Mobile Money since 2011, indicated in its 2015 publication that the popular mobile money transfer (MMT) services that existed were: phone to phone money transfer; phone to bank/bank to phone money transfer, phone to company/organization money transfer, bank to company/organization money transfer, phone to phone airtime credit transfer and phone to phone airtime top-ups [8].

In Africa, the pioneers of mobile money business are said to be Safaricom of Kenya who introduced the M-PESA in 2007, where Vodafone is technically a minority shareholder (40%). The service was dubbed “an innovative payment service for the unbanked.” The service registered a quick and significant growth within its few months of registration. Hughes [10] explains that within the first month Safaricom had registered over 20,000 M-PESA customers, well ahead of the targeted business plan. It further quickly captured a significant market share for cash transfers, and grew to 17 million subscribers by December 2011 in Kenya alone. This rapid growth was attributed to the low cost and transactional flexibility. This significantly meant efficient in financial sector and business circles, which would in turn spur economic growth.

For a long time, the ordinary people in the countryside of most African countries have had it difficult to access banking services. This has been owed to many factors that may include distance to banking services and low incomes among the people that makes them not afford the banking costs. The birth of mobile money services seems to be a gateway to financial

liberties. Aker [2] explains that, because formal financial services, especially banks, remain largely out of reach of rural and poorer urban Africans, mobile money has been hailed as a mean of bringing these un(der)served customers within the reach of financial services.

In the case of Zambia, the mobile services beyond banking have seen many hard and transitioning days. For a long time, many people made money transfer services through other means like the Zambia postal service, through its service called “Swift Cash.” It remained for a long time the only mean by which money could be electronically sent, together with Western Union, offered under the same roof.

By the year 2007, Swiftcash was the largest domestic money transfer modality under the operation of Zampost. Hougaard [9] explains that Zampost had made an estimation that projected that the services would have at least 80% of the domestic formal money transfer market. He further states that indicated there was an awareness and trust of Swiftcash as the preferred channel, as long as there is a post office in the receiving town. The challenge that Swift cash began to face as a modality was the unavailability of the post office outlets, given that there were only 223 postal outlets countrywide. Therefore, it appeared that the footprint, rather than fees, became the biggest challenge to large-scale market penetration.

The coverage challenges faced by the Zampost’s swift cash led to an innovation and the birth Zoon, which began its services as a method for payment for cotton farmers. Zoon then became the first company to effectively launch mobile financial services in Zambia in 2009. Rapidly, loyalty was shifting from the Swift Cash to the new service that had sprung across the county and in great proximity to each other. The platform was using the mobile phone networks for the existing mobile phone operators: Zamtel, Airtel and MTN. Later in 2012, Airtel and MTN entered the market following their well understanding of the business, so they could also offer mobile money services. This meant that the players had increased and the service coverage thereby increasing customer choices.

Despite the entry into the market by the three mobile telephone operators, Zoon continued to have some significant market share such that in 2015, the market share of Zoon agents was estimated at 33 percent, whereas Airtel and MTN both held 27 percent of the national mobile money market. As opposed to the telephone network mobile money service when a customer was required to have an account, Zoon operated more like Zampost’s Swiftcash where a code/PIN was generated which the recipient of the money sent would use to effect a withdraw. On the other hand, mobile phone networks came with spurring and attractive innovations for their customers. Donovan [6] indicates that Airtel and MTN, contrastingly, aim to create a ‘network effect’ through customer accounts – customers cannot send money without an account, higher fees are charged when transacting money to non-users and intensive marketing and promotions are used to attract customers to join the network.

## 2. Problem Statement

For a long time, the Zambian financial sector has generally been dominated by Commercial Banks, Investment banks and Financial Lending Institutions. These have been the basis of many financial transactions ranging from salary payment, investment and consumption loans, security management and transfer payment, among other services. However, the sector has proved to have a serious delimitation on places that are generally rural by setting; limiting its investment benefit and subsequently economic growth. This means that the rural and peri-urban populations have remained potentially untasted and excluded from financial liberty.

The introduction of mobile money services was aimed at expanding the financial service coverage to include places that had no banks to ease the money service transactions. This means that there would be both easy access and efficient financial transactions. It is said that any intervention that is implemented must have a positive impact on the people it targets. The majority of Zambians fall in the category of unbanking class. Therefore, mobile money services become their banks. The growth of mobile money business therefore carries a mammoth task to try and debunk the narrative that the rural setting has no investment and financial potential. What we have not adequately examined however is how the advent of mobile money services have impacted the social-economic aspects of people's lives. The assumption that mobile money business is a viable financial sector in the rural setting can only be supported by the specific and multiplier social-economic impact it renders to both the players and the customers.

## 3. Literature Review

### 3.1. Banking Services in Rural Setting

The banking sector has for a long time been the main medium of both banking and financial payment. This dependability means that the services are supposed to be spread countrywide. However, a larger proportion of the country's population live in peri-urban and rural areas where the majority are either poor or have very low incomes to manage the costs that come with banking including account maintenance charges. More than 60 percent of the productive Zambian population resides in the rural areas and enhancing financial inclusion in the rural economy may imply increasing financial inclusion for the country as a whole [12]. The challenges in the financial sector mean that both Government and the private sector need to work together in the creation of an enabling environment and provision of financial services and products for the rural areas. Mobile money services, which are part of the digital financial services, become critical to achieving meaningful financial inclusion in Zambia. The Zambian rural population that remains significantly underserved or not served at all, plays a significant role in the contribution to the national wealth. Strengthening of rural financing would unearth and strengthen the rural potential. MOF postulates that increasing access to financial services

and products by rural households in Zambia is cardinal to reducing poverty, creation of employment and wealth and attracting meaningful industrial development in rural areas that can lead to sustainable economic growth for the country at large [12].

### 3.2. The Role of Financial Sector in Social-Economic Development

Basically, development across the world evolves around finance. All economic activities that governments and corporates engage in are aimed at bringing about some financial value. Every year, the government of Zambia strikes cooperative agreements with investment entities to invest in different sectors of the economy in order for them to yield profit and pay a portion of their financial revenue to government in form of taxes. These finances that government gets from investors are put in different sectors both social (like education and health) and investment sectors (like power generation and tolling of roads) with the aim of creating social economic benefit to the general population.

Typically, the financial sector possesses a crucial role in the payment system in an economy. Lee, J. [11] indicates that the financial sector plays the role of payment in several ways, so he indicates that the financial sector provides the economy with medium of payment through issuing of notes, holding demand deposits and honouring the checks that are drawn up demand deposits. Tokareva et al. [15] additionally point out that, this creates some level of efficiency and brings about economic growth. It hence means that all the players in the sector have a pivotal role. The economy would otherwise be rendered a barter kind of system if the financial sector players never existed as a collection.

### 3.3. Transactional Costs Relating to Mobile Money

Normally mobile money business involves a dealership where they have an account with the mobile telephone network provider who approves the dealership. The mobile money operator is then allowed to do deposits and withdraws at agency level and accrues some loyalties/bonuses. A registered customer can save their money as well as make withdraws at the Agent's booth. The withdraws are made at a cost on the withdrawer. The money saved, no matter the amount does not accrue any interest. It seems at this point that mobile money services are just a medium of savings and facilitators of financial transaction like paying bills and cash transfers.

Depositors do not receive interest on their electronic accounts and bear the risk of loss of value through inflation. They pay the cost of transferring and withdrawing money, but there is no charge for depositing money [4]. In Kenya, the graduated withdrawal fee pays for the cost of the M-Pesa account, ranges from about 0.5% for large transfers to 20% for the smallest. The costs of transfer are 10% for the smallest transfers, falling to 0.5% at transfers of Kshs 20,000, and to 0.16% for Kshs 70,000. In Zambia, the transaction charges are equally put in bands. Son [14] reveals the mobile

money transactions and charges for the period 2022 to 2023 as below.

**Table 1.** 2022-2023 mobile money withdraws and transaction charges in Zambia.

Withdraw Amount (K)	Charge (K)
Between 1 to 150	2.5
Above 150 to 300	5
Above 300 to 500	10
Above 500 to 1000	20
Above 1000 to 3000	30
Above 3000 to 5000	50
Above 5000 to 10,000	100

These seemingly high transaction charges on withdraws have not deterred demand increase for mobile money services. New entrants into the business and the springing across the country has been an order.

**Table 2.** 2022-2023 mobile money withdraws and transaction charges in Zambia.

Transferred Amount (K)	Charge (K)
Between 1 to 150	1
Above 150 to 300	1.5
Above 300 to 600	2.5
Above 600 to 1,200	3.5
Above 1,200 to 5,000	3.5
Above 5,000 to 20,000	5

### 3.4. Consumer Behaviour

Mobile money business is a customer dependent concept. Consumer behaviour therefore is one of the determinants of the growth of mobile money business. Different customers exhibit different behaviors toward products. There is need to understand consumer behavior. The consumer holds the market balanced and keeps it going and growing. Consumer behaviour is the study of individuals and organizations and how they select and use products and services. It is mainly concerned with psychology, motivations, and behaviour [13]. On the other hand, Tripathi, defines consumer behavior as a process whereby individuals decide whether, what, when, where and from whom to purchase goods and services [16]. Smith [13] highlights what needs to be considered when looking at consumer behavior:

- 1) Businesses need to be mindful that consumers are thinkable and must consider how they feel about different alternatives (brands, products, services, and retailers).
- 2) The consumers reasoning and selection of different alternatives presented to them.
- 3) How consumers behave when they are researching and shopping.
- 4) How the environment (peers, culture, media) influences consumer behavior.
- 5) How marketing campaigns can be adapted and improved to more effectively influence the consumer.

He goes further to say that; these considerations are influenced basically by three factors:

*Personal factors* – A person's interests and opinions. These tend to be affected by demographics such as age, gender, culture, profession and background.

*Psychological factors* – Everybody's response to a particular marketing campaign will be based on their perceptions and attitudes. A person's ability to comprehend information, their perception of their need, their attitude, will all play a part.

*Social factors* – Peer groups, from family and friends to social media influence can strongly influence consumer attitudes and behaviours. These social factors also include social class, income and education level.

### 3.5. Mobile Money Services and Small and Medium Enterprises (SMEs)

Small and medium enterprise (SMEs) are an important component of every economy. However, this area has for a long time lied on the neglected side of the business. Financing of SMEs has proved to be a problem in most countries. What has been the problem is financial transaction efficiency. Most people in rural communities whose common economic activity is farming receive their farming inputs from their children and relatives who live in towns and major cities. Financially viable benefactors have been transferring cash to relatives in rural places for these economic activities.

Given the nature of rural settings in Africa, financial transactions cannot be done through banks, given the fact that the rural and the peri urban areas lack these facilities. Small scale traders also need alternative cheaper and non-bureaucratic financial system to push and grow their businesses. This implies that the only workable option is the mobile money service. Because these services and the mobile telephone call services are done by the same service providers, a transaction can easily be confirmed among the sender, receive and the dealer making, it is more efficient.

Studies done in other parts of African regarding mobile money transaction in relation to economic activities have shown quite a positive result and dependence among these variables. Donovan [6] explains that, even though the M-Pesa is not used for money storage, it has this potential even though the primary purpose has been to send and receive money. Access and use of more sophisticated financial services through mobile money services like savings, credit, and insurance could prove more beneficial even to SMEs.

### 3.6. Growing Unemployment in the Advent of Financial Technology

Human population has been growing at a very fast rate in recent years. This growth is everyday leading to depletion of the natural resources as demand for these resource increases. CSO [5] indicates that Zambia by 2020 had a population of 18,383,955. From this, 55.2% of the population of Zambia is in rural (10,147,943.16 people in 2019). Of this, Kasama town has a population of 91,056. Aaron [1] explains that 53.85% of the Zambian population is between the age of 15 and 64. This in actual sense is the employable age category.

Like many countries in Africa, Zambia is grappling with youth unemployment. Unemployment, a term used to refer to a situation where individuals who are employable and actively

seeking a job are actually unable to find a job. Included in this group are those people in the workforce who are working but do not have an appropriate job. Otherwise, with reference to youth unemployment, we can say that, youth unemployment refers to the share of the labour force aged 15-24 without work but available for and seeking employment. A great number of youths who are graduates of Grade 12 and tertiary education are unemployed. Zambia youth unemployment rate for 2019 was 22.63%, a 0.07% decline from 2018 [17]. These alarming levels of unemployment have not been cushioned or reduced by the technological advancement in the financial sector. According to Aliero, H. M. et al. [3], in their study that investigated the impact of financial sector development on the level of unemployment in Nigeria, concluded that there was persistence of unemployment in Nigeria, while credit allocation in rural areas had both short run and long run effect of reducing unemployment. The reality of high levels of unemployment exposes many youths to a lot of problems and therefore makes them vulnerable. This unemployment has driven many youths to venture into a number of activities that may keep them going as they wait to either go to college if they are grade 12 graduates or get a formal employment if they are a college graduate.

The springing of the mobile money business becomes an employment avenue for many youths of different education standards and backgrounds. The mobile phone communication services industry has over the years provided a host of employment opportunities across Africa through its range of services. Among the opportunities created by the industry are mobile money services, which involve the electronic receipt, transfer, and saving of money using a cellular phone [18]. In Zambia, mobile money business has employed a significant number of youths without estimation, placing them on a salary ranging from K1500 to K2000, depending on how much commission is earned from the mobile telephone operator.

## 4. Methodology

The study used a cross-sectional study design, utilizing primary data as the determinants of the study findings. The target populations were those individuals operating mobile money booths affiliated to mobile phone service providers (MTN, Zamtel and Airtel) from within Kasama town and their customers. The study used convenient sampling to recruit participants and data were collected using a structured researcher administered questionnaire. Therefore, the study included booths that were functional (where the operator was available) and local customers. On the other hand, all customers that were not from within Kasama town by current residential addresses were not included in the study.

Using disproportionate sampling, the formula below was used to determine the final sample size.

$$n = N/(1+N(e^2))$$

Where: n is the desired sample size;

N is the known population size, which is 30;

e is the precision set at 0.05;

Step 1:  $0.05 \times 0.05 = 0.0025$ ;

Step 2:  $0.0025 \times 30 = 0.075$ ;

Step 3:  $1 + 0.075 = 1.075$ ;

Step 4:  $30 \div 1.075 = 27.91$ ;

Therefore,  $n = 28$ .

With the employment of the sample size determining formula;  $n = N/(1+N(e^2))$ , the study sampled population was the 28 sampled from 30 booths operating from within Kasama town centre. From each booth, the searcher sampled 1 customer, making it 28 customers sampled and included in the study.

The study used Microsoft excel to enter, process and analyse the data. Multivariate Regression analysis was used to determine the dependence of the dependent on the independent variables. This was done by regressing the dependent variables (service satisfaction, number of withdrawals, number of deposits and great job opportunity) on the predictor variables (mobile network and clientele).

In making inference on the findings, the researcher considered the following parameter of reference from regression findings: correlation coefficient, standard error and coefficient of determination ( $R^2$ ). We further considered significant F (which is a p-value of F) from the ANOVA to see how statistically significant our results were. Results with significant  $F < 0.05$  were considered statistically significant to make an inference. The study considered a P-value of 0.05 as a threshold for rejecting our set null hypotheses.

## 5. Presentation, Analysis and Interpretation of Data

### 5.1. Single Variable Descriptive Statistics (Frequency) Analysis

#### 5.1.1. Duration in Business

The study wanted to establish the period that a participant mobile money operator had been running the business. This was important in the sense that, longer duration in the business line may be indicative of the profitability of the sector. From what was enlisted, the majority of participants in the survey had been in business for 1 to 3 years with 12 participants (43%) responding so, while those that had been in business for less than 1 were 11, accounting for 39% and only 5 (18) had been in business for more than 4 year.

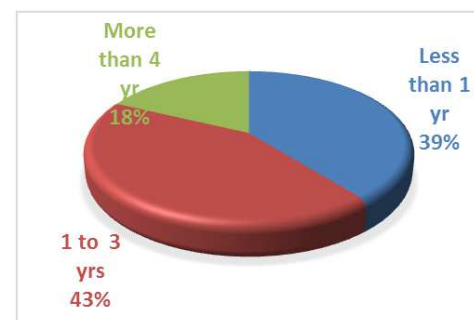


Figure 1. Duration in business.

### 5.1.2. Service Satisfaction

Because the study had to do with the social economic impact, it became necessarily important to find out how satisfied the mobile money business operators were with the phone networks they were affiliated to. The satisfaction means good services, clientele growth and the possibility of new entrants and growth of the employment window. From what was established, 24 (86%) of the 28 respondents were satisfied with the services of the mobile phone networks they were affiliated to.

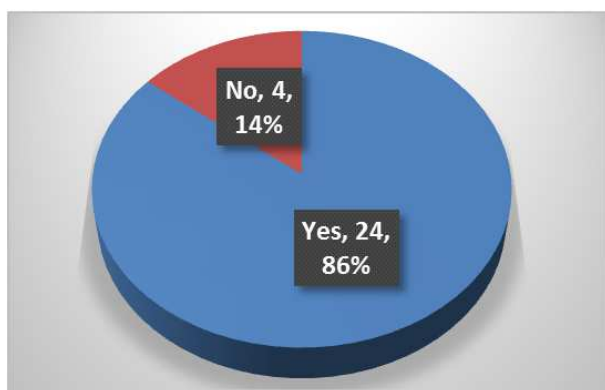


Figure 2. Service satisfaction.

### 5.1.3. Number of Deposits

The research also wanted to determine the number of deposits that an operator recorded on a day. This would give an impression of customer increase, and business stability and growth. The largest part of respondents, 19 (68%) indicated that they recorded between 15 and 26 deposits in a day. 7 (25%) indicated they were recording between 5 and 15 deposits per day. The impression given here by percentage is that the bigger number of operators recorded the larger number of deposits per day.

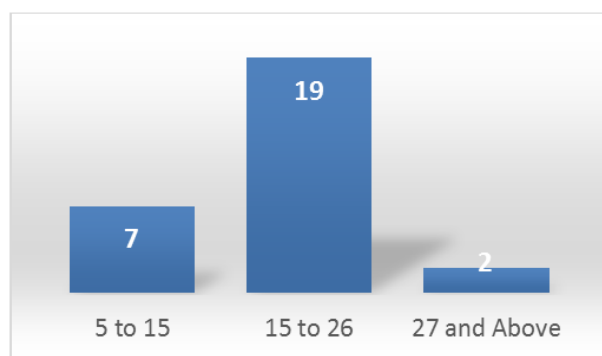


Figure 3. Number of deposits.

### 5.1.4. Number of Withdraws

The balance between withdrawals and deposits is what determines the stability and growth of mobile money business. Respondents indicated that they cannot facilitate withdrawals with limited balance in their deposits and vice versa. 5 (17.9%) responded that they recorded between 5 and 15 withdrawals, while 15 (53.6%) said that they recorded between 16 and 17 deposits per day and 8 (28.5%).

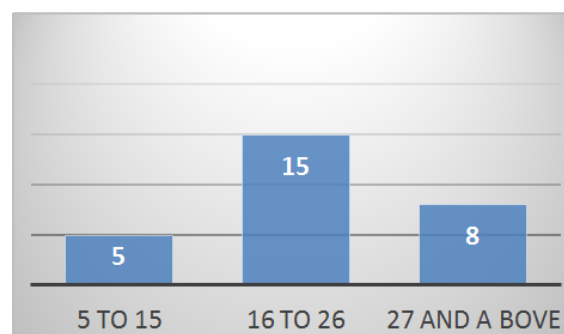


Figure 4. Number of withdraws.

### 5.1.5. Clientele Growth

The study also wanted to find out if the number of clients a mobile money operator recorded at the time the study was conducted had changed from the previous month. 20 (71.4%) of respondents answered that the number of clients recorded from the previous month had grown from the previous month, while 7 (25%) said that the number had remained the same and 1 (3.6%) indicated that they had recorded a decrease in the number of clients seen.

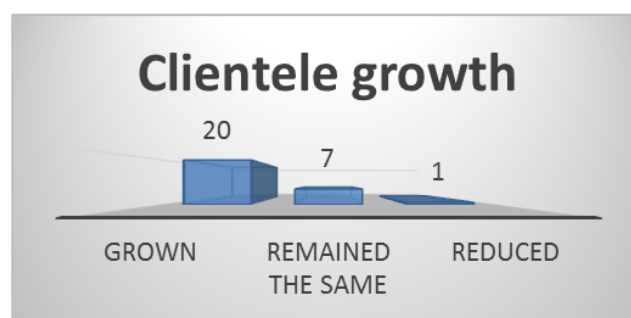


Figure 5. Clientele growth.

### 5.1.6. Booth Ownership

The study also wanted to find out the level of ownership of the booth. This would give a twofold understanding; that there was increase in employment creation should it be found that most people were not owners of the booths, and the growth in participation of true owners should the true owners be more. 18 (64%) responded that they were working as employees, while 10 (36%) indicated that they owned the booths. From here we see that mobile money business created 64% of employment in the sector.

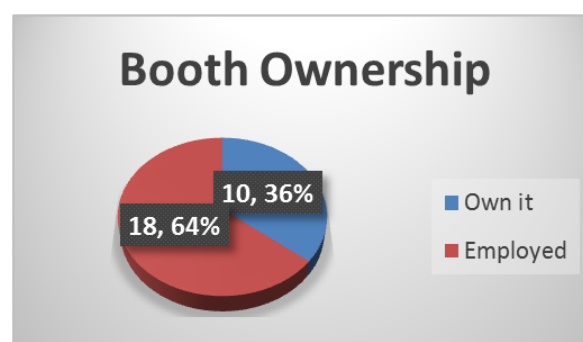


Figure 6. Booth Ownership.



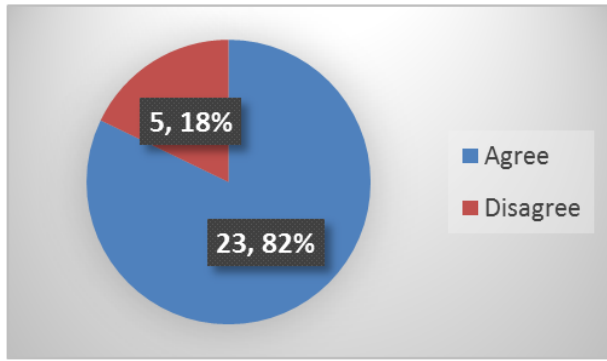


Figure 7. Job Opportunity.

### 5.1.7. Job Opportunity

The study attempted to find out how the booth operators considered mobile money business as a great job opportunity. 82% of the respondents responded that they considered it to be

a great job opportunity while 18% disagreed that it was not a great job opportunity. By this huge percentage, we see that generally operators considered it as a great job opportunity. This is indicative of the establishment that the sector has a positive social-economic impact through employment creation.

## 5.2. Multiple Variable Regression Analysis

### 5.2.1. Regression of Mobile Network and Clientele VS Service Satisfaction

We attempted to establish the dependence of the service satisfaction on the increase in the clientele and the mobile network an operator was affiliated to. To do this we regressed service satisfaction which was a dependent variable on the two independent variables, mobile network and clientele. The regression output from the inputs are tabulated and interpreted below.

Table 3. Regression of Mobile Network and Clientele Vs Service Satisfaction.

#### SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.673083743
R Square	0.453041725
Adjusted R Square	0.407461869
Standard Error	0.278665696
Observations	27

#### ANOVA

	df	SS	MS	F	Significance F
Regression	2	1.5436977	0.77185	9.939516	0.000717
Residual	24	1.8637097	0.07765		
Total	26	3.4074074			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.884677419	0.2919455	3.03028	0.005774	0.282132	1.48722	0.282132	1.487223
Mobile Network	0.283064516	0.0826201	3.4261	0.002211	0.112545	0.45358	0.112545	0.453584
Number of Deposits	-0.103225806	0.11079	-0.93172	0.360758	-0.331885	0.12543	-0.33189	0.125434

1. The correlation coefficient was at 0.673083743. This value is quite close to 1 which indicates a strong positive relationship between the independent and dependent variable. With this value, it concluded that service satisfaction has a strong positive relationship with the combination of mobile network provider and the growth in clientele.
2. Our Coefficient of determination ( $R^2$ ) which is simply an indicator of goodness of fit was 0.453041725. This means that 45% of the points are falling within the regression line. In other words, 45% of the dependent variables (service satisfaction) are being explained by the independent variables (mobile network and clientele).
3. The results obtained were statistically significant given that the value of Significant F was less than 0.05.

4. Our P- Value is at 0.005774, which is less than the 0.05 threshold. This therefore means that we rejected the null hypothesis which stated that: The mobile money and clientele have no positive impacts on service satisfaction. We therefore accepted the alternative hypothesis and concluded that the mobile money networks and growth in the clientele on the mobile money business has a positive social and economic impact on operators and customers.

### 5.2.2. Regression of Mobile Network and Clientele VS Number of Withdraws

After regressing number of withdraws which was a dependent variable on the two independent variables, mobile network and clientele, the regression outputs from these inputs were tabulated and interpreted as below.

**Table 4.** Regression of Mobile Network and Clientele Vs Number of withdraws.**SUMMARY OUTPUT**

<b>Regression Statistics</b>	
Multiple R	0.735731
R Square	0.5413
Adjusted R Square	0.504604
Standard Error	0.482314
Observations	28

**ANOVA**

	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>Significance F</b>
Regression	2	6.86291	3.431455	14.75092	5.876E-05
Residual	25	5.815661	0.232626		
Total	27	12.67857			

	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>	<b>Lower 95%</b>	<b>Upper 95%</b>	<b>Lower 95.0%</b>	<b>Upper 95.0%</b>
Intercept	3.383755	0.25239	13.40685	6.44E-13	2.8639479	3.9035619	2.863948	3.903562
Mobile Network	-0.31177	0.160262	-1.945378	0.063057	-0.6418365	0.0182956	-0.641836	0.018296
Clientele Growth	-0.59533	0.216953	-2.74406	0.011066	-1.0421528	-0.148509	-1.042153	-0.14851

1. The correlation coefficient that establishes the relationship between the depended and the independent was at 0.735731. This value is quite close to 1 which also implies that there existed a strong positive relationship between the combination of mobile Network and Clientele (independent variables) and Number of withdraws (dependent variable).
2. The Coefficient of determination ( $R^2$ ) parameter was 0.5413. This means that 54% of the points are falling within the regression line. Therefore, 54% of the dependent variables (number of withdraws) are being explained by the independent variables (mobile network and clientele).
3. The Significant F was 5.786, far greater than the reference value of 0.05. From this, we concluded that though there seemed to be a positive relationship between the independent and the dependent variable, the results of the relationship were not statistically significant.
4. Our P- Value is at 6.44, which is far bigger than the 0.05 threshold. This therefore meant that we failed to reject

the null hypothesis which states that: The mobile money network and clientele have no positive impact on the number of withdraws. Therefore, we conclude that the mobile money networks and growth in the clientele of certain networks don't necessarily imply the increase in the number of withdraws. We can infer from this that the increase in the clientele may mean that people would be seeking other services like depositing which are equally important. We also infer that withdraws may not be limited to one mobile service provider.

### 5.2.3. Regression of Mobile Network and Clientele VS Number of Deposits

The study also analysed the dependence of the number of deposits on the increase in the clientele and the mobile network operator was affiliated to as a combined predictor variable. So, we regressed the number of deposits which was a dependent variable on the two independent variables, mobile network and clientele.

**Table 5.** Regression of Mobile Network and Clientele Vs Number of Deposits.**SUMMARY OUTPUT**

<b>Regression Statistics</b>	
Multiple R	0.6686507
R Square	0.4470937
Adjusted R Square	0.4028612
Standard Error	0.4234378
Observations	28

**ANOVA**

	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>Significance F</b>
Regression	2	3.6246526	1.8123263	10.107809	0.0006069
Residual	25	4.4824903	0.1792996		
Total	27	8.1071429			

	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>	<b>Lower 95%</b>	<b>Upper 95%</b>	<b>Lower 95.0%</b>	<b>Upper 95.0%</b>
Intercept	2.729572	0.2215809	12.318625	4.087E-12	2.2732176	3.1859264	2.2732176	3.1859264
Mobile Network	-0.0642023	0.140699	-0.4563098	0.6521068	-0.3539774	0.2255727	-0.3539774	0.2255727
Clientele Growth	-0.6108949	0.1904692	-3.207316	0.0036499	-1.0031736	-0.2186163	-1.0031736	-0.2186163



1. The 0.6686507 value of correlation coefficient is quite close to 1 which also implies that there exists a strong positive relationship between mobile network and growth in clientele (predictor variable) and Number of deposits (dependent variable).
2. Because our Coefficient of determination ( $R^2$ ) was 0.4470937, our dependent variable was by 45% being explained by the independent variables (mobile network and clientele).
3. The significant F was equally significant for this comparison with the values of 0.0006.
4. Our P- Value is at 4.08, which is also far bigger than the 0.05 threshold. This therefore means that we fail to reject the null hypothesis which states that: The growth of mobile money and clientele has no positive impact on the number of

deposits. And hence we conclude that the mobile networks and growth in the clientele of certain networks don't necessarily imply the increase in the number of deposits. The increase in the number of clienteles of a mobile money operator affiliated to a particular mobile network may actually translate into withdrawals and other services.

#### 5.2.4. Regression of Mobile Network and Clientele VS Great Job Opportunity

The study tried to analyse how being a great job opportunity working for a mobile money booth depended on the increase in the clientele and the type of mobile network an operator was affiliated to. We as a result regressed great job opportunity which was a dependent variable on the independent variables (mobile network and clientele).

**Table 6.** Regression of Mobile Network and Clientele Vs Great Job Opportunity.

#### SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.4151382
R Square	0.1723397
Adjusted R Square	0.1061269
Standard Error	0.3687448
Observations	28

#### ANOVA

	df	SS	MS	F	Significance F
Regression	2	0.7078238	0.3539119	2.6028146	0.0940051
Residual	25	3.3993191	0.1359728		
Total	27	4.1071429			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.7825875	0.1929606	4.0556861	0.0004294	0.3851778	1.1799973	0.3851778	1.1799973
Mobile Network	0.0131323	0.1225257	0.1071799	0.9155018	-0.2392142	0.2654788	-0.2392142	0.2654788
Clientele Growth	0.2840467	0.1658674	1.7124925	0.0991843	-0.0575636	0.625657	-0.0575636	0.625657

1. The correlation coefficient was at 0.4151382. This value is greater than 0 but less than 1, and because it is a positive value, it indicates a positive relationship between the independent (Mobile network and clientele) and dependent variable (great job opportunity).
2. On the other hand, the Coefficient of determination ( $R^2$ ) was 0.1723397. Like for the other previous regression analyses, this means that 17% of the points are falling within the regression line. To mean that only 17% of the dependent variables (great job opportunity) are being explained by the independent variables (mobile network and clientele).
3. Our P- Value is at 0.0004294, which is less than the 0.05 threshold. On this basis, we reject the null hypothesis which states that: The growth of mobile money and clientele have no positive impacts on job opportunity. We therefore accept the alternative hypothesis and conclude that mobile money networks and growth in the clientele on the mobile money business have a positive social and economic impact on job creation in Kasama. It was regarded likewise as a great employment creating sector by respondents.

## 6. Conclusion

The study was embarked on to find out the social-economic impact that the growth of mobile money business had on the mobile money operators and customer in Kasama town. Four parameters (Number of deposits, Number of withdrawals, job opportunity and service satisfaction) were explored for determination as determinants of social-economic welfare, which were measured in relation with mobile network and clientele as a combined predictor variable. The study also looked at parameters like booth ownership and the duration that one had been in the mobile money business, which were both only examined by descriptive statistics (frequency). The four parameters examined by inferential statistics have a deterministic ability on the social economic welfare. Increase in both the number of withdrawals and deposits means business is growing which in turn may lead to an increase in employment opportunities. Job opportunity is a significant determinant of social economic welfare.

What the study came to establish is that mobile network and clientele had positive impact on job creation, service

satisfaction and the levels of deposits and withdraws. Mobile money business had created about 64% of employment to youths within the sector. All these in the end lead to growth in business and an improvement in the social welfare. The assessment took into consideration very few factors of which some of them don't seem to be direct social-economic ones. However, these positively determined factors have a multiplier effect on the following social-economic areas:

- 1) Increased investment in other investment areas, leading to further growth of SMEs.
- 2) Reduction in financial dependence by the now employed individuals.
- 3) Efficiency in business transactions; cash transfers and purchases (purchase of farm inputs and utility services like electricity and water).
- 4) Ability to render social support to dependents like non-working parents and relatives.
- 5) Growth of the banking sector in the rural settings owing to the growth in people's incomes.

The innovation that brought about this financial business avenue that has led to great improvements in the day to day human financial transactions and has created efficiency in the sector is commendable. It can however be said that the sector is quite expensive on the side of the customers given the average 5% charge that is levied on the withdraw transactions. The sector seems to be still transitioning through numerous ideological inputs given its profitability and continued growth and expansion. With advancement in many areas, it may not be surprising to see a situation where the mobile money sector will begin to copy some common banking sector practices like giving interests on savings. This will mean that mobile money business will not only be a vehicle for transactions on the part of customers but will give them valuable benefits on savings. Already, mobile network providers allow small loans for those customers with subscription to mobile money services.

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