

MOBILE MONEY UTILITY AND FINANCIAL INCLUSION: INSIGHTS FROM UNBANKED POOR END- USERS

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Abstract

The relatively high financial exclusion ratios and the size of the information (undocumented) economy have been a source of concern for Nigerian and Ghanaian policy makers. The introduction and rapid growth of mobile telephony services after the deregulation of the telecommunications industry in the early 2000s witnessed a dramatic rise in teledensity ratios across West Africa. With access to mobile phones exceeding banks, the use of the mobile device as an economic tool to enhance financial inclusion has been pronounced by the regulatory licensing of mobile money operators and the introduction of a mobile money framework in Nigeria and more in-depth policy discussions about a mobile money framework in Ghana.

This study seeks to explore the utility of mobile money with a view to not only assess its application in the enhancement of financial inclusion, but also to: 1) help better tailor the current applications for poor end-users; 2) help in targeting specific unbanked poor end-users for specific existing or new mobile money products; 3) provide information which can be used by mobile money platform developers and providers to craft new, innovative and locally-tailored applications of mobile money; and 4) help identify specific cultural limitations that hinder the adoption and use of mobile money by the poorest segment of the population in both countries.

The study adopts a mixed-methods approach to the supplier and consumer sides of mobile money. Using desk research and interviews, we provide insights into the mobile money offerings and supply-side dynamics such as the key processes, how customers are targeted, and the kinds of distribution channels used. On the consumer side, we employ focus groups and surveys to understand the utility of mobile money services amongst poor urban dwellers in Accra, Ghana and Lagos, Nigeria.

We find that whilst access to financial services is somewhat available, mobile money services have been developed around formal services and hence adoption is relatively low amongst the financially excluded. In addition to the general inaccessibility by the poor, other reasons like access, trust, perceptions, and so on also inhibit access and ultimately utility for these poor users. The alignment of objectives amongst ecosystem participants is a key goal for the success of mobile money as a digital financial service that enhances financial inclusion.

1. INTRODUCTION

1.1 Background

Mobile money is a unique service comprising the convergence of two industries - banking and telecommunications. Although the mobile money industry is in its nascent stages, the industry is making a significant impact on financial inclusion and transforming the lives of the poor. Indeed, mobile money “represents the biggest opportunity to increase financial inclusion in emerging markets”¹. There is however, more room for penetration and access of mobile money globally. Access to financial services (financial transactions, credit, savings etc.) is important for the ability of the individual to financially manage, structure and plan livelihoods for themselves and their families. However, 50% of adults worldwide (more than 2.5 billion people) do not have access to formal banking services, and 59% of adults in developing economies are unbanked poor². The focus of our research is on the unbanked poor end-users of mobile money in two Anglophone countries³ in West Africa—Ghana and Nigeria.

Ghana has an estimated population of 25 million with 66.4% of the population above the age of 15 (Figure 1). Over 50% of the population lives in urban areas and Ghana has an unemployment rate of 5.8%⁴. According to the Ghana National Communications Authority, Ghana’s mobile penetration passed the 100% mark in November 2012⁵ and by June 2014, had reached just over 110%⁶; however, many subscribers own more than 1 SIM-card⁷. In a study by Research ICT Africa in 2012 conducted in Ghana, 22% of the poor had access to bank accounts⁸. As of 2012, despite the relatively high mobile penetration in Ghana (Figure 2), Ghana’s mobile money adoption rate was only 9% (Figure 3).

¹ GSMA (2012). Mobile Money for the Unbanked poor, Annual Report, 2012, pg. 2

² Demircuc-Kunt, Asli and Leora Klapper, 2012, “Measuring Financial Inclusion: The Global Findex Database”, World Bank Policy Research Paper 6025.

³ The third Anglophone country in West Africa, Liberia, is excluded as it is still rebuilding after years of civil war.

⁴ Ghana Statistical Service (2013). 2010 Population & Housing Census. Accra: Ghana Statistical Service and US Census Bureau, 2014.

⁵ <http://business.myjoyonline.com/pages/news/201302/100891.php> (accessed 7/19/2015)

⁶ http://www.nca.org.gh/downloads/Telecom_Voice_Subscription_JUNE_2014.pdf (accessed 7/19/2015).

⁷ <http://business.myjoyonline.com/pages/news/201302/100891.php> (accessed 7/19/2015)

⁸ Research ICT Africa, “Household and Small Business Survey” (2012), <http://www.researchictafrica.net>.

Figure 1: Ghana Population by Gender and Age

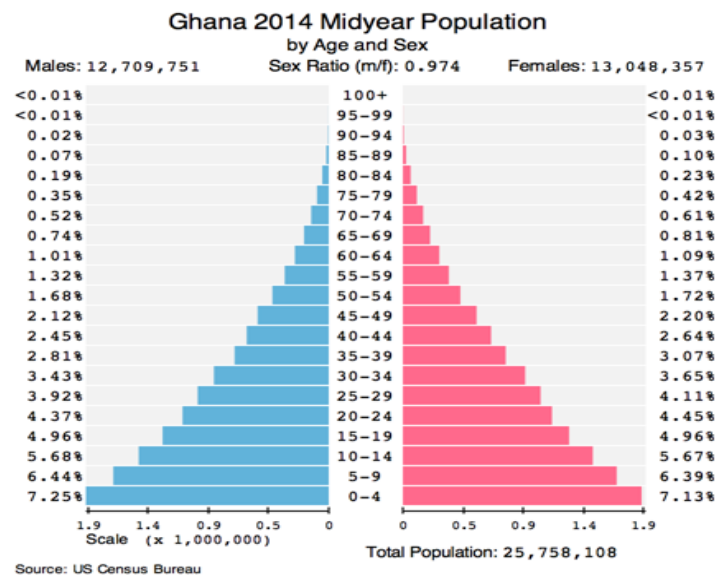
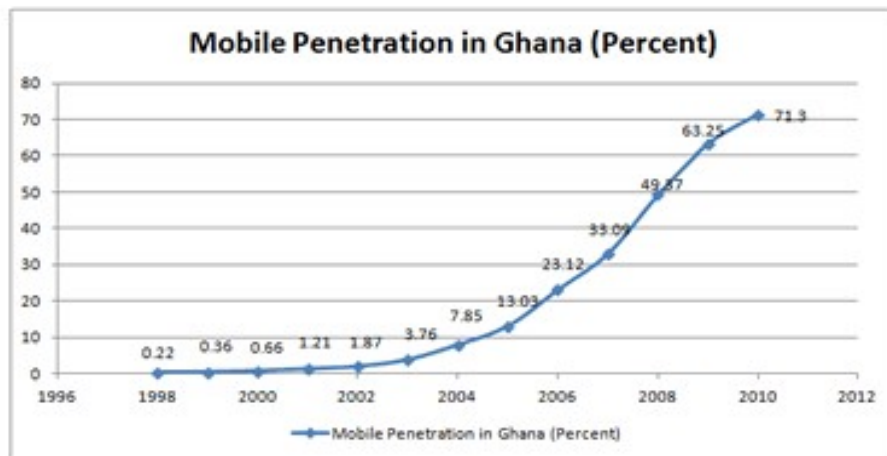


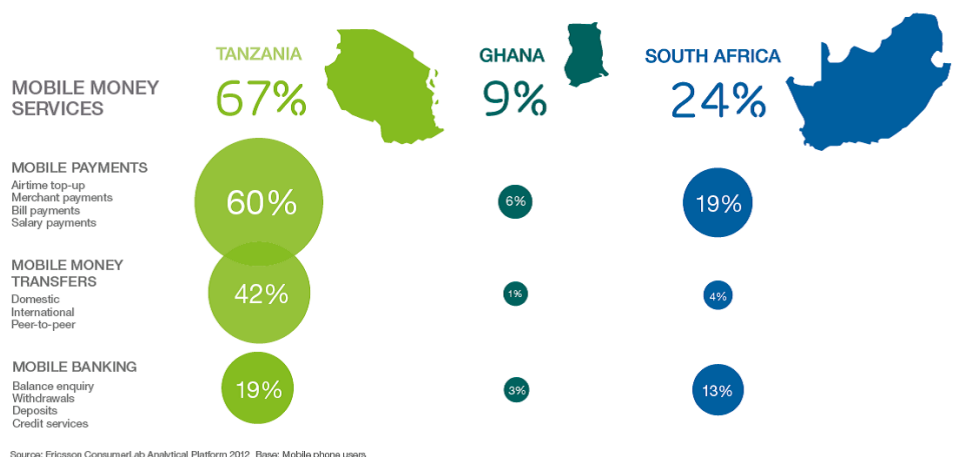
Figure 2: Ghana Mobile Penetration 1994-2012



Source: National Communications Authority (NCA), Pal Ecommerce, US Census Bureau⁹

⁹ <http://business.myjoyonline.com/pages/news/201110/74316.php>

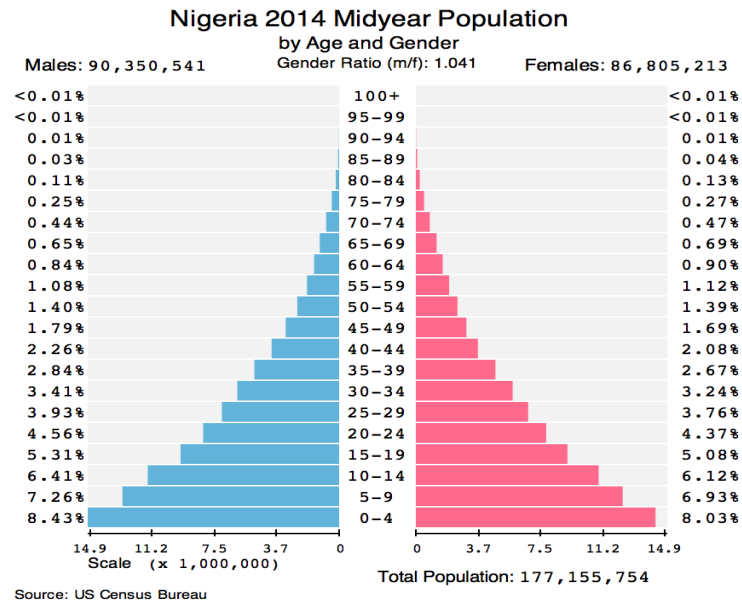
Figure 3: Ghana Mobile Money Adoption Rate 2012



Nigeria, with an estimated population of 177 million has an adult population of about 93.5 million (Figure 4). Of these, reports indicate mutually exclusive groups comprising 36.3% (33.9 million) banked, 12.3% (11.5 million) formal other, 11.9% (11.2 million) informal other, and 39.5% (36.9 million) excluded¹⁰ (Figure 4).

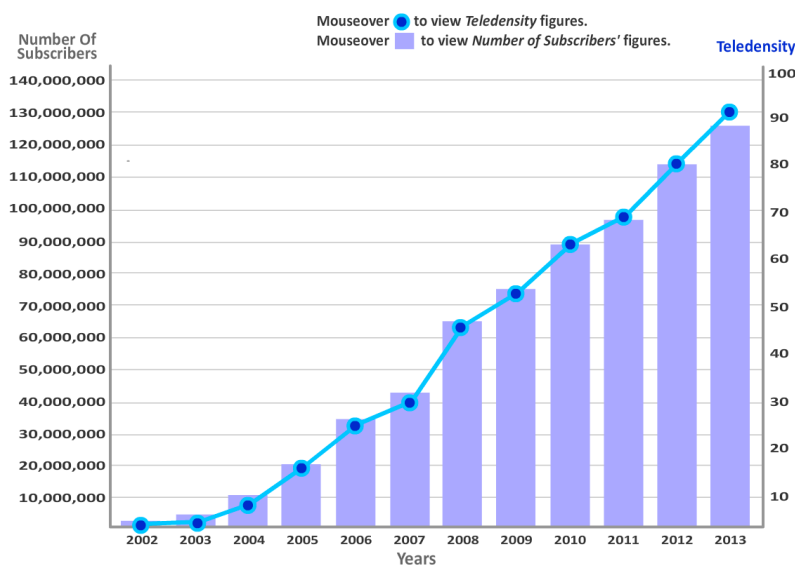
The high adoption of mobile telephony (Figure 5) and the mandate of the Central Bank of Nigeria to extend e-government programs and financial services has led to significant progress in promoting e-payment systems and policies.

Figure 4: Nigeria Population by Gender and Age



¹⁰ Enhancing Financial Innovation & Access (EfiNA). (2014). EfiNA Access to Financial Services in Nigeria 2014 Survey: Key Findings. efina.org.ng. Lagos and US Census Bureau 2014

Figure 5: Nigeria Subscriber and Tele-Density Statistics (2002 - 2012)



Source: Nigerian Communications Commission (NCC)

One clear example of this institutional drive towards e-payment mechanisms was the development of the 2012 National Financial Inclusion Strategy in Nigeria. This strategy gave rise to regulatory frameworks for mobile payments and agent banking alongside a review of the “know your customer” (KYC) requirements. At the time of this study, the mobile payments regulatory framework defined three operator models, namely: bank-led, bank-focused and non-bank-led. The bank-led model comprises a partnership or consortium of one or more banks and/or partner organizations delivering services that leverage a mobile banking system. The bank-focused model in Nigeria is initiated and led by a principal bank delivering mobile payment services to customers. The non-bank model provides registered and licensed payment services providers that are neither banks nor telecommunications firms/providers (telcos) the approval to deliver mobile payments to consumers. Although telecommunications providers may act as consortium members in the bank-led model, independent licenses to telcos are prohibited on the basis of regulatory lapses with the telecommunications regulator. The implementation of the regulatory regime led to the licensing of 18 mobile payments operators in Nigeria¹¹.

This is clearly a different strategy from the system in Ghana, where licenses have been issued directly to telco operators who act as the primary leaders in this industry, despite forming partnerships with banks and other financial institutions to support the service. As such, despite the emergence of other e-paying platforms recently, the 3 major players in the mobile money space in Ghana are all telecommunications operators.

1.2 Objectives

This study seeks to understand the utility of mobile money from the perspective of unbanked poor end-users in Ghana (Accra) and Nigeria (Lagos) by exploring the applications and limitations of mobile money use. The study seeks to:

¹¹ Jimoh, M. I. (2013). Mobile Money and Telco Regulation in Nigeria (pp. 1–26). Presented at the International Conference on Payments System.

- Explore current mobile money products offered to unbanked poor end-users by mobile money providers in Ghana and Nigeria.
- Explore which of the products are most used by unbanked poor end-users and how these products are used by the unbanked poor end-users.
- Understand alternative country- and culturally-specific methods and options available to unbanked poor end-users when mobile money does not cater to their needs.

While the focus of this project is to gain insights on the utility of mobile money from the perspectives of unbanked poor consumers, this project has the potential to add insight to two important related issues facing mobile money adoption and increased financial inclusion of the unbanked poor:

- The mobile money industries in Ghana and Nigeria have different regulatory policies. While mobile money in both countries is led by the Central Banks and the banking industries of each country, in Ghana, mobile money licenses are issued to telecommunications firms, while in Nigeria, the licenses are issued to third-party firms (not telecommunications firms). This study therefore can provide insights, again, from the perspective of the unbanked poor end-users, on which model may provide better utility for them and thus increase financial inclusion.
- An understanding of the market failures and misuses of mobile money as identified by unbanked poor end-users that limit their current use or adoption and thus hinder financial inclusion.

2. RESEARCH METHOD

The study adopted a mixed methods approach conducted in 4 phases: 1) explore offerings of mobile money providers through interviews with telcos; 2) conduct focus groups with unbanked poor end-users; 3) conduct a large-scale survey of mobile money utility for unbanked poor end-users; and 4) data analysis and synthesis of findings.

Desk research methods were employed for secondary data, interviews with providers on mobile money functions and innovations offered to consumers, and qualitative and quantitative data collection through focus groups and surveys with unbanked poor users who have mobile phones. Secondary data of mobile money operators and operations was acquired using desk research that comprised internet searches, provider and regulator website reviews and document analysis. Semi-structured interviews with the mobile money operators were conducted using the interview guide in Appendix 2. Knowledge of the agent networks and operations were acquired through interviews with active agents¹². The interview analysis commenced using within-case analysis prior to cross-case analysis¹³.

Participation in the focus group discussions was based on the subject's use of formal or informal financial services and knowledge and use of mobile money. Focus group discussions were conducted with multiple groups of individuals in the mobile money target group using the interview guide in Appendix 3. Verbatim transcripts of the focus groups and interviews were developed and analyzed using qualitative data analysis techniques¹⁴.

¹² This knowledge of agent networks and operations was used to identify specific target groups for the survey.

¹³ Miles, M. B., & Huberman, A. (1994). *Qualitative Data Analysis: an expanded sourcebook*.

¹⁴ Both qualitative and quantitative data analysis is still ongoing.

Survey participation was based on access to formal or informal savings, knowledge of mobile money, and income level. Street intercept surveys were conducted in various locations in the Greater Accra Region and Lagos State. The survey, conducted using the interview method comprised open- and closed-ended questions. The survey questionnaire is included in Appendix 4.

Training on mobile money and the survey instrument was provided to a total of twenty (20) and twenty-four (24) survey administrators (enumerators) in Nigeria and Ghana respectively. The training provided the interviewers better understanding of the study objectives in addition to information on mobile money concepts and terms. Role-play demonstrations of survey cases from the mobile money user and non-user perspective were also conducted during enumerator training. To guard against survey fraud, an additional four supervisors were recruited in the Nigerian study. The supervisory team monitored the interviewers in the field, validating the use of real subjects.

3. MOBILE MONEY UTILITY – INSIGHTS FROM PROVIDERS

The findings gathered from the various stages are discussed from the supply (provider) and demand (consumer) perspectives and are presented in this section.

3.1 Provider Offerings

Knowledge of mobile money service offerings was acquired through desk research and provider interviews conducted in Accra, Ghana and Lagos, Nigeria. Desk research of provider offerings was conducted for the 18 licensed mobile money operators in Nigeria and the 3 telecommunication operators in Ghana that provide mobile money services: MTN, Tigo and Airtel.

Mobile money is typically stored value credit in the form of a mobile wallet that is accessible from the mobile phone and other complimentary channels. Mobile money services facilitate financial and non-financial transactions across the mobile networks. These services include:

- Cash-In: the payment of cash on account through a physical agent; this credits the mobile wallet.
- Cash Out: the withdrawal of cash from the mobile wallet through a physical agent; this debits mobile wallet
- ATM Withdrawal: the withdrawal of cash from an automated teller machine (ATM).
- Money Transfer (bank account/wallet): the transfer of cash between the mobile wallets, and between mobile wallets and conventional bank accounts
- Airtime: the purchase of mobile top-up (airtime) from the mobile wallet.
- Payments (utility, services): the payment of utility bills and other services directly from mobile wallet.
- Merchant Payments (Retail POS): the payment for goods and services from mobile wallet at a retail point of sale.

In addition to providing multiple access channels to mobile money, non-mobile (web) access is also supported by about 67% of the providers in Nigeria. This is more indicative of generic payment platforms accessible from multiple sources than a homogeneous mobile money offering. The widespread development of cross-platform apps by at least 50% of the providers is indicative of the expected use of high-end smartphones.

In Ghana, all 3 telco providers support non-mobile (web) access. Unlike in the Nigerian case, there were no cross-platform apps across the 3 telco providers in Ghana at the time of this study.

In Ghana, the very simple telco-led model and the limited number of providers provided little variation in their services and offerings. As at the time of this study, there were approximately 2.5 million registered users of the mobile money service in Ghana.¹⁵ However, the diverse Nigerian model offers interesting variation in the characteristics of mobile services. Details of mobile money services by providers in Ghana and Nigeria are summarized in Tables 1 and 2, respectively.

Table 1: Ghana Mobile Money Provider Details

Description	Active	Inactive	Total
Licensed operators	3		3
Model			
Telecom-Led	3		3
Interface/Infrastructure			
SMS	3		3
USSD	3		3
Web	3		3
Physical Channels			
Agent	3		3
Mobile APP Platforms			
Blackberry	3		3
Android	3		3
Services ¹⁶			
Cash-In	3		3
Cash-Out	3		3
ATM Withdrawal*	1		
Airtime	3		3

¹⁵ Tigo, Airtel and MTN had an estimated 450,000, 300,000 and 1,800,000 people registered, respectively.

¹⁶ In Ghana, the payment (utility, services) and merchant payment (retail POS) systems were nascent at the time of the study; ATM withdrawal was only being discussed between a bank and only one telco firm.

Table 2: Nigeria Mobile Money Provider Details

Description	Active	Inactive	Total
Licensed operators	15	3	18
Model			
Non-Bank	10	2	12
Bank-Focused	5	1	6
Bank-Led	0	0	0
Interface/Infrastructure			
SMS	6		6
USSD	10		10
Web	10		10
Physical Channels			
Agent	14		14
Bank Branch	9		9
Mobile APP Platforms			
Blackberry	8		8
Nokia	2		2
Android	8		8
iOS	5		5
JAVA	4		4
Services			
Cash-In	14		14
Cash-Out	12		12
ATM Withdrawal	8		8
Money Transfer (bank account/wallet)	14		14
Airtime	14		14
Payments (utility, services)	13		13
Merchant Payments (Retail POS)	7		7

3.2 Provider Characteristics

The provider interviews sought to provide more insights into the mobile money environment through the target markets and distribution networks. In Ghana, in-depth interviews were conducted with the three mobile money operators. In Nigeria, in-depth interviews were conducted with three mobile money operators (two banks and one non-bank provider) and an agent aggregator. . The Nigerian respondents were selected based on product popularity. The provider interviews sought to understand confirmed offerings from the desk study as well as the characteristics and organizational processes employed in the development and distribution of mobile money services. The findings present operator characteristics by processes, target markets, distribution strategies, and business partnerships.

Provider characteristics of these operators in Ghana and Nigeria are highlighted in Tables 3 and 4, respectively.

Table 3: Characteristics of Mobile Money Operators Interviewed in Ghana

MNO Type	Country	Description
MTN Ghana	Ghana	This is the network with the largest user base in Ghana. It piloted the mobile money platform in Ghana (i.e., first mover) and can be considered the leading telco in Ghana. We interviewed the mobile money product manager and assistant.
Tigo	Ghana	This was the second telecom to provide mobile money services in Ghana. We interviewed the head of the mobile money team.
Airtel Ghana	Ghana	This firm was the most recent entry into the mobile money space in Ghana at the time of the study. We interviewed the former head of their mobile money team.
Operator X ¹⁷	Ghana	

Table 4: Characteristics of Mobile Money Operators Interviewed in Ghana & Nigeria

MNO Type	Country	Description
Bank A	Nigeria	Bank A named its mobile money service after its USSD code. It was one of the first financial institutions to launch an aggressive mobile money campaign and continues to drive awareness. Two respondents, the mobile money product manager and his senior manager responsible for transaction products were interviewed.
Bank B	Nigeria	Bank B is a well-known bank that is especially popular amongst the youth. To maintain its youth market, Bank B deploys more innovative solutions using information technology. This bank first introduced social media accounts using Facebook. Three respondents from Bank B's e-payments group were interviewed.
Operator A	Nigeria	Operator A is a widely advertised independent MNO that achieved the 1 million-customer mark within 2 years of launch. The head of strategy was interviewed.

3.3 Organizational Processes

The usefulness of mobile money revolves around the service offerings supported where wallet holders have access to a variety of payment-related services or as simply put by the Independent MMO manager in Nigeria, “*giving people more things to do with their money*” that requires market segmentation, product and market development, business partnerships (product and distribution), and systems integration processes.

¹⁷ While Operator X did not, at the time of the study, have a mobile money platform in Ghana, we also interviewed a company representative who would be spearheading the introduction of the platform in Ghana.

The usefulness and adoption of mobile money requires product development and systems integration strategies that increase the pool of services supported by the mobile money network. As understood by Nigerian Bank A,

“the adoption rate may be low now, but as we begin to look at specific industry and specific ecosystems, and working with the industry that are serving them, to proffer solutions in that space.”

This dynamic use of mobile money involves the use of the platform for the development of nonpayment services addressing specific developing country issues like drug authentication in the health industry, agricultural insurance and other extension services. These developments are however dependent on the involvement of other industry sectors that will draw potential wallet holders. Thus,

“mobile money can resolve financial inclusion; however, it depends on all the different sectors getting involved not just the banks. The banks have provided the platform in terms of creating new, innovative, products and services that can use the platform to deliver value to the lower end of the bottom of the pyramid.”

Unfortunately, this slow growth is also hindered by the lack of consumer demand which is cited as one of the causes of the slow growth of mobile money in Nigeria;

“your consumer needs to be the one demanding the product ... right now they are not demanding the product”.

One way of increasing said adoption rates has been to increase the number of agents that can provide the mobile money service. In Ghana, for instance, though there are many vendors who can sell credit/airtime, there are a limited number of mobile money agents that can activate transfers to other agents and/or wallets; this more specialized service must be conducted in the offices of one of the telco firms.

3.4 Market Development

The mobile money market is developed through direct and indirect mechanisms such as advertising, distribution (agent) networks, and direct customer engagement. Unfortunately, in Nigeria, the existence of these mechanisms does not necessarily translate into service utility:

“The truth of the matter is that I can bang the air till tomorrow. I can sing on the radio. It doesn't mean that people will ask for the service”

Advertising is a consistent approach amongst the various providers, where practices range from channel advertising to event sponsorships. Channel advertising media employed include conventional media - print (magazines and newspapers), radio, television, and outdoor billboards, internet and websites, and social media. As described by Nigerian Bank B:

“There are various channels, but we use social media very heavily. We also use the print media and SMS and other things we could call new media like inner push and also agents.”

Corporate event sponsorship and celebrity endorsements are also employed where the target audience of the events are mobile money markets. Bank A in Nigeria gives the example of such an initiative:

*“When *** went live on mobile payments, he sponsored a group of three youth guys who are into music, and they had a slogan called gangster according to them, a sort of gospel according to rap. And then they clock twenty-three movements every Friday and all these youngsters will go there, and you know we sponsored the whole thing. And the idea they sponsored was pay for things within that space using mobile payment, that itself was market.”*

The distribution of agent networks is also critical to raising mobile money awareness and driving adoption of mobile money. For bank mobile money operators, this situation is somewhat alleviated by bank branches; albeit providing limited access in non-urban locations. In the case of non-bank mobile money operators, the absence of retail locations warrants the need for agent-based distribution and market development. Agent development processes are an operational component of all mobile money operators that includes selection, registration, and capacity building activities. Agent aggregators that act as a cooperative of agents or intermediaries also conduct these activities.

Direct marketing campaigns are also employed in the development of mobile money market awareness. Strategies currently employed include text messages (SMS), affiliate marketing schemes, and the use of direct sales agents that operate within bank branches or in densely populated locations like university campuses. This has been very effective (particularly in Ghana), in getting people registered onto the service, but has not culminated in any great increase in utility of the product.

In the case of affiliate marketing, this is in collaboration with existing online businesses that facilitate mobile payment transactions:

*“And there's also something called the affiliate marketing which is where other businesses who want their users to be able to do any *** transactions on their websites”. Independent MMO*

In the B2B space, Nigeria's cashless policy and the use of mobile money as a payment engine has created new business opportunities. As a representative of Nigerian Bank A explains:

“There are conversations that the bank has never been able to have even with the corporates but by reason of introducing this mobile concept, we begin to have those conversations.”

An example of such a conversation with insurance executives about the payment of motor insurance explains the depth of the inclusion issues:

“Do you really need that guy to pay third party insurance of 5000 naira today, do you really need it? If he can say he will pay it in three installments, would you mind? If he says he can pay in the first three months and prorate his cover, would you mind? And they said no. So why are they not doing it? Because they look for people like me (working and banked person) and you who can cut three cheques, but they can't look for those other people because they don't have cheques and they don't cut cheques because they don't have cheque books.”

In addition, corporates in need of retail markets are also realizing the potential benefits of mobile money for installment payments or collections. In government settings, this receipt mechanism improves controls. For example,

“the Ogun State hospitals decided that they needed a more foolproof way to collect the payments at the different hospital boards and they brought us in. And we've put a few agents there. And what they do is basically collect the money from the patients if they want to buy everything from a syringe to pay for their cards. And it goes straight into the State hospital accounts.”

The current emphasis of mobile money and mobile money operators is not financial inclusion but transaction cost economics that will yield investment returns on license and infrastructure assets in the short-term; with mobile money markets for financial inclusion requiring longer incubation periods. This unfortunate reality is better explained by a Senior Manager at Bank A when speaking about the internal competition for funds in their organization and the pressures the mobile money operator manager encounters:

“He's competing with investment banking business, global market business, all other business units. They're looking at him. So why should I spend a million dollars on your platform [mobile money for financial inclusion] when I can take the same million dollars and put it over there and get a 3% margin? That's what he's competing with.”

Whilst this behavior demonstrates short-term success, it questions the long-term sustainability of mobile money operations amongst smaller providers. .

“For us, we have not reached out to the unbanked yet. We want to capture and gain the loyalty of the banked, i.e., those who have the money before they can now start flowing money to the unbanked. It's cheaper for us to also implement and record quick success. So that we don't die before we even grow.”

In Nigeria, mobile money operators currently use a two-prong strategy to develop the target populations. In the first instance, they target existing banked consumers by offering the alternative value propositions of convenience, mobility, and account independence.

*“We find that different studies - internal studies we've done and even external ones - show that while a lot of people know *** some people don't know what it is or what it does. People know *** has something to do with money, airtime, send transfer, but there's so much of a robust service that *** offers. We don't think we are doing justice yet. So we are at it; making sure that for the different demographics, we are selling to them the benefits that best work for them.”*
Independent MMO

The second follow on strategy is dependent on the use of mobile money for payments between existing and trusted groups.

“Who does the woman in the market trust? Who does the garage driver trust? They have their own community, social circles, circles of influence and all that. They can trust that to the end of this earth. And they have ways of managing the integrity of that circle. So it still connects this entire plan around that, without destroying what is already working for them, which is what they will resist, if it has to bring new system.”

3.5 Distribution

Mobile money products are distributed using both physical and electronic channels. The network servicing mobile money wallet holders (W), comprises of entities like service providers (SP), mobile money operators (MMO) and their depository banks (Bank), bank business partners (BP) and agent aggregators (AA) and distribution channels such as branches (BR), Agents (A), ATMs (ATM), and web portals (WWW).

Physical distribution channels employed are bank branches, telecom offices and agent locations. Although bank branches and telecom branch offices are typically used to service the bank-led mobile money operators and Ghanaian markets respectively, independent mobile money operators are also developing partnership agreements with banks also have access to the bank branches. Independent agent locations are alternative physical channels available for the distribution of mobile money. These agent services usually exist in businesses in localities that increase their service offerings through mobile money services. Agents may be independent or members of a cooperative. For example Bank B adopts a B2B agent strategy working with a more manageable sub-set:

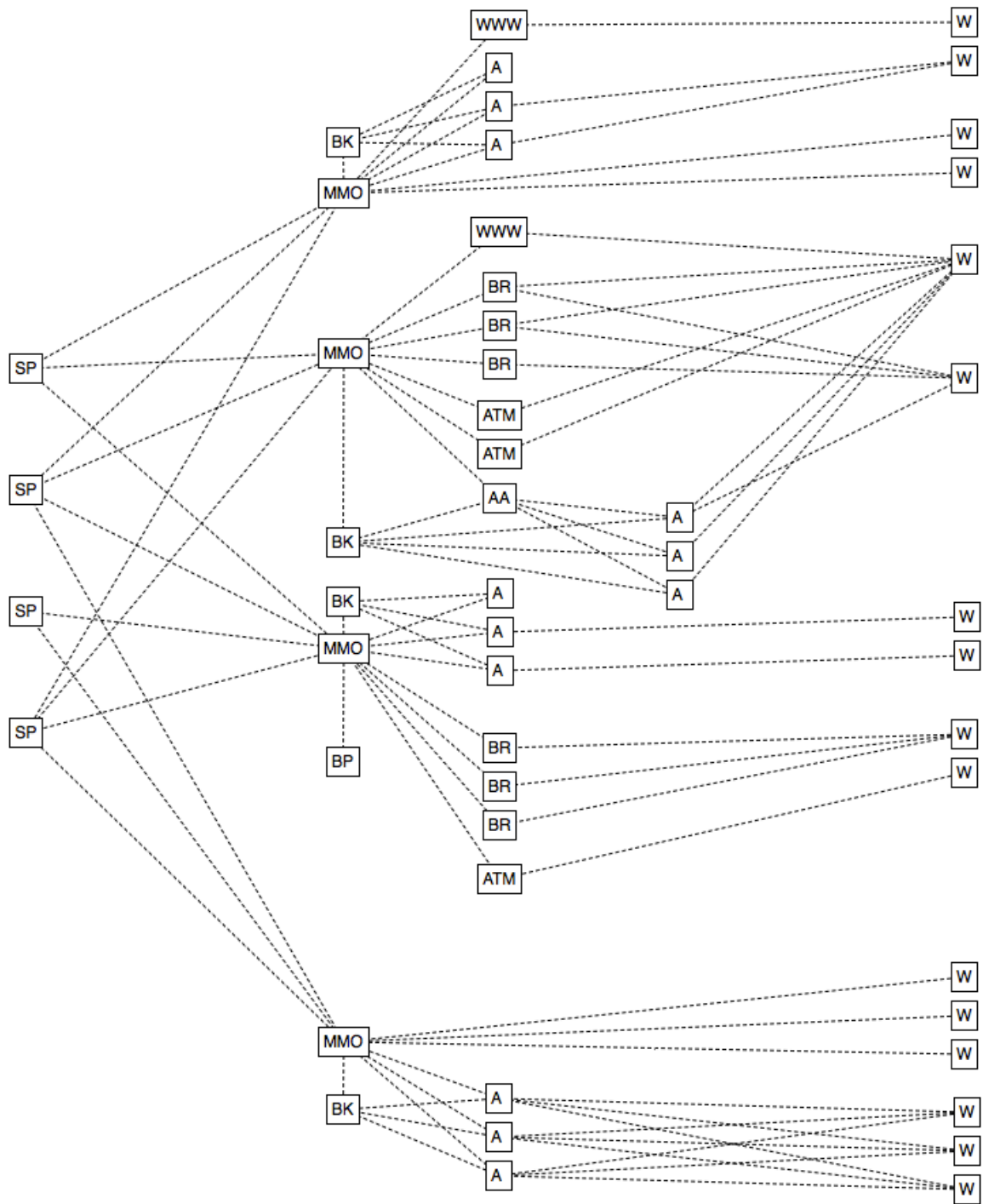
“Our approach in terms of agents is to use what we called agent aggregators. They are people that have others under them. So with this, we are able to manage them. That means for us, it is easy to branch out very quickly without being popped down.”

In addition to conventional mobile-related mechanisms—SMS, USSD, or mobile apps—additional electronic interfaces integrated with mobile money include automated teller machines (ATMs) and online web portals. ATM integration with mobile money fulfills cash-out services where recipients of mobile money can withdraw (cash-out) from bank ATMs. Online web portals that offer a more superior user interface to non-cash services like check balance, transfer to mobile wallet, etc. are also supported.

Business partnerships for mobile money distribution detail the responsibilities of the mobile money operators and provider alongside commercial terms and conditions. Partnerships with mobile telecommunications providers who serve as infrastructure providers is mandatory for all mobile money operations. The provision of the mobile platform or infrastructure for the transmission of financial transactions, irrespective of the technology adopted, is dependent on strategic partnerships. Given the regulatory regime in Nigeria that precludes mobile network operators from leading mobile money initiatives, these partnerships are somewhat fragile. In spite of this, the banks understand the importance of service collaboration. Figure 6 details the complex mobile money ecosystem in Nigeria.

How do you collaborate to make or deliver this service, because the customers don't really care how your relationship works as long as it works?

Figure 6: Nigeria Mobile Money Ecosystem



4. MOBILE MONEY UTILITY – INSIGHTS FROM FOCUS GROUPS

4.1 Target Groups

Understanding of mobile money utility from the perspective of poor unbanked consumers was conducted in two stages – qualitative and quantitative research. Through focus group discussions the qualitative stage gleaned insights into consumers’ access to and utility of financial services and mobile money services.

The sample population for the focus group discussions was selected from the different occupation groups with financial needs and applications addressed by mobile money. In Ghana, the initial criteria for selection was that participants were poor and in need of financial inclusion. This was typically exemplified by either their lack of a bank account, or infrequent use of one. Based on this general criteria, selection of target populations for the focus groups was based on actors who we suspected (given in-depth knowledge of the country context) would not have bank accounts based on their profession, but who were very economically active: taxi, truck and small bus (“trotro”) drivers, hairdressers and market women. Since a majority of respondents in these groups were non-users, a final focus group specifically targeting mobile money users was purposefully constructed as well. The focus groups provided key insights for the crafting of the survey instrument (Table 5).

In Nigeria, the Lagos Business School, made up of different cadres of staff and visitors was used as a core data collection center. The participants selected were screened based on income. Focus group discussions conducted outside the business school were conducted at the premises of the respondents (Table 6).

In Nigeria, five (5) focus group interviews were conducted between July and August 2013 with different groups of individuals. In Ghana, six (6) focus group discussions were conducted between May and June 2013. Tables 7 and 8 provide the descriptive statistics of the participants in these focus groups for Nigeria and Ghana respectively.

Table 5: Ghana Focus Group Member Characteristics

Focus Group	Number	Participant Description
Group 1	5	Small bus drivers (“trotro”) and their assistants at the 37 Lorry Station (one of the largest lorry stations in Accra).
Group 2	18	Market women in the Adabraka fish market
Group 3	10	Hairdressers in the Nyaniba-Osu area.
Group 4	7	Taxi Drivers at the Trade Fair Taxi rank in Labadi
Group 5	4	Truck workers for the Ghanaian Ministry of Agriculture.
Group 6	6	A variety of blue-collar workers that mainly use the mobile money platform; located in the Nyaniba-Osu Area.

Table 6: Nigeria Focus Group Member Characteristics

Focus Group	Number	Participant Description
Group 1	8	Janitorial staff employed on fixed contract basis at an academic institution.
Group 2	9	Waitresses working in the cafeteria/restaurant of an academic institution
Group 3	9	Security personnel

Group 4	10	Auto mechanics working in the Ebute-Metta area of Lagos Mainland.
Group 5	15	Drivers working with management executives attending programs at business school either employed in an individual capacity or by the manager's employer.

Table 7: Nigeria Descriptive Statistics of Focus Group Participants

Category	Number	Percentage
Gender		
Male	36	70.6%
Female	15	29.4%
Education		
None	9	17.6%
Junior School Leaving Cert	1	2.0%
Senior School Leaving Cert	18	35.3%
GCSE/WAEC/O-Level Certificate	5	9.8%
Diploma	2	3.9%
Degree	11	21.6%
Degree	5	9.8%
Bank Account		
Yes	49	96.1%
No	2	3.9%
Ajo/E-susu		
Yes	32	62.7%
No	19	37.3%
MM Knowledge		
Yes	33	64.7%
No	18	35.3%
MM Use		
Yes	0	0.0%
No	51	100.0%

Table 8: Ghana Descriptive Statistics of Focus Group Participants

Category	Number	Percentage
Gender		
Male	21	42.00%
Female	29	58.00%
Susu		
Yes	50	100.00%
No	0	0.00%
MM Knowledge		
Yes	49	98.00%
No	1	2.00%
MM Use		
Yes	11	22.00%

No	39	78.00%
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4.2 Financial Services Utility

In Ghana, a majority of the focus group participants were employed in the informal sector, whereas in Nigeria, the employment of majority of the focus group participants was in formal organizations. This contributed to the Nigerian focus groups having greater access to financial services (bank accounts) than the Ghanaian study. Generally, the utility of these financial services for these groups focuses on money transfer and savings products as discussed below.

4.2.1 Money Transfer

With participants living and working in urban locations, the need to support family members and friends is a common occurrence in African customs. This could be conducted directly through the banks; either using one’s personal account or trusted friends:

“they will give you their details... their account details, and send the money...”.

“what they do is that...they look for people that have account number and send it to me...then I send”.

Money transfer services offered by courier and transportation services are also available amid risks of loss or theft. As a result of the frequency of transfers, respondents have developed relationships with drivers who move money within and across West African borders. The stability of these drivers across routes has led to the building of relationships and trust over time. In addition to the reduced risk, relationships such as these have also reduced transaction costs as described:

“I usually leave it with the station drivers and they know where to drop it off.”

“It depends.... because it got to a point that I...I made a friend there... I have a friend that each time I come, I just give him like maybe five hundred naira (N500).... it depends on what I have... because... initially it was like one thousand naira (N1000) but as time goes on now.... we are like friends now...so I just find small thing for him.”

The deployment of self-service banking applications, especially automated teller machines (ATMs) has also facilitated money transfers. In Ghana, this is still catching on as Fidelity Bank was the only bank to offer such a mobile money transfer service at the time this study was conducted:

“Another way, another way is via ATM. Transfer money via ATM to any bank. Let’s say you want to transfer money from xx Bank to yy Bank. You could do that through use of your ATM card. Yeah, that would facilitate a much faster and easier way... just to say.... it saves you the stress of going to the bank... joining a queue and all sorts....”.

Reasons to send and receive money varied across the various groups; cash was typically going to or coming from family members for their personal needs. The service was also used for rent payments as described by a respondent:

“He doesn’t stay near me so we communicate on phone, so when he says send my rent through the bank, so you can walk straight to the bank and send the money.”

In the case of smaller amounts and on agreement with the recipient, mobile recharge codes are exchanged for cash:

“Like the one I did, I had to like.... if the money is like two thousand naira (N2,000), I will have for that she will agree, I will have to put like two hundred naira (N200) because she will say the person that is buying will collect two hundred naira (N200)”.

Whilst this method includes the discounted surcharge, it still provides a cheaper option when bank and transportation fees are taken into account:

“Yes, that’s what I am saying. You will be paying more. It is costly. But sometimes when you think of transportation, transportation and moving from there, comeback and time wasted on it, it will balance that.”

4.2.2 Savings

The respondents had different notions of savings – in Ghana, micro finance institutions, savings & loans companies and cooperative/ joint saving schemes with colleagues all fell under the general term ‘Susu’ whereas in Nigeria the typical forms of savings were bulk and incremental using ‘Ajo’, or banks . In Nigeria, two types of thrift collections are practiced. The first is similar to Ghana’s Susu where low-income individuals periodically place their savings with a thrift collector for withdrawal at a later date. The second time is a collective contributory system that enables members of the group access to bulk monies.

Cooperative schemes were typically used amongst the driver focus groups. This came in two general forms; the more formal institutionalized way was for the driver’s union to take money from the drivers every day and give them ‘coupons’ which they could return at the end of the year for their money¹⁸:

“Our corporative takes Ghc2 from us every day of my own money. It goes into the union. When we are given tickets every day of Ghc8, Ghc2 of that money is actually yours. So they give you back a GHc2 coupon for you to save. So anytime you want to collect that money just go for it.”

Others chose to adopt a more informal scheme amongst friends; they would each contribute a sum of money for the month and offer it to one person. The individual to receive this pool of money changes on a weekly or monthly basis until everyone has had a turn:

“... it’s something we handle ourselves. 5 or 10 people come together every week and pool their money together. The money is then given to an individual on a week by week basis.”

Micro finance institutions and savings and loans companies typically sent out collectors to collect and deal with respondents. In some cases, collectors are from the community itself and the respondents (members of the community) required the intervention of these

¹⁸ Drivers lamented, however, that if they lost those coupons, they could not reclaim their money.

collectors to encourage respondents to start saving. As such, it was not uncommon for respondents not to know the name of the specific collecting organization they dealt with; as far as some of the respondents were concerned, their money was with “the susu collector”:

“...well, there was the first Susu scheme we tried in 2009. They were coming for money from us, the person left with it [i.e., absconded] and we never got the money back. With this [second Susu scheme] however, they’ve shown us where we can go for it. The first person was just an individual doing this on his own, so when he left, we couldn’t do Susu again until these GFC people came. There are many of us here who haven’t done this until then.”

For bulk savings schemes, respondents utilized community-based schemes like E-susu or Ajo that pooled monies amongst a closed group of contributors and paid each contributor the pooled funds monthly:

“The reason why we use Ajo is for us to gather the money in a bulk...”

Access to a larger pool of money not only helps build a mentality and discipline of savings but also supports recipients to meet larger financial obligations like house rent or the purchase of household electronics:

“You know it’s very easy to go to the bank and withdraw the money but when you do Ajo, you know you can’t take it until a certain time”.

The various savings account options offered by banks are also utilized in spite of its temptations. Other bank-related savings schemes are fixed deposits that attract higher interest rates and higher penalties if liquidated prior to maturity. As described by a respondent:

“I tried it once and after six months I had to liquidate the account because I couldn’t manage; [it makes no sense] going to look for money when I have that kind of money in a bank. So, that’s another way of saving money. I think that fixed deposit is another good thing except if you want to liquidate before the time, you have to pay them.”

The investment in landed property as a savings mechanism was also posed. However, the high costs of land make this option quite inhibitive to majority of the respondents.

4.3 Mobile Services Utility

The ubiquitous utility of mobile telephony is confirmed amongst the focus group participants in both countries, where a small proportion utilizes multiple telephones or dual-SIM devices. In addition to traditional telephony and SMS, other uses of mobile telephones include browsing, chatting, email, social media (Facebook), and WhatsApp.

In spite of the prevalence of mobile telephony, the use of mobile financial services tells a different story. A majority of the participants are generally aware of mobile money services. This awareness has been developed largely through print and media advertisements. Direct marketing methods like SMS and word of mouth have also been employed. A significant number of people believed that more education was necessary and seemed to indicate that experiential marketing would complement their direct marketing strategies and encourage

user participation. In the Ghana context, focus group participants often asked if the research team was from one of the telecom firms that offered mobile money:

“They’ve come here to register our chips for Mobile Money. So, we’ve known about Mobile Money for a long time but, personally, I don’t use it.”

“These Tigo people came to explain it to us, they are just outside the market. There is somebody there and when you are there, you pay them their money and that means you have saved your money.”

“So if they had done proper education and we knew that we could have used mobile money to transfer money, this would not have been a problem...So they need to teach more people how to use it.”

“Yes, they’ve been sending messages. Someone like me, I have been ignoring it.”

This lack of awareness and proper education increases caution amongst prospective users. As a respondent explains their reasons:

“That is the reason why I don’t want it, you know in Nigeria you have to be careful so I don’t involve myself in sort of things that I don’t really know”.

Familiar mobile money brands include telecommunications, bank, and independent operators across both countries.

In Ghana, the mobile money platform has expanded past just transfers into insurance; a tool some people who identified themselves as nonusers actually used. The insurance offering is often part of the initial mobile registration:

“I use my phone to pay for IFS investment or trust. It is a minimum of 3 years. They said you can go to Ecobank or Merchant to deposit, but you can also use your mobile money.”

“I use it for Tigo Insurance. I also have a Tigo bank account...You pay in; they are just outside [the market]. Whenever you want to withdraw your money, you call out your mobile number. It acts as your account number.”

Users also identified network and PIN issues, as well as a lack of education on the system as the primary frustrations that inhibited their use the mobile money service:

“I also encountered problems registering. I have registered and I forgot my PIN... I was thinking if they could use my savings account; I believe they use your phone number as your account? So why couldn’t they use your phone to trace your PIN or your particulars?”

Firsthand experience of mobile money was practically non-existent in Nigeria due to issues such as disbelief, target market, acceptance, literacy, timing, and security. For example, belief in mobile money services or the use of the mobile for financial services is quite nascent amongst some respondents. Whilst some associate the services with superstitious myths by claims like “it’s like six-six-six”; or simply by the lack of experience or trial. As one respondent explains his experience in pigeon English:

“that thing wey you talk, when I go xx Bank, this one man come there before me; he just go there, didn’t put card. I think he wan put card but he didn’t put

anything. I just see. He just press number and money came out. I just look at the thing. He didn't put anything, he just take money like that. I come call him 'oga'¹⁹, sorry to disturb you oooo. What did you use for it?' He said...ah ah... the thing, they send the number for his phone that is why he just go there and press something. I say okay. As you talk now, I say that thing is real."

Another key inhibition was the perceived target market for mobile money. The respondents perceived of mobile money services as services for the elite with access to large amounts of money. As stated by respondents: "it's for people with bulk of money" or "it's meant for the rich". This perception is further enhanced by the perceived operational complexity associated with the use. Whilst a respondent expressed to other discussion participants "people at your own level can operate it"; another perspective is on its acceptance at markets and storefronts. As a respondent tries to explain the basis of their perceptions:

"we are talking about local market - selling pepper... those old women. Most of them are illiterate."

In spite of teledensity estimates in excess of 100%, beyond receiving calls, the interaction with mobile phones by Nigerian market women is limited. A respondent demonstrates the conversation from such a market woman:

"My son, please come and help me call Iya Musi; that's part of using phone. When they have to call the number by themselves, can they use it when the boy is not around?"

Another perspective inhibiting acceptance is the dearth of distribution channels:

"I have not really seen any authorized dealer in charge of that thing in this our area here. So probably if we have dealers all over just as we have where you can go to buy your recharge card, I think it would be easier that way."

Timing is another issue. Given the recent introduction of the mobile money products and indeed the very concept of sending money via a cellphone, one respondent draws an analogy with the mobile telephony introduction and admits the probable mass future adoption of mobile money services:

"It was made for a group of people, then they were selling the SIM card for thirty thousand (30,000) as the case may be. It was made for some groups of people. But when it boiled down to two hundred naira (200), people now feel like it is now for all of us."

Another pertinent inhibitor is the perceived degree of security of mobile money. The digitization of financial services and the potential risk of loss has been an issue since the introduction of electronic banking services. In the absence of cybercrime legislation, the development of the online criminal industry has warranted caution amongst prospective mobile money users:

¹⁹ Master or boss

“Well, why I don’t want to use it, you know Nigeria these days. You know we have 419²⁰ everywhere. We have all these yahoo yahoo guys. Aahhh. For me, for my own suggestion as for my eh advice, I don’t like it at all.”

The confidence of bank security of these systems is also absent due to the knowledge of the banks’ vulnerabilities and ATM scams are heightened by thoughts of the loss or theft of information-laden phones. As one respondent describes the information theft using flash drives:

“You know some banks have lost a lot of money. For example, somebody can come in, use their flash drive. Maybe you can disguise as you are a co-worker, then they can ask you say: ‘oga excuse me, can I use your system.’ Then you don’t know that the flash you use, they can use it to collect information from your own system.”

This lack of corporate and individual protection experienced in current electronic banking services in Nigeria is not endearing users to mobile money:

“I stopped using my ATM²¹ because when they stole my ATM, they were sending me alerts that the money have been withdrawn. I went to the bank, before I even filled the form finish, I was still get another alert so I need to pick another form and said they should ban the ATM, so I stopped using ATM.”

5. MOBILE MONEY UTILITY – INSIGHTS FROM THE SURVEY

The descriptive statistics of both surveys are illustrated in subsequent figures and charts.

5.1 Survey Details

The survey was conducted in public areas in Lagos State, Nigeria and Greater Accra Region, Ghana using the street intercept technique. Due to lower literacy levels expected amongst respondents, it was necessary to train enumerators who could administer these surveys verbally and record responses.

The random selection of participants was deliberately employed to capture a wider range of the target population. The respondents were selected from open locations such as markets, bus stops in different parts of the state. In Nigeria, 2371 respondents were interviewed, with 121 considered unusable and thus discarded. The total number of surveys evaluated was 2250. In Ghana, 2252 surveys were administered, with 85 surveys considered unusable, typically because information was not provided in the screener section or in the body of the questionnaire. This brings the total number of surveys evaluated in Ghana to 2187. Figures 7 and 8 show the survey locations in Lagos, Nigeria and Accra, Ghana, respectively, and Table 9 provides more details on the survey locations in both countries

²⁰ Section of Nigerian Criminal code addressing fraud.

²¹ ATM is used as a synonym for debit card

Figure 7: Map View of Survey Locations in Nigeria

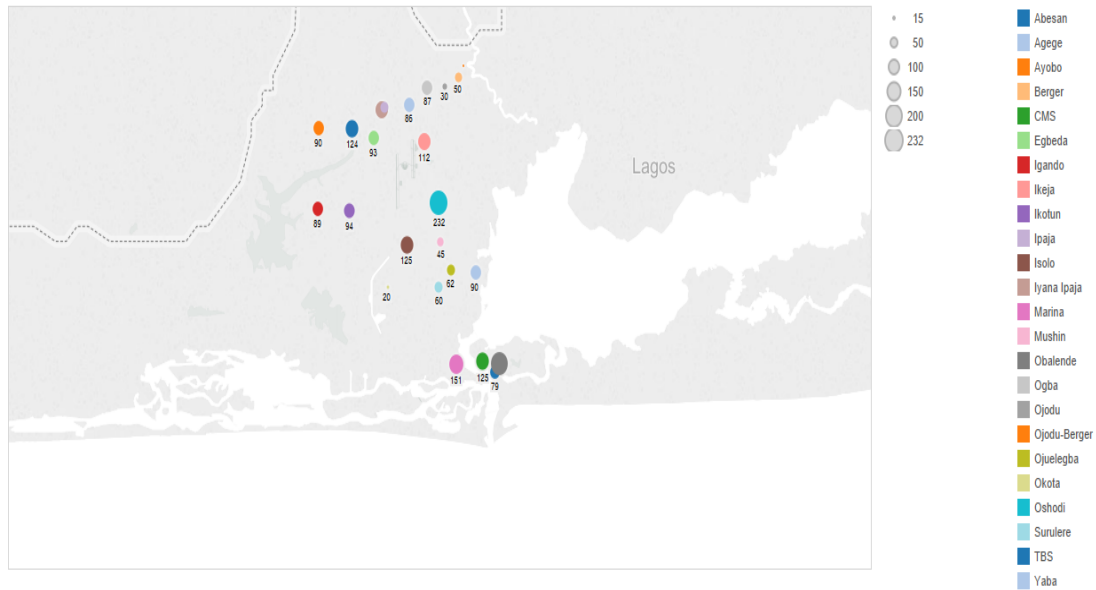


Figure 8: Map View of Survey Locations in Ghana

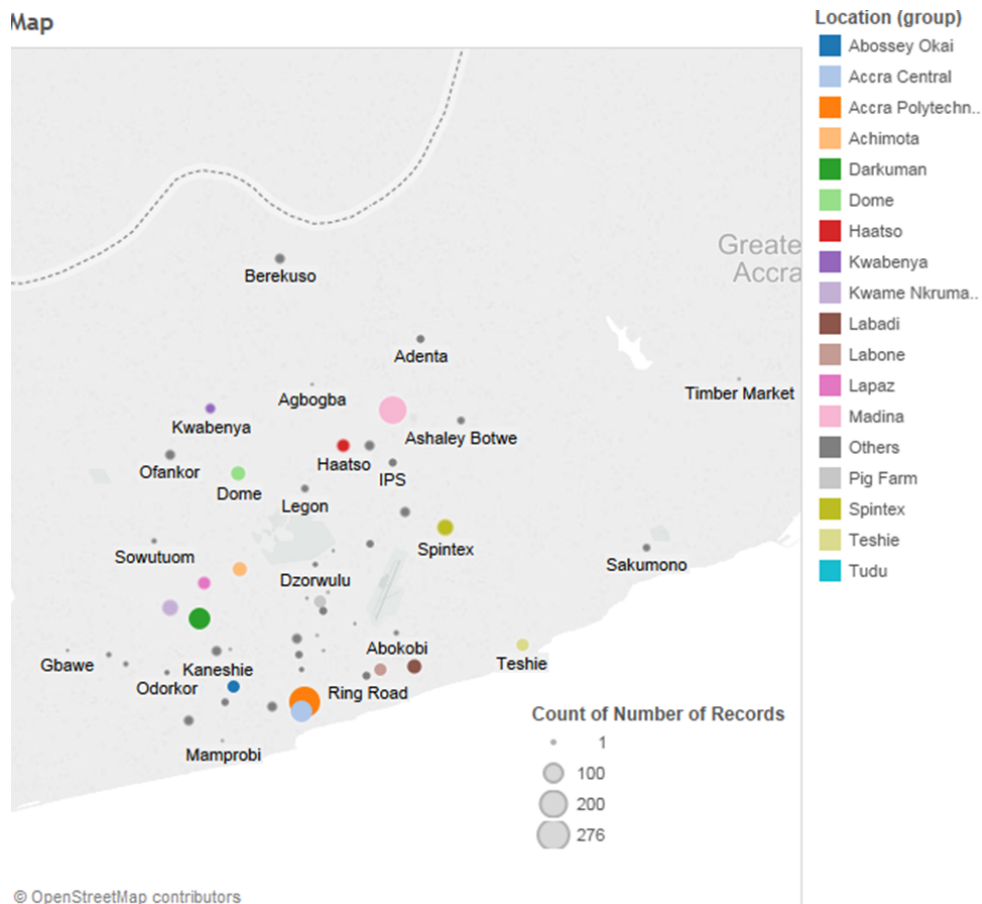


Table 9: Nigeria and Ghana Survey Characteristics by Location

Nigeria			Ghana		
Location	N	Percentage	Location	N	Percentage
Abesan	124	5.5%	Accra Polytechnic	276	12.62%
Agege	86	3.8%	Madina	220	10.06%
Ayobo	90	4.0%	Kasoa	184	8.41%
Berger	50	2.2%	Darkoman	134	6.13%
CMS	125	5.6%	Accra Central	128	5.85%
Egbeda	93	4.1%	Tudu	85	3.89%
Igando	89	4.0%	Spintex	75	3.43%
Ikeja	112	5.0%	Kwame Nkrumah Circle	73	3.34%
Ikotun	94	4.2%	Achimota	67	3.06%
Ipaja	61	2.7%	Labadi	59	2.70%
Isolo	125	5.6%	Dome	59	2.70%
Iyana Ipaja	121	5.4%	Haatso	52	2.38%
Marina	151	6.7%	Lapaz	46	2.10%
Mushin	45	2.0%	Teshie	44	2.01%
Obalende	209	9.3%	Abossey Okai	44	2.01%
Ogba	87	3.9%	Labone	41	1.87%
Ojodu	30	1.3%	Pig Farm	34	1.55%
Ojodu-Berger	15	0.7%	Kwabenya	33	1.51%
Ojuelegba	62	2.8%	Agbogbloshie	32	1.46%
Okota	20	0.9%	Dansoman	32	1.46%
Oshodi	232	10.3%	East Legon	32	1.46%
Surulere	60	2.7%	Kaneshie	32	1.46%
TBS	79	3.5%	Ofankor	28	1.28%
Yaba	90	4.0%	Other (38) ²²	377	17.24%
Total	2250	100%	Total	2187	100.00%

5.2 Respondent Demographics

5.2.1 Age

Approximately 82% and 73% of respondents in Ghana and Nigeria respectively were between the ages of 18 and 35 years, consistent with the age demographic of the both countries (see Figures 9 and 10).

²² Other (38) represents 38 other locations that contributed less than 1.28% of survey respondents.

Figure 9: Ghana Age

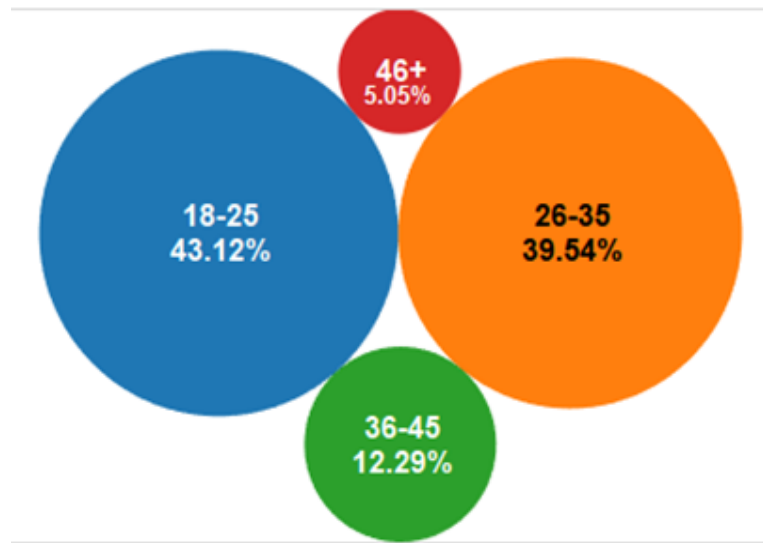
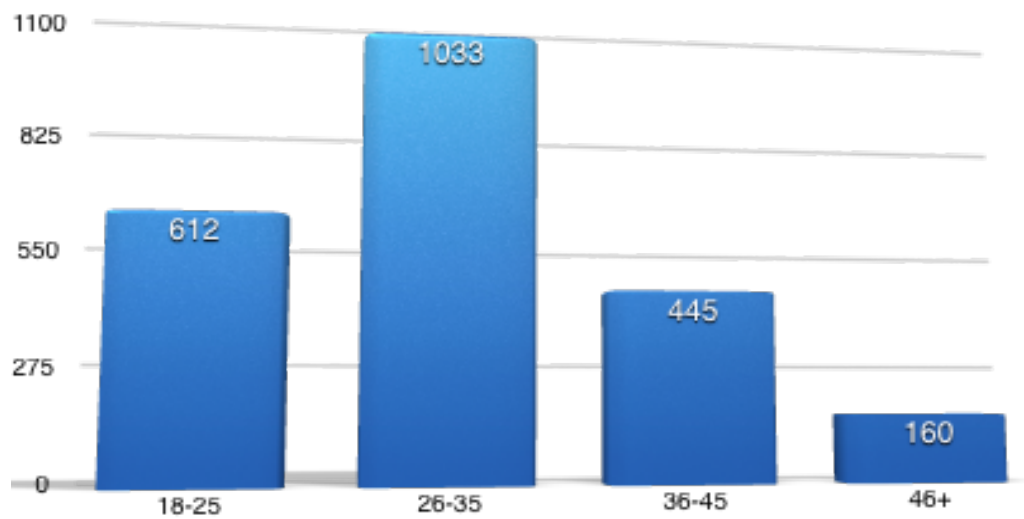
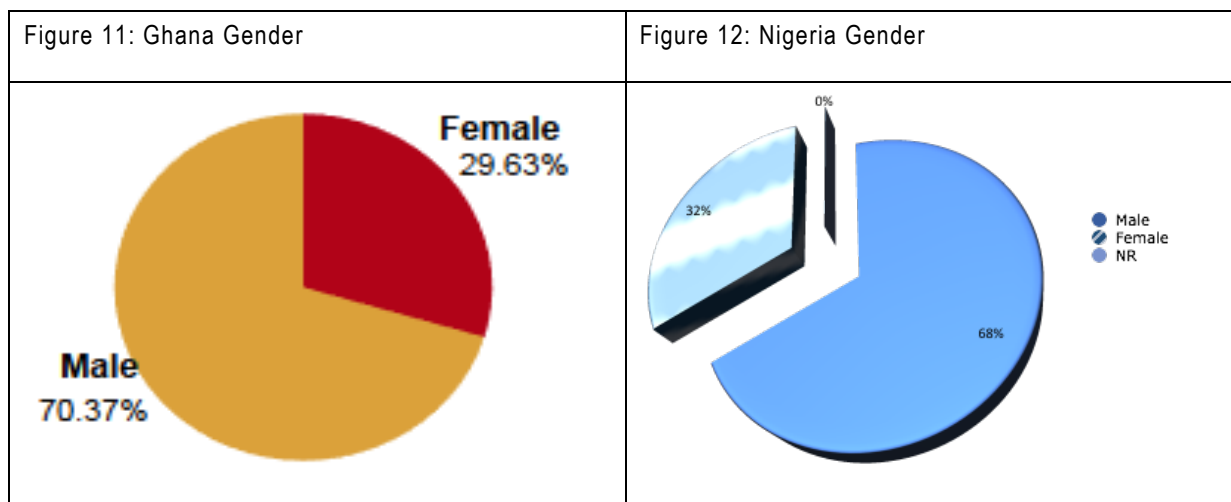


Figure 10: Nigeria Age



5.2.2 Gender

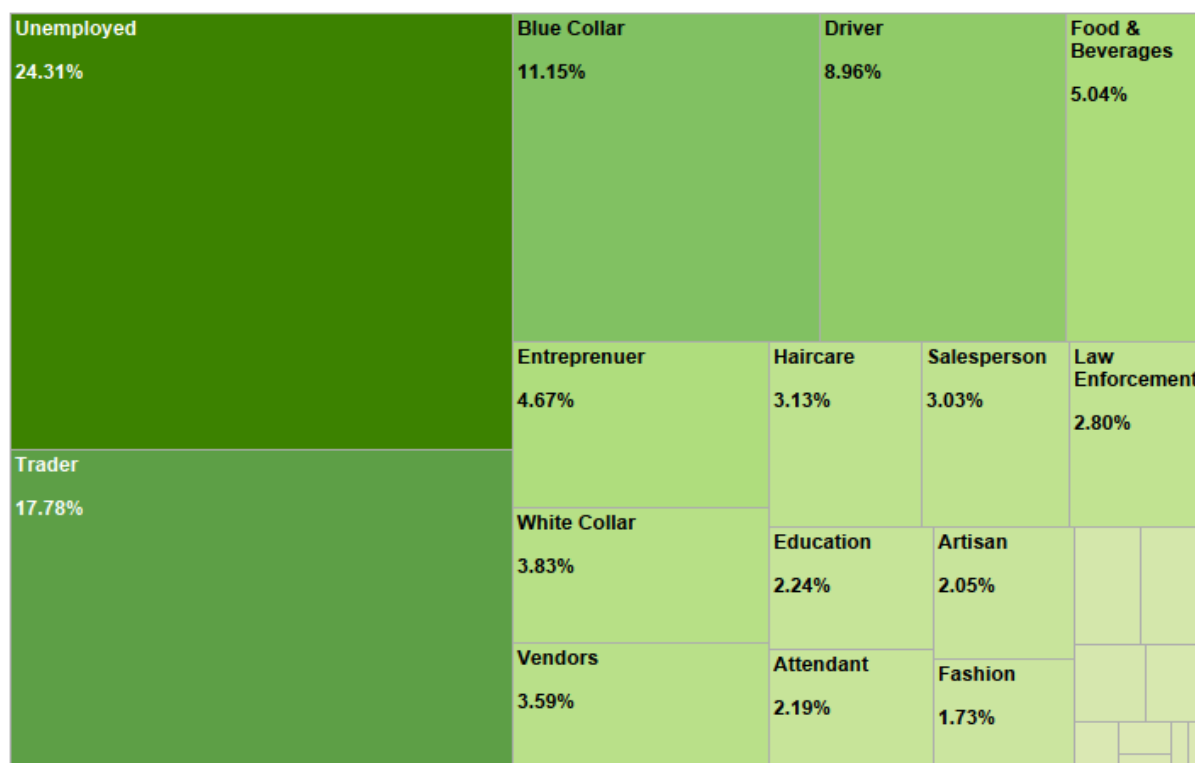
The gender breakdown of both surveys however, are not representative of either country (Figures 11 and 12). Both surveys had a greater proportion of males being interviewed than females.



5.2.3 Profession

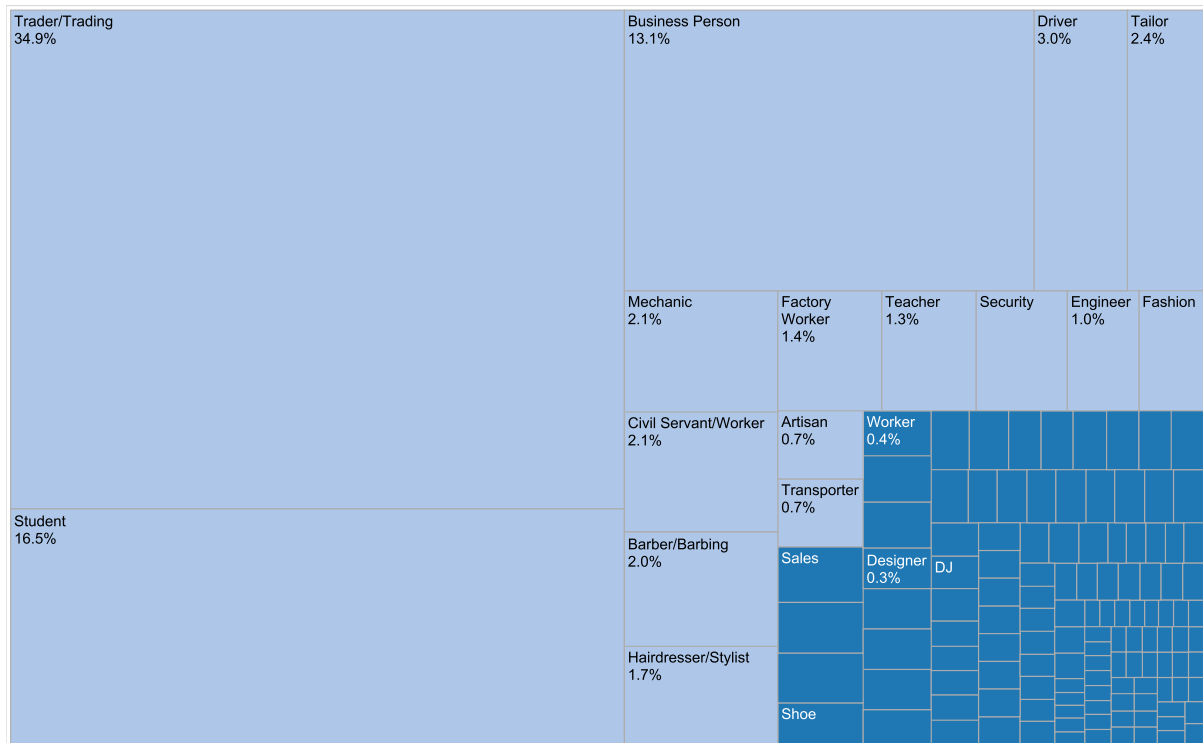
A significant percentage of respondents were typically engaged in some form of trade, business or some blue-collar work²³. In the Ghana survey, close to 25% of respondents were unemployed.

Figure 13: Ghana Profession



²³ Blue-collar work is defined as manual or physical work in the manufacturing, mining, sanitation, construction, mechanical, maintenance, technical installation, etc. industries.

Figure 14: Nigeria Profession



5.2.4 Education

At the time of the survey, most respondents ended their education at the senior secondary school level (SSS) but a sizable number from both countries had completed higher-level degrees at polytechnic institutions as well.

Figure 15: Ghana Education

Educational Level

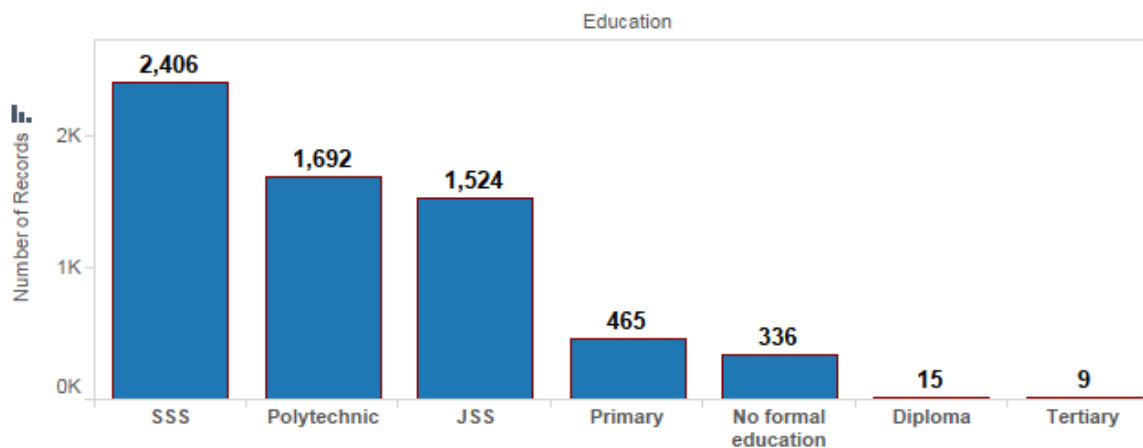
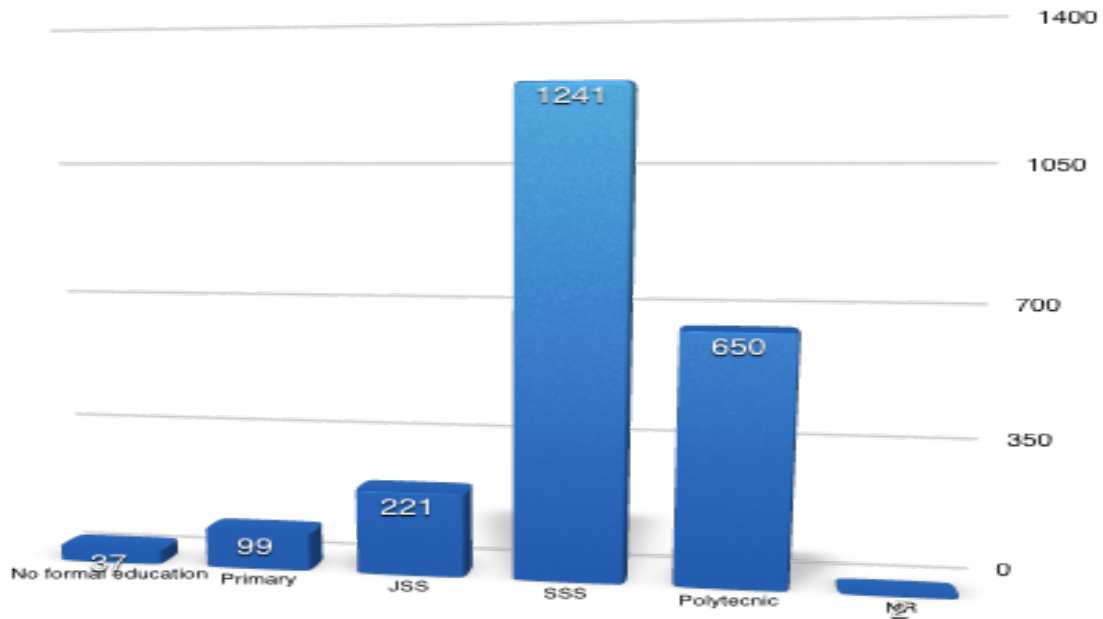


Figure 16: Nigeria Education



5.2.5 Formal Banking: Bank Account Ownership & Use

A majority of respondents did have bank accounts that they used quite frequently (Figures 17 and 18). However, a majority of these account holders in Ghana explicitly earn less than Ghs500 (less than \$300 USD) every month, which qualified them to partake in this study.

Figure 17: Ghana Bank Account Ownership

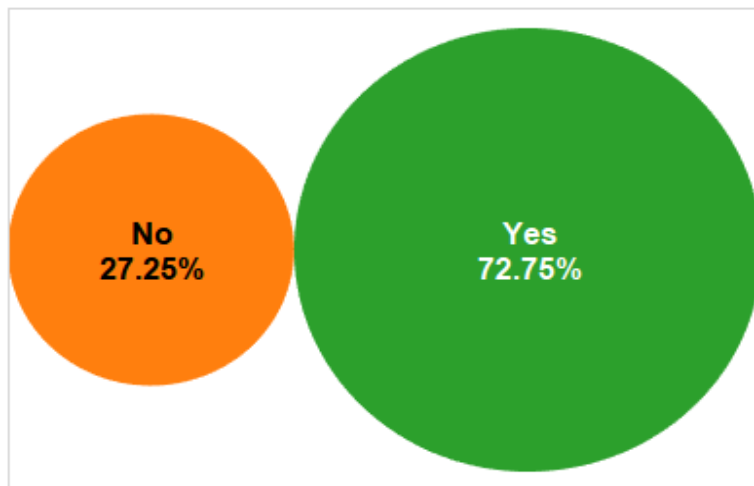
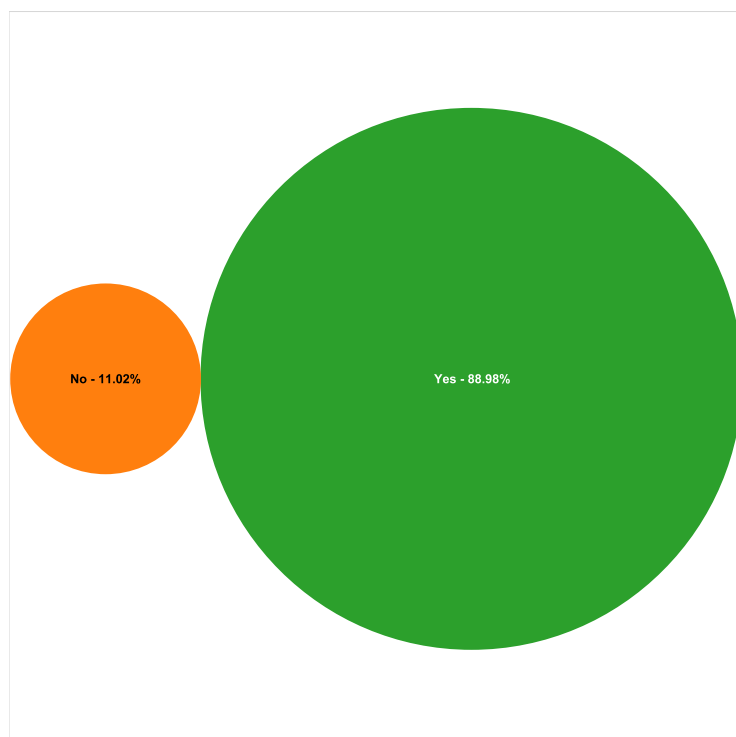


Figure 18: Nigeria Bank Account Ownership



Banking frequency showed a significant difference in the Ghana and Nigerian populations. Although a significant portion of survey respondents in Ghana owned a bank account, these accounts were not used on a regular basis (i.e., less than twice a month) (Figure 19). Conversely, the Nigerian population frequently used their bank accounts (Figure 20).

Table 10: Ghana Banking Frequency

LessthanGHS500	Irregular Use	Regular Use	Total
No	5.20%	7.04%	12.24%
Yes	42.99%	44.77%	87.76%
Total	48.19%	51.81%	100.00%

Figure 19: Nigeria Banking Frequency

Sc BankFreq	
Anytime	8
Once in a while	26
Daily	74
Weekly	1,278
Monthly	582
Yearly	3
2 times/month	3
2 times/week	4
3 times/month	1
3 times/week	2
Regularly	21

Figure 20: Nigeria Mobile Phone Ownership

	0	1	2	3	4	5
1	3	1,053	427	22	6	
2		18	509	118	32	1
3		1	11	31	7	2
4			1	1	5	1
5					1	

5.2.6 Respondent Mobile Telephone Ownership and Utility

In Ghana, the ownership of mobile devices amongst respondents was high with 2806 phones and 2882 SIM cards recorded amongst the 2187 respondents. A majority of respondents used their phones to make voice calls and text. General browsing and the use of Facebook and WhatsApp were other significant uses, as well as checking emails. However, similar to the Nigerian study, digital financial services like electronic banking, insurance, investments and transfers were not well patronized.

The ownership of multiple mobile devices amongst respondents was also observed to be high in Nigeria with respondents having access to multiple devices or multiple networks through dual-SIM enabled telephones. The data also demonstrates the use of non-SIM mobile phone networks such as CDMA networks. The uses of the mobile devices are predominantly for regular mobile network services such as voice calls and text messaging. The uses of data-enabled services such as Internet browsing, email, and social apps (WhatsApp and Facebook) are also on the increase. However, digital financial services like electronic banking, insurance and the like polled low. Figures 20 and 21 detail the mobile phone ownership in Nigeria and Ghana, respectively, and Figures 22 and 23 detail the uses of the mobile phones by survey respondents in Ghana and Nigeria, respectively. In Nigeria, the ownership of multiple telephony services is prevalent either through multiple devices or dual—SIM devices. The matrix in Figure 20 shows the count of mobile devices (vertical) versus SIM ownership (horizontal).

Figure 21: Ghana Mobile Phone Ownership

Count of # of cellphones	Count of # of Sim Cards							Grand Total
	0	1	2	3	4	5	9	
1	1047	10	6					1063
2	1	513	357	9	2			882
3		28	94	33	3			158
4		7	22	12	7			48
5		3	8	4	2	3		20
6		1	1	2	1			5
7						2		2
9							1	1
11		2						2
many		1						1
Grand Total	1	1602	492	66	15	5	1	2182

Figure 22: Ghana Mobile Phone Utility

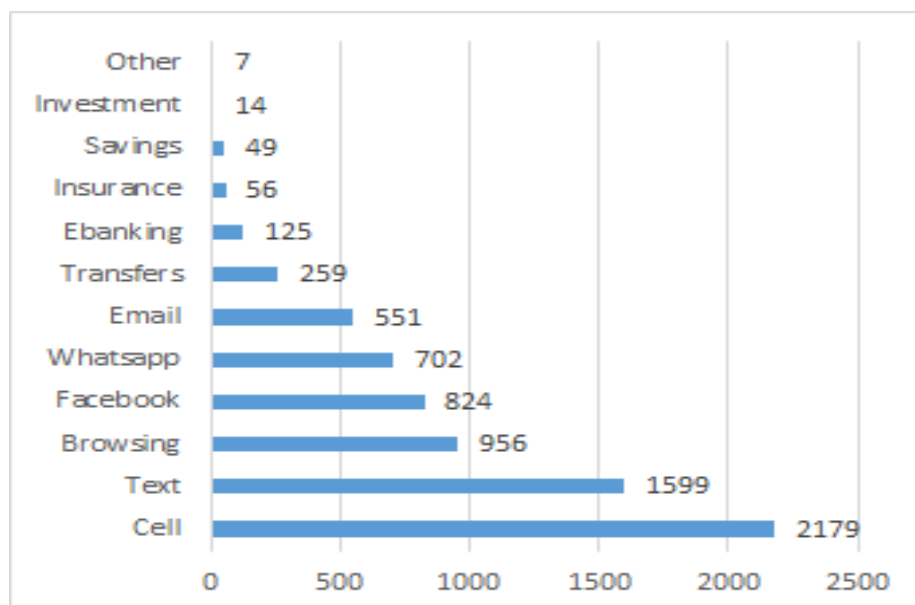
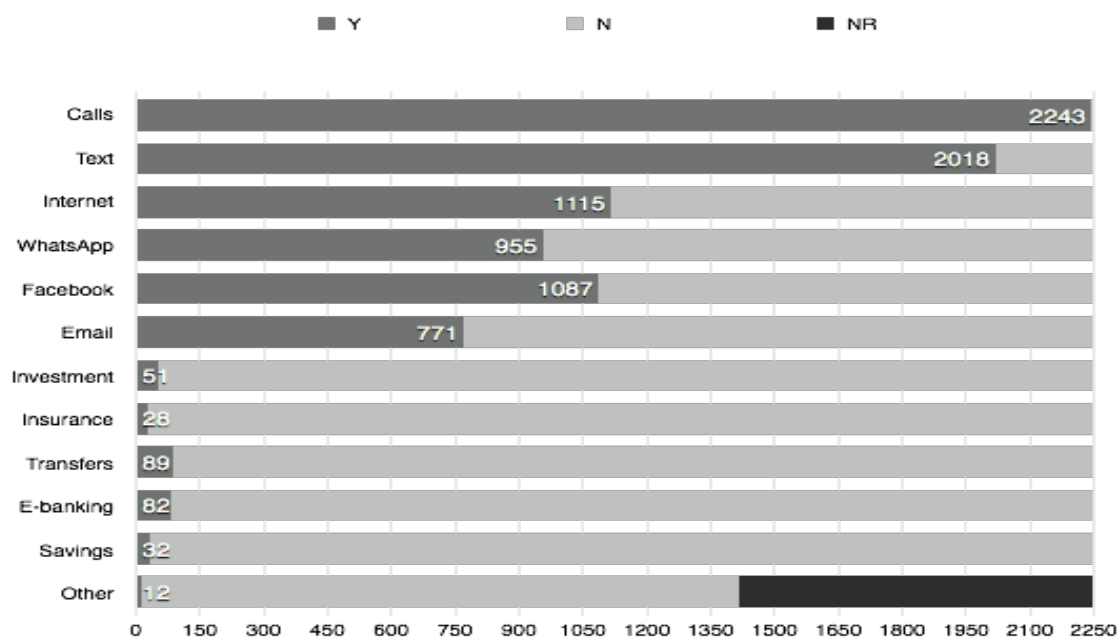


Figure 23: Nigeria Mobile Phone Utility



Further analysis of the digital financial services utilized in Nigeria is illustrated in the descriptive keyword analysis shown in Figure 24. The graphic highlights main uses such as transfer, savings, airtime recharge (credit), etc. and user communities or recipients that include friends, family, parents, etc.

Figure 24: Nigeria Mobile Financial Services Utility



5.3 Respondent Informal Financial Services

5.3.1 Use of Informal Financial Services

Significantly more than half of the survey respondents in both countries did not use informal financial services—Susu in Ghana (Figure 25) and Ajo in Nigeria (Figure 26).

Figure 25: Ghana Use of Informal Financial Services

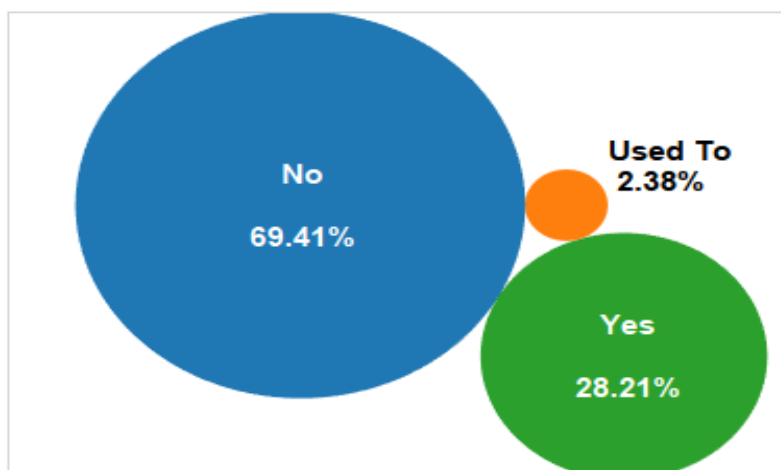
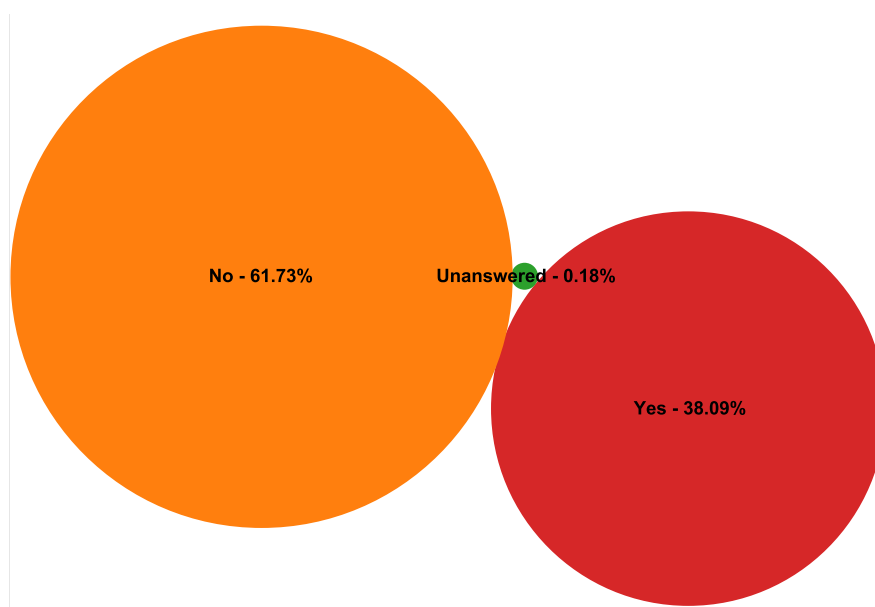


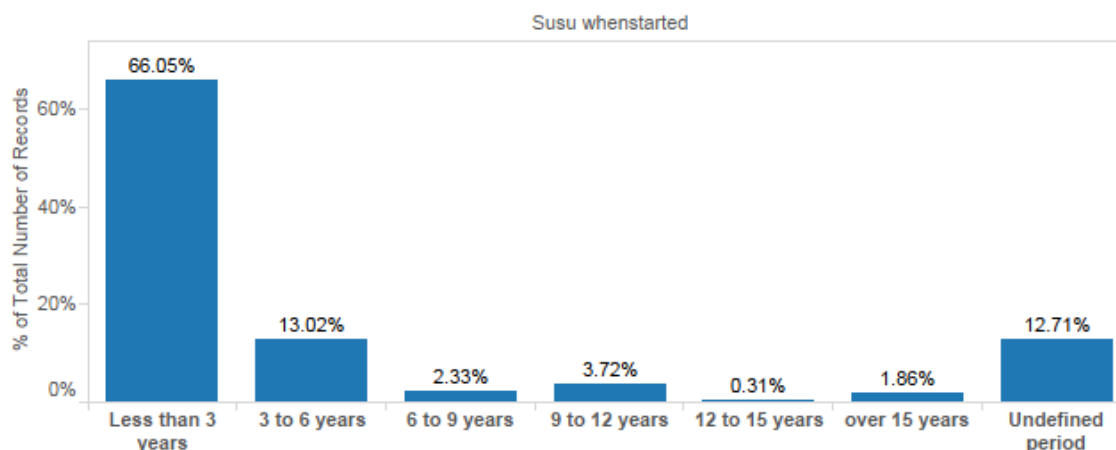
Figure 26: Nigeria Use of Informal Financial Services



5.3.2 Duration, Types, and Rationale for Informal Savings

Of the 39% of respondents that utilize informal savings schemes in Nigeria, 23% have used such methods for less than 5 years. Even though a large proportion of respondents utilize contribution schemes, the savings frequencies and amounts vary. In Ghana, close to 70% of respondents utilize such informal and formal schemes collectively known as Susu, with close to 67% of them utilizing these methods for less than 3 years (Figure 27).

Figure 27: Ghana Susu Duration of Savings

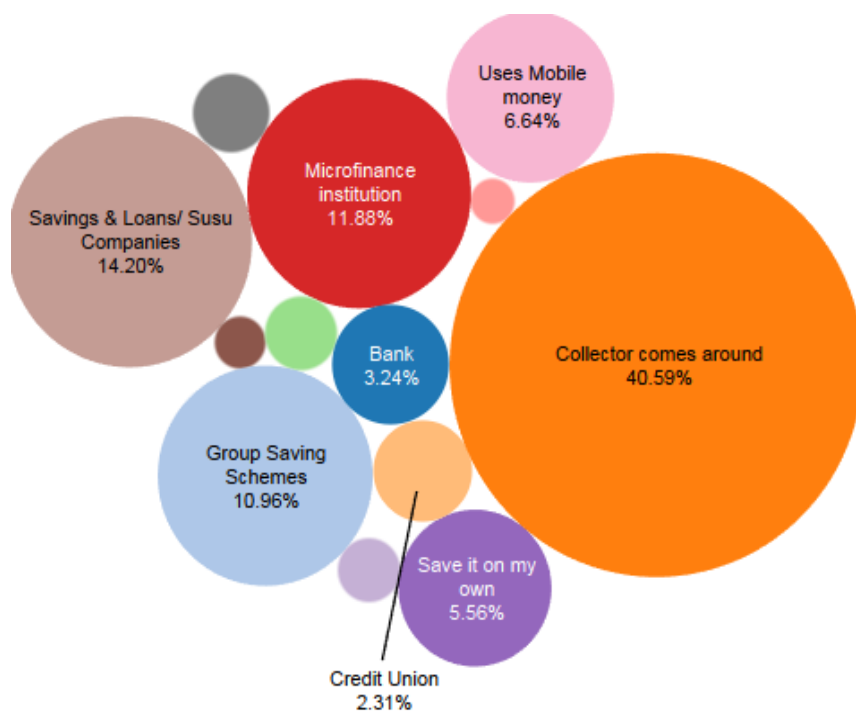


The types and means of saving differed in the two surveys (Figures 28 - Nigeria and 29 - Ghana). Microfinance organizations and savings & loans companies are alternatives to the individual and group contribution schemes. Unlike bank savings, the access to a pool of funds periodically is an enabler of informal savings schemes with varying reasons from savings for general and specific acquisitions, rent, and business growth and also as a guard against impulsive spending. In Ghana, mobile money was also considered a method of saving by close to 7% of respondents.

Figure 28: Nigeria Types of Informal Financial Services (Ajo)

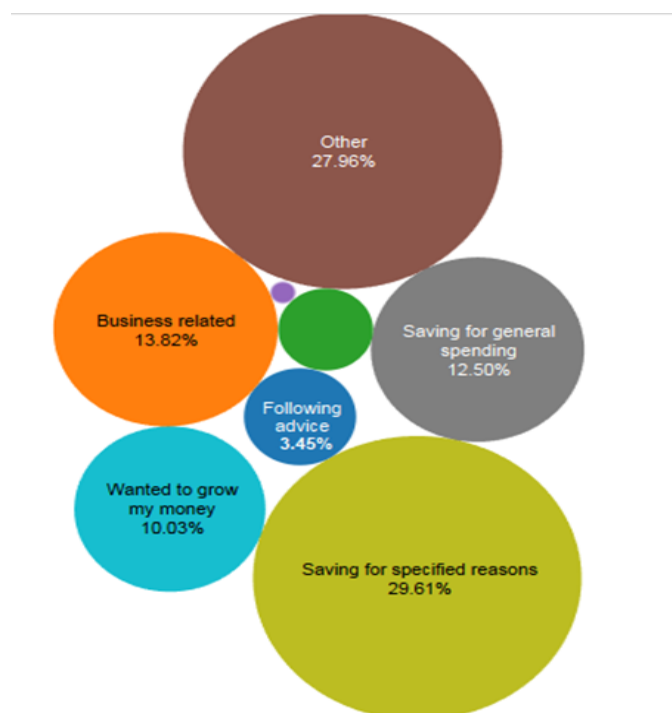


Figure 29: Ghana Types of Informal Financial Services (Susu)



Understanding why respondents began saving through informal means was as expected: largely to save for specific items (rent, etc.), however, low on the scale was saving because of long-term financial stability or financial growth (10%) (see Figure 30).

Figure 30: Ghana Reasons for Starting Susu



One major limitation of informal schemes is accessibility restriction; where funds are not available outside the collectors’ city of operations. About 90% of Ghanaians surveyed for example, had no access to their savings accounts when they left Accra or any major city; 50% of them wished that this was not the case (Figure 31). This represents a clear opportunity for the various institutions mentioned earlier to provide such a service using mobile money or other e-transaction platforms.

Figure 31: Ghana Access Outside The City Centers

Susu out of town...

Do You want to?	Can You Access?		Grand Total
	No	Yes	
No	39.73%	2.68%	42.41%
Yes	50.00%	7.59%	57.59%
Grand Total	89.73%	10.27%	100.00%

5.3.3 Respondent Degree of Trust of Informal Savings Schemes

Other savings schemes described amongst users and non-users of formal and informal schemes include investments (assets and human), self-safekeeping at home, and saving with friends or family.

Trust perceptions in these informal savings schemes are relatively high; however, the associated risks are typically associated with the collector. The trust perceptions of informal savings schemes were greater than 50% amongst respondents. The reasons supporting negative perceptions range from flight risk to the human fallibility where the collector should not be perceived as a saint or god (no trust), accidents, theft, loss and other collector risk (collector inability to pay, accident or even death) and some respondents had issues trying to access their funds.

Reasonable and total trust perceptions were supported by the collector’s general availability and reliability whilst operating from a known location. In Ghana, users’ experiences using Susu and the reliability of the system, accessibility to the service, the general perception about the methods they chose (whether they practiced Susu with friends & work colleagues or simply handed their money over to a collector) were other significant reasons behind their trust. Close to 60% of those that practiced Susu in Ghana did not find it risky and only 6% did not see any benefits from this practice.

Figures 32 to 40 highlight the degree of trust of respondents for existing informal savings systems in Ghana and Nigeria.

Figure 32: Ghana Susu Trust Perceptions

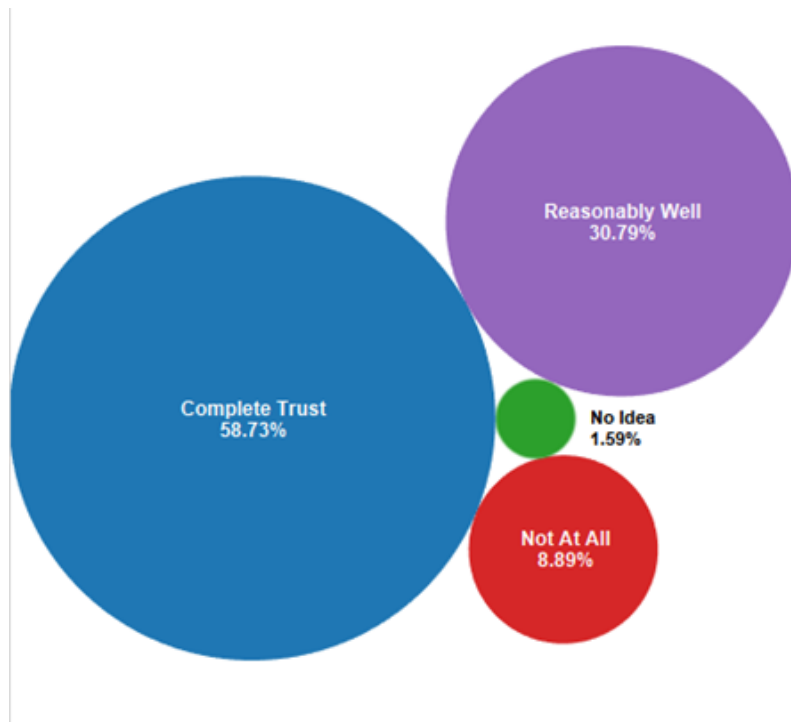


Figure 33 Ajo Collector Trust Perceptions 1

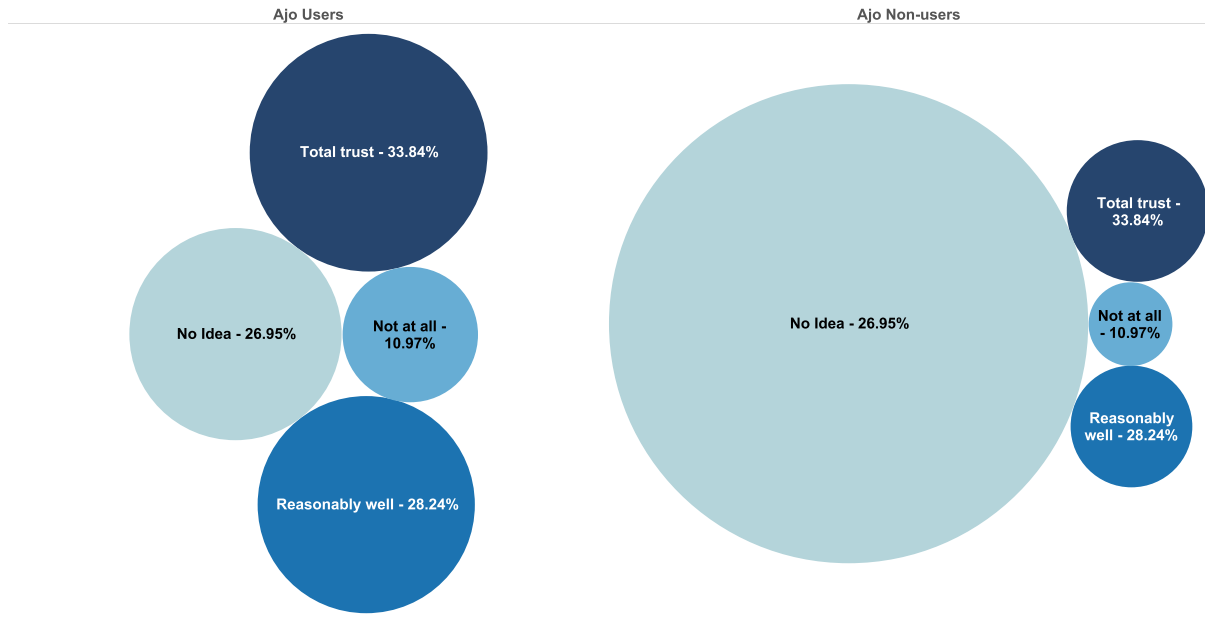


Figure 34: Nigeria: Ajo Collector Trust Perceptions II



Figure 35: Ghana “Reasons Why I Trust Susu”

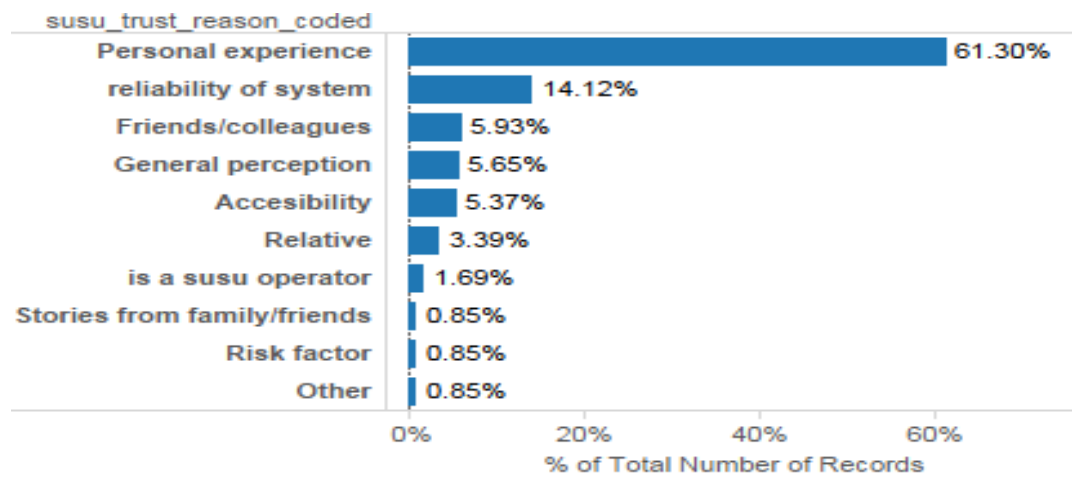


Figure 36: Ghana “Reasons Why I Do NOT Trust Susu”

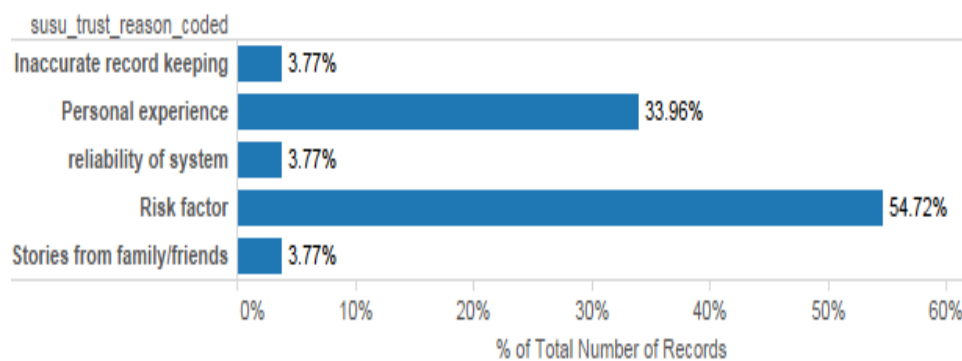


Figure 37: Ghana Informal Financial Services (Susu) Perceived Benefits

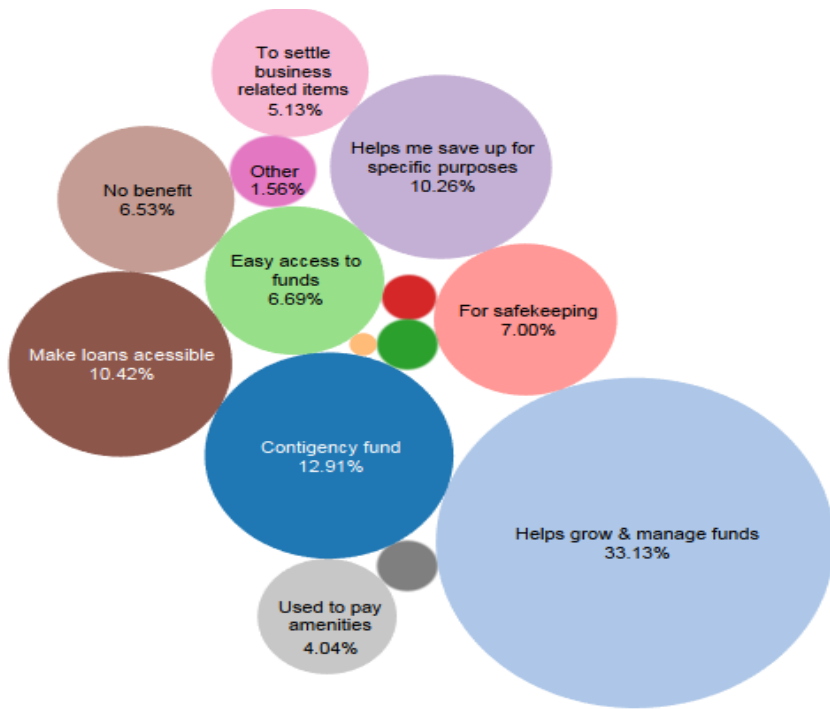


Figure 38: Ghana Informal Financial Services (Susu) Perceived Risks

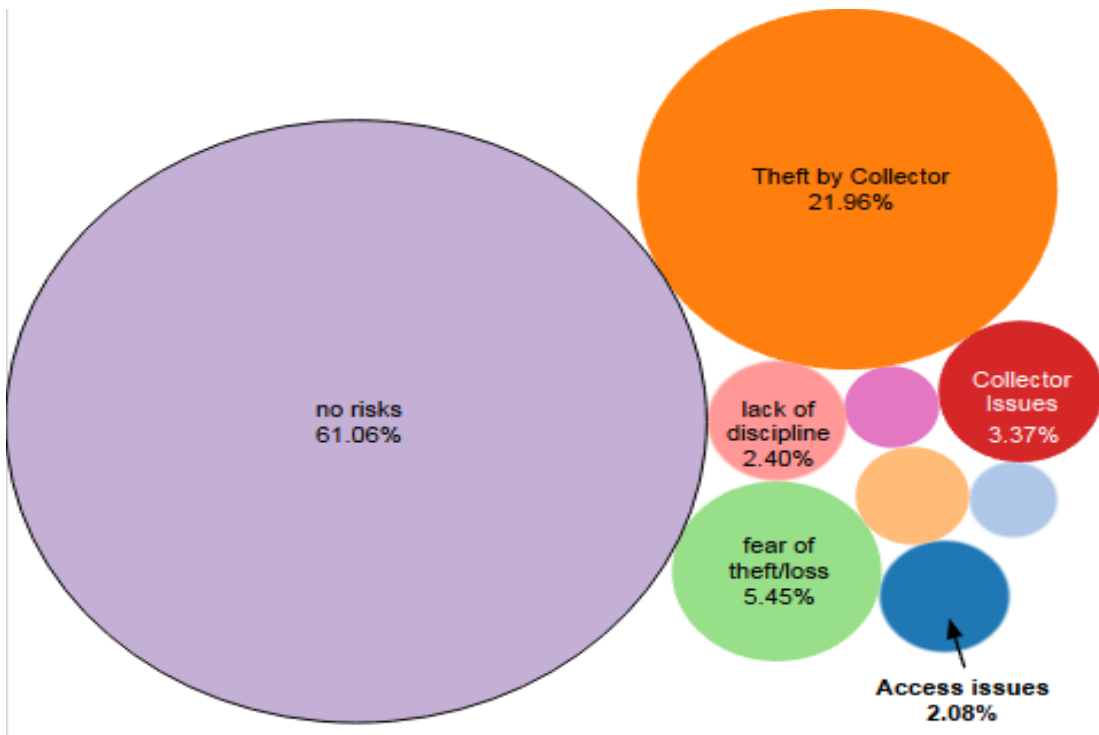


Figure 39: Nigeria Informal Financial Services (Ajo) Perceived Benefits



Figure 40: Nigeria Informal Financial Services (Ajo) Perceived Risks



5.4 Mobile Money – Users & Non-Users

In Ghana, a majority (almost 60%) of respondents surveyed did not use mobile money (Figure 41). In Nigeria however, a significant majority of respondents were non-users of mobile money services, even though they knew about the service (Figure 42).

Figure 41: Ghana Mobile Money Use

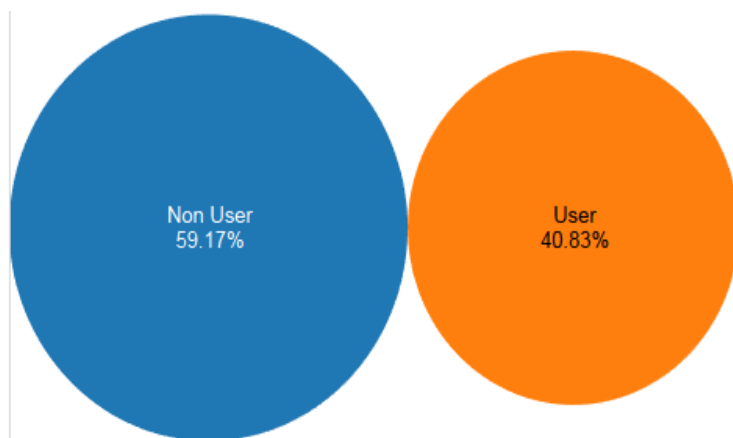
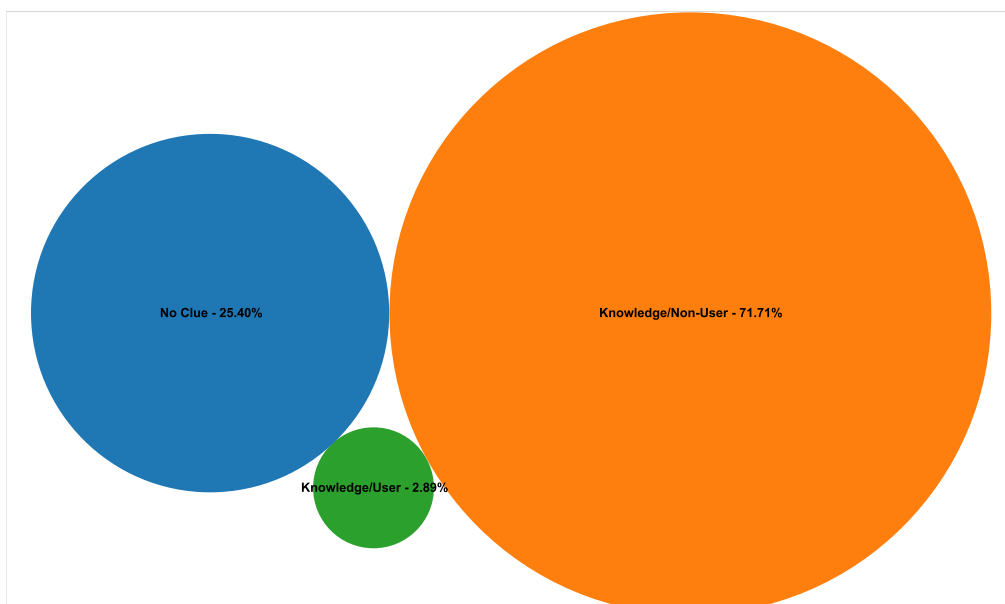


Figure 42: Nigeria Mobile Money Use



Details of the non-user and user groups follow in sections 5.5 and 5.6, respectively.

5.5 Non-User Perceptions of Mobile Money

Given the well-documented low adoption rates of mobile money in Ghana and Nigeria, a key portion of the survey sought to understand the perceptions of nonusers. This section explores the perceptions of non-users with regard to curiosity, awareness, and perceptions of bank and telecommunication firms (telcos) trust.

5.5.1 Non-User Curiosity

In Ghana, the level of curiosity about mobile money and its potentials among nonusers was also significantly low (82%) with a similarly low level of curiosity about mobile money in Nigeria. (Figures 43 and 44)

Figure 43: Ghana Expressed Curiosity about Mobile Money from Non-Users

Curious About MM? (NU)

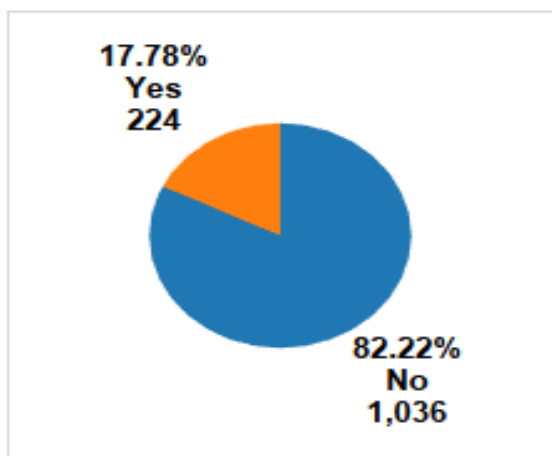
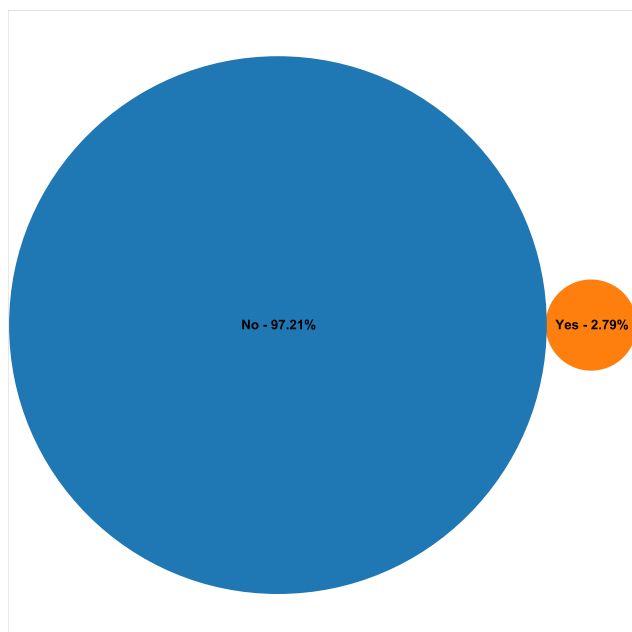


Figure 44: Nigeria Expressed Curiosity about Mobile Money from Non-Users

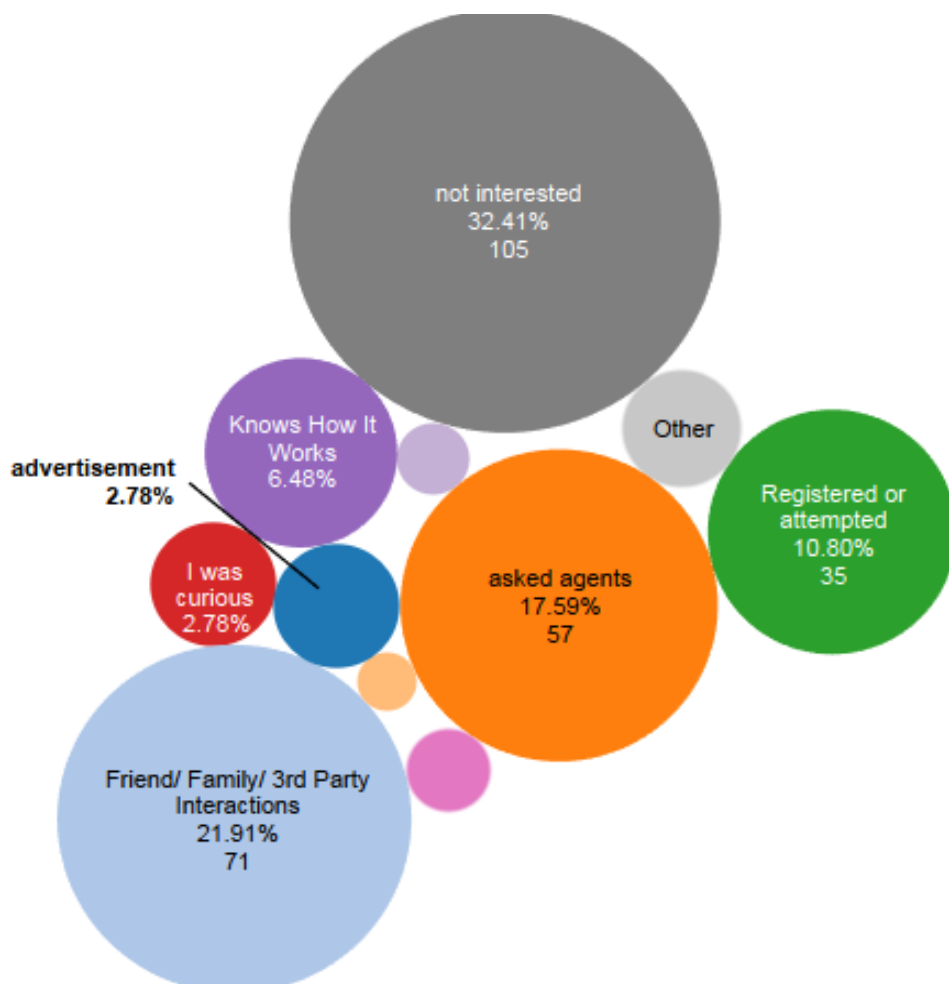


In the Ghanaian survey, 105 (41%) of the 224 non-users curious to find out more about the service decided they were not interested in the offering. 35 respondents (10.80%) made some attempt to register for the service (even though they had not yet used it at the time this study was conducted.) The remaining non-users asked their friends & family (21.91%), or Mobile Money agents (17.59%). Only 2.78% of respondents got more information on the service through adverts (see Figure 45)

Of the 61 Nigerian respondents that had made further enquiries, 48 provided additional information on their experimentation with mobile money. Although 7 respondents simply acquired additional information on operations; some inhibitors or delimitations cited include

operational protocols (3), product/service unfamiliarity (11), poor patronage (1), poor network (5), and trust (5). Another inhibitor amongst experimenters was the suitability of mobile money for large value transactions (2). Motivations for use include the portable use for purchases (10) and easy access to transfer services (3).

Figure 45: Ghana Non-User Curiosity Details



5.5.2 Non-User Channels of Mobile Money Awareness

Amongst non-users mobile money, advertisements (radio, TV, billboards) proved to be the most popular awareness medium. Word of mouth through friends and family, and direct marketing by banks & telcos using text messages were also popular (Figures 46 and 47).

Figure 46: Ghana Non-User Channels of Mobile Money Awareness

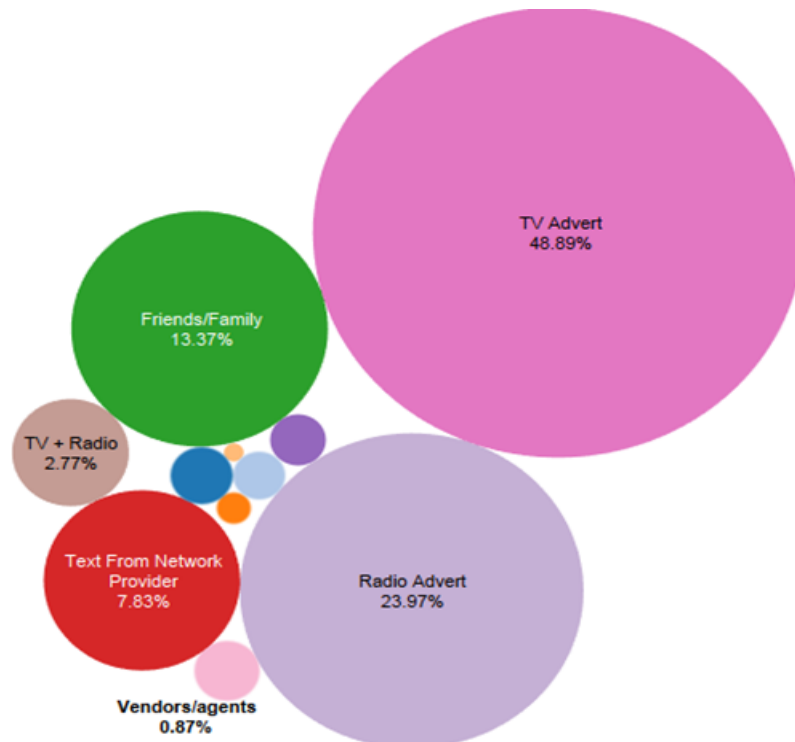
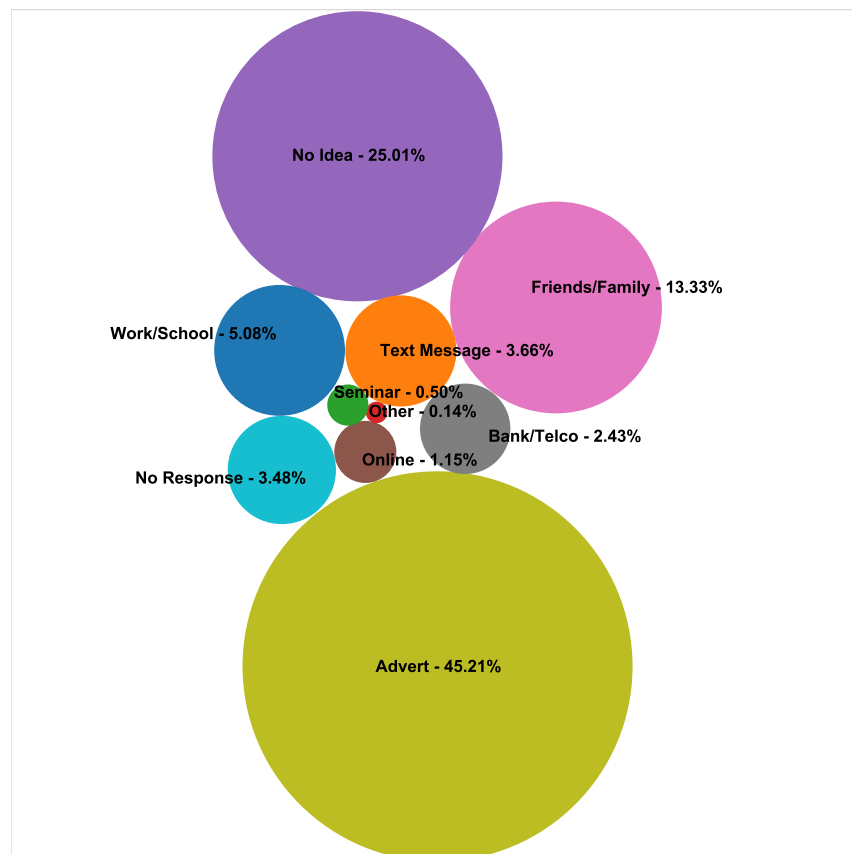


Figure 47: Nigeria Non-User Channels of Mobile Money Awareness



5.5.3 Non-User Perceived Usefulness of Mobile Money

The perceived usefulness of mobile money by mobile money nonusers is illustrated through the keywords in Figure 48 that clearly associate mobile money utility with transactions/transfers, money, sending and receiving.

Figure 48: Perceived Usefulness of Mobile Money Nigeria (L) & Ghana (R)



5.5.4 Non-User Mobile Money Inhibitors

The uncertainty and inhibitors of mobile money by nonusers are represented by the keywords in Figure 49 where three words dominate - operate, interested, and dislike; representing operational and personal preferences.

Figure 49: Nigeria Mobile Money Inhibitors



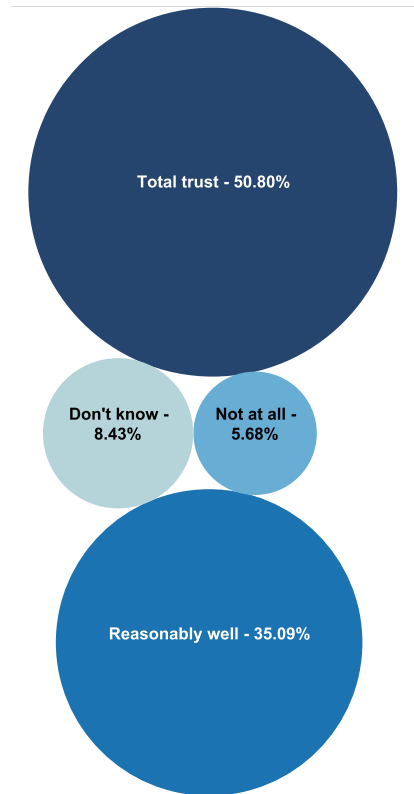
5.5.5 Trust of Regulatory Institutions: Banks & Telcos

In Nigeria, the predominant mobile money regulatory frameworks license either bank- or telecommunications-operated models. Given the sensitivity of financial transactions, the trust perceptions amongst potential mobile money users reveal that whilst trust perceptions are reasonably high; banks are more trusted (see Figure 50)

This degree of trust is somewhat similar in Ghana, where mobile money is licensed to telecommunication-operators. Financial transactions are typically understood to be in the remit of banks and other financial service operators and, as such, it was no surprise that most nonusers had 'total trust' in banking services but had mixed views about trusting their telco operators. (Figure 51)

Figure 50: Nigeria Non-User Trust Perceptions of Banks & Telcos

Bank Trust



Telco Trust

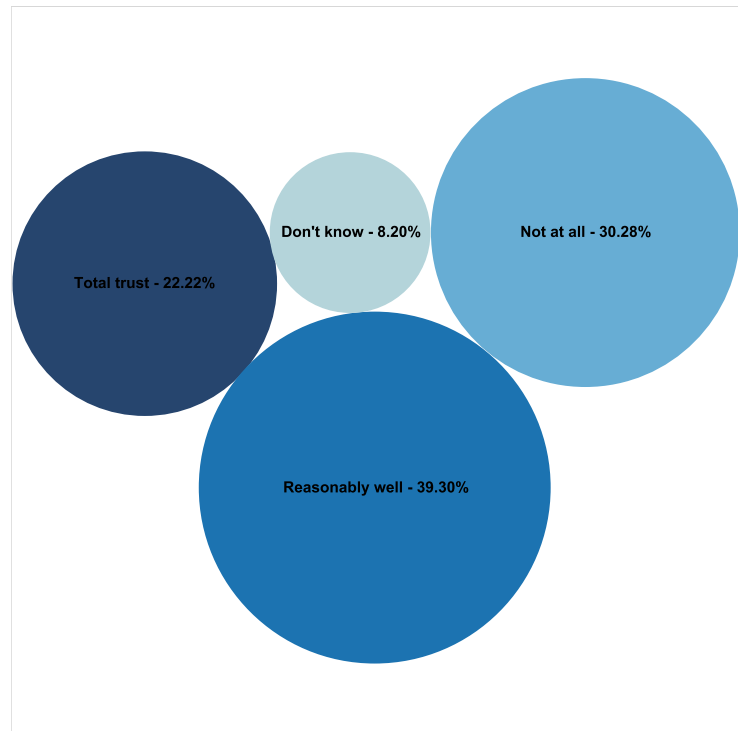
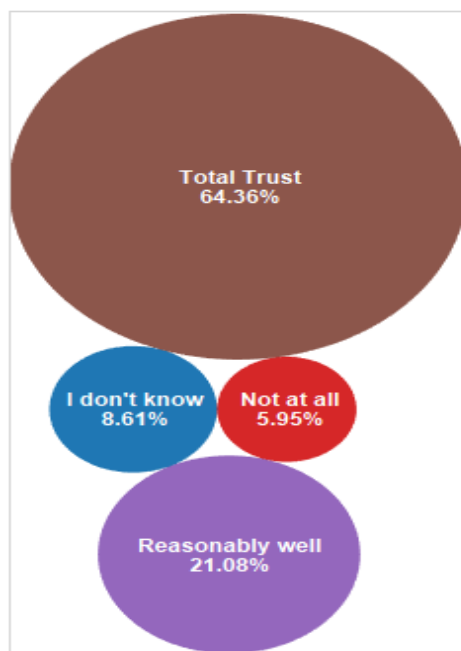


Figure 51: Ghana Non-User Trust Perceptions of Banks & Telcos

Do You Trust The Bank?



Do You Trust Your Telco?



5.5.6 Comparative Trust of Banks & Telcos

An evaluation between bank and telcos revealed that in both countries, banks were considered trustworthier than telcos. Banks were perceived to be secure and had long been established as the place where transactions involving money should be made, unlike mobile money which is a new entrant into the market. Mobile money platforms were mainly favored for their speed, reliability and accessibility compared to banks. Equal trust reasons were founded on trustworthiness of both provider groups and relative service satisfaction. (Figures 52-55)

Figure 52: Nigeria Detailed Non-User Trust Perceptions of Banks vs. Telcos

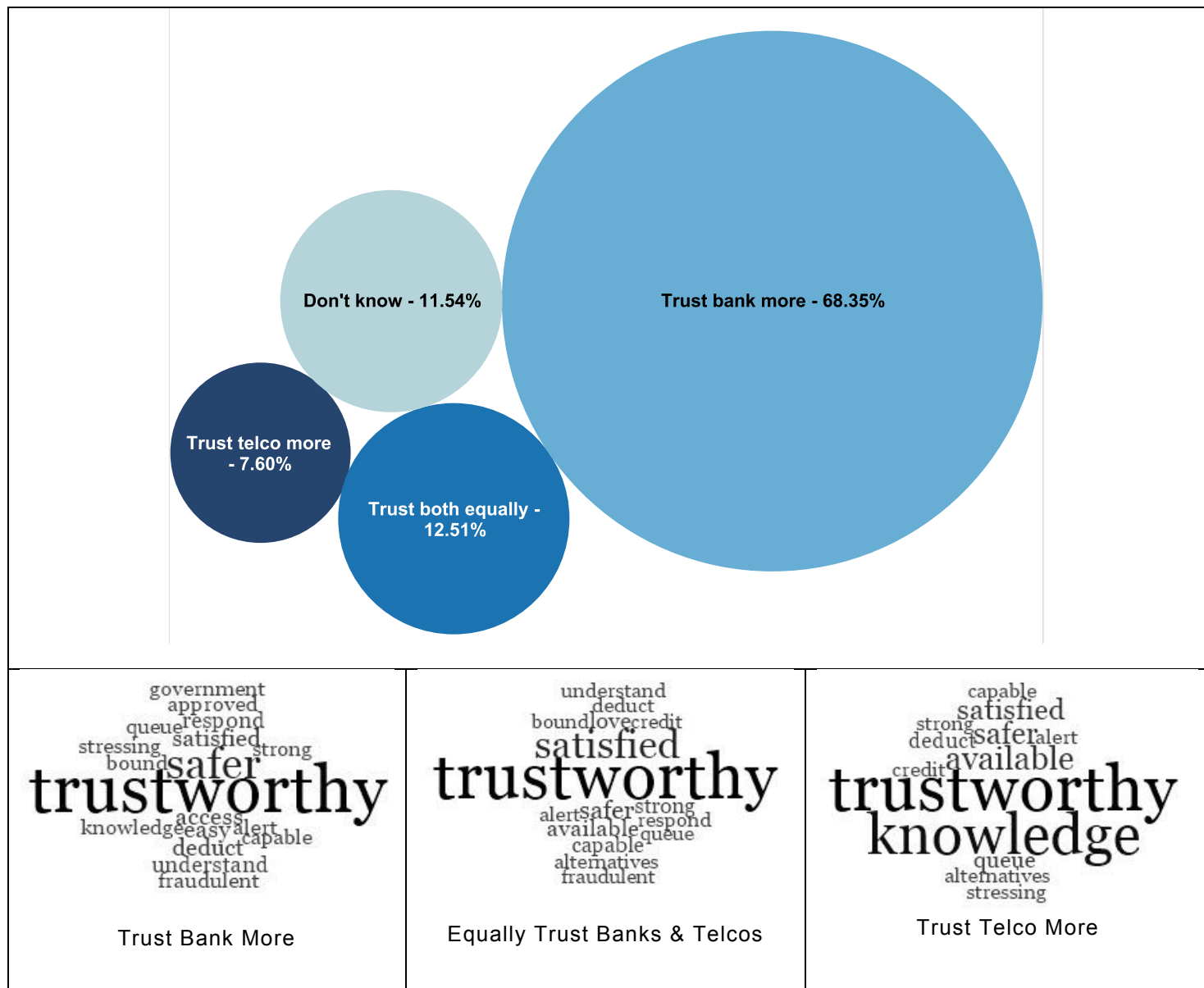


Figure 53: Ghana Non-User General Trust Perceptions of Banks Vs. Telcos

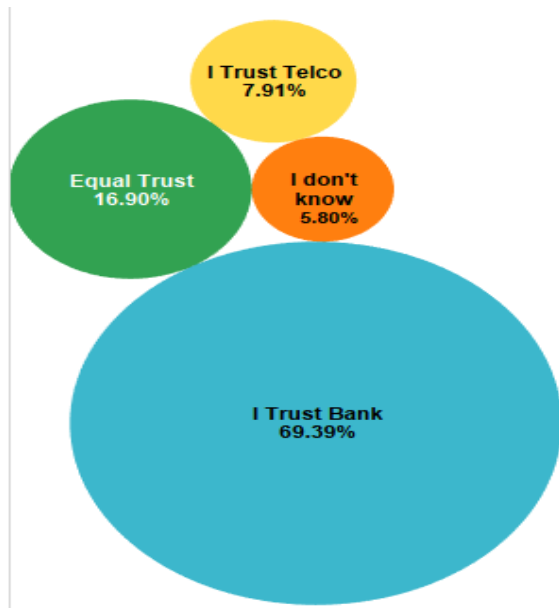


Figure 54: Ghana Non-User Details of "Why I Trust the Bank"

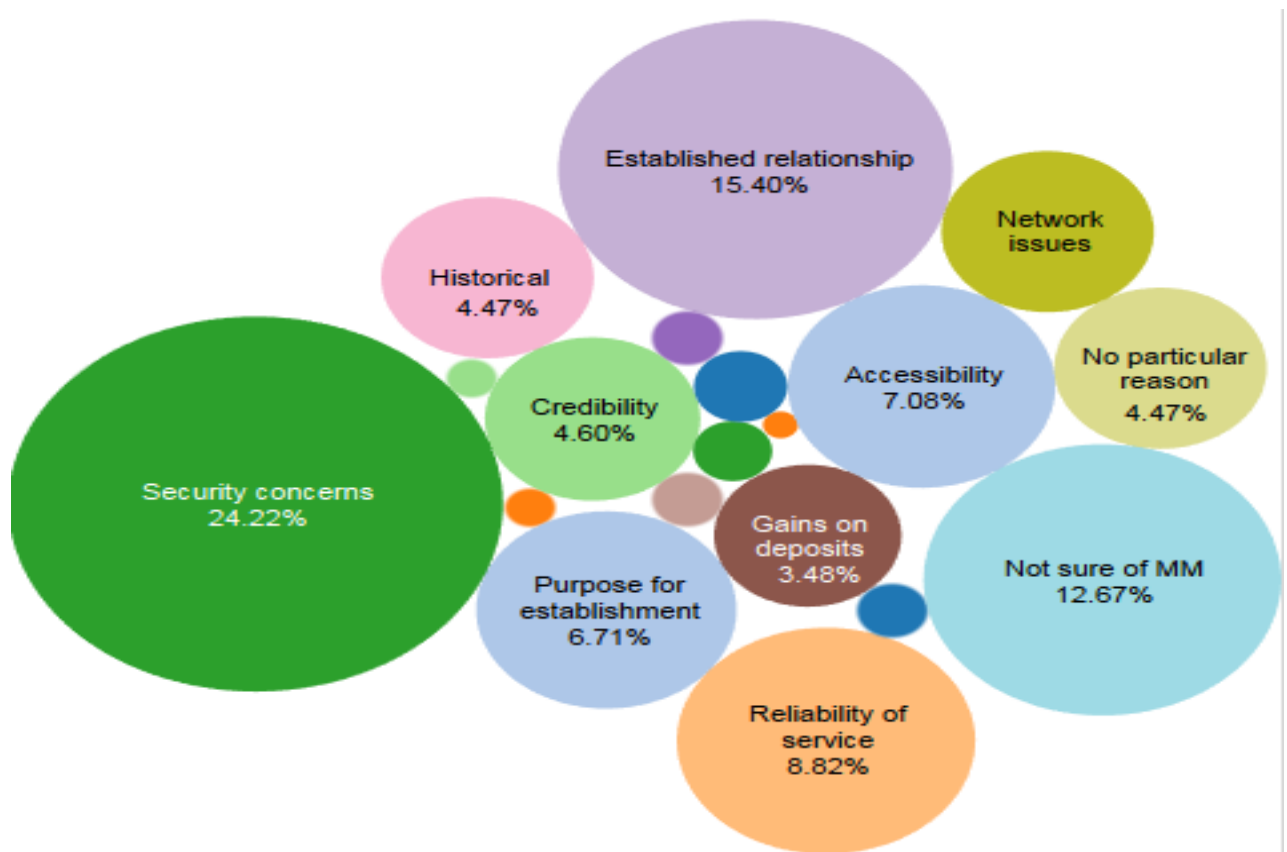
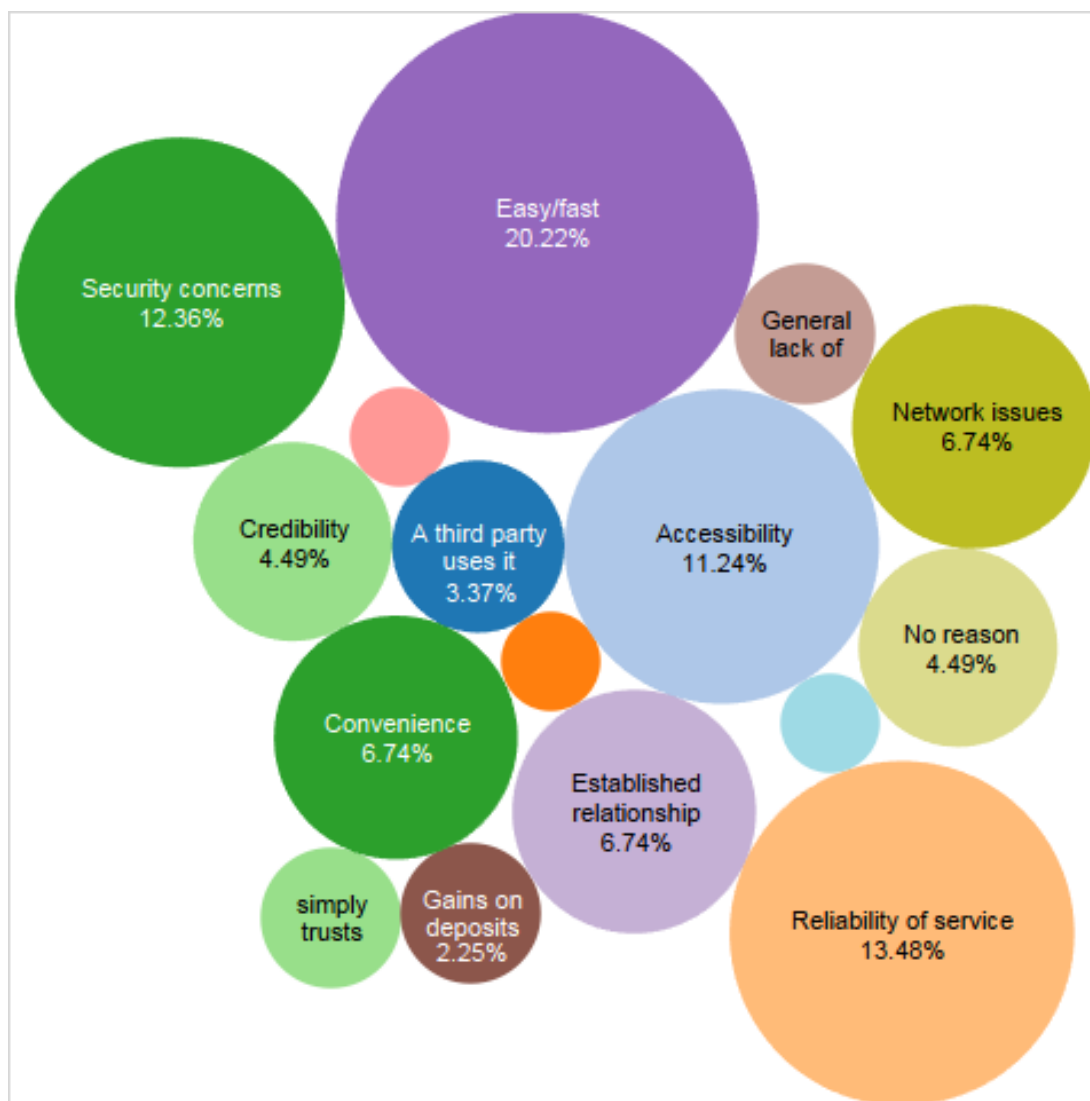


Figure 55: Ghana Non-User Details of "Why I Trust the Telco"



Arguably, the degree of institutional trust for both banks and telcos is a key driver of the rate of mobile money adoption in both Ghana and Nigeria.

5.6 User Experiences with Mobile Money

5.6.1 Degree of Use of Mobile Money by Users

As described above, the knowledge and use of mobile money services was low in Nigeria. 2182 (97%) respondents either had no clue (25%) or some knowledge without first-hand experience (72%). The user community polled only 65 respondents representing about 3% of the survey population. Also in the Nigerian study, other than the low adoption rates reported, the frequent utility, albeit low (only 20 frequent users), is on the rise (see Figure 56).

Among users in Ghana however, 73% considered themselves to be ‘active’ users who consistently use mobile money at least once a month (Figure 57).

Figure 56: Nigeria Active Use of Mobile Money by Users

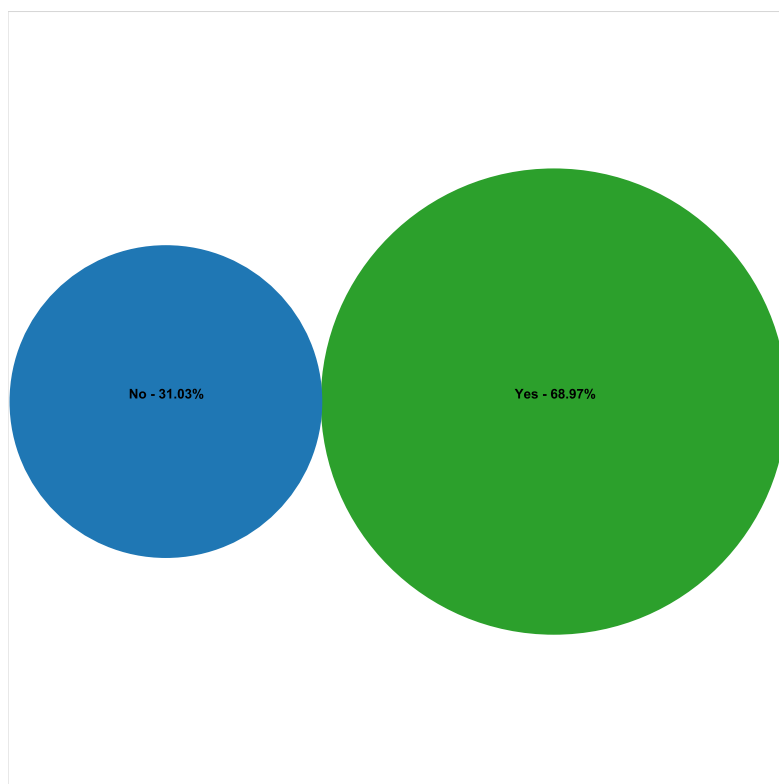
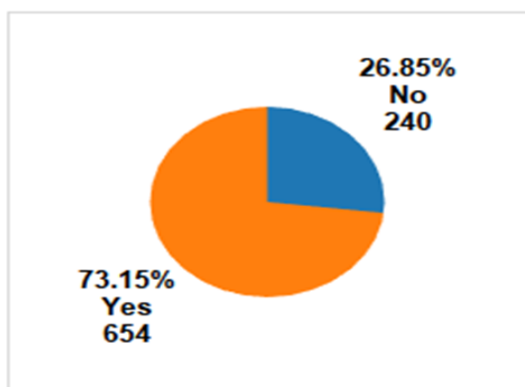


Figure 57: Ghana Active Use of Mobile Money by Users

Are You An Active User? (U)



5.6.2 User Awareness Mechanisms

Amongst the user communities in both Ghana and Nigeria, awareness was developed through channels such as advertising, word of mouth via friends and family, and direct solicitations from banks or telcos. The approaches and frequency of these mechanisms was similar to those of non-users (see Figures 58 and 59).

Figure 58: Ghana User Awareness Mechanisms

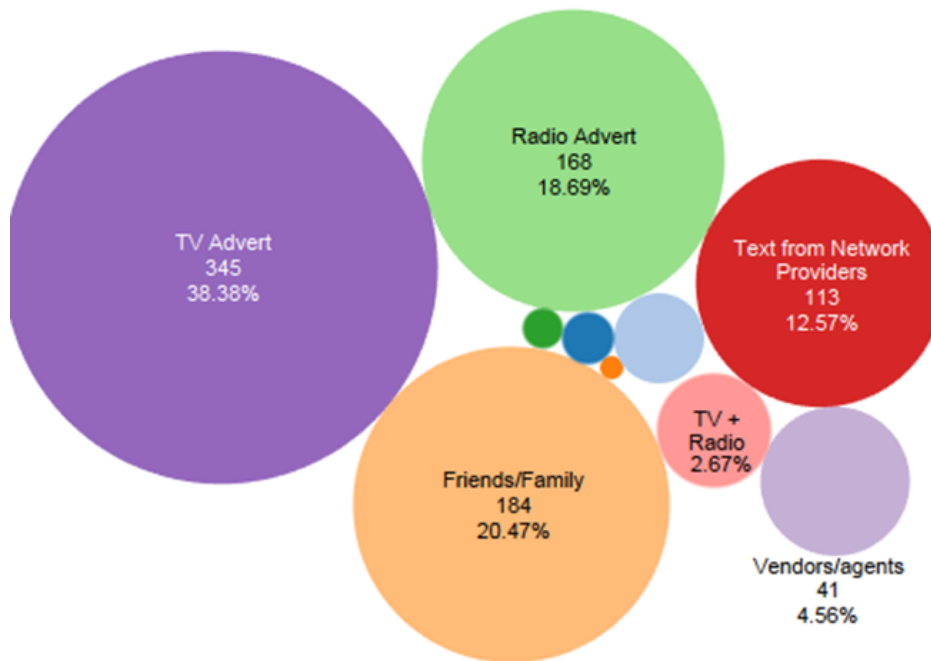
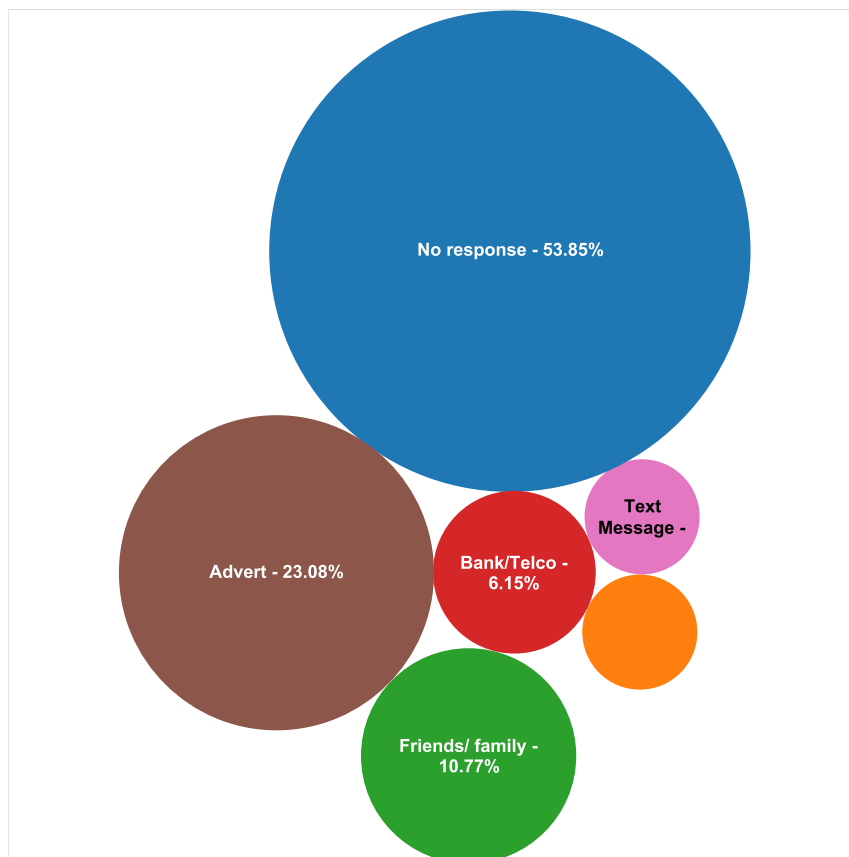


Figure 59: Nigeria User Awareness Mechanisms

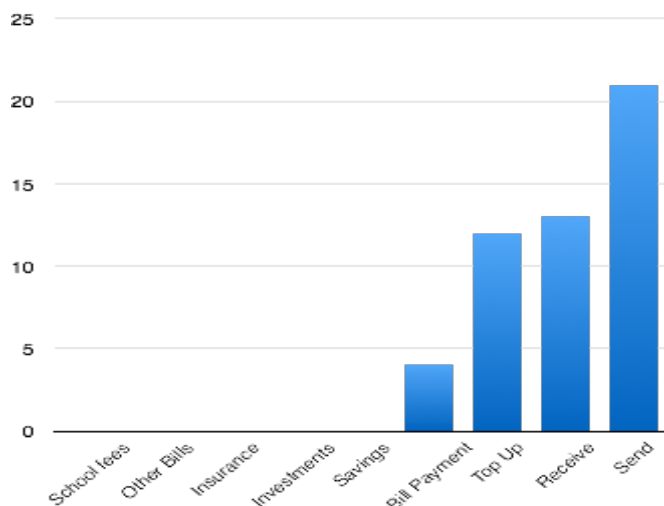


5.6.3 Utility Dynamics of Mobile Money by Users

Utility dynamics defined through users include types of use, transaction values and usage frequency, which are further illustrated below.

In Nigeria, comparison of services most employed by the mobile money users (Figure 60) does not support the use of mobile phones for the full complement of digital financial services. Findings demonstrate most mobile money users simply use the services for person-to-person transfers, purchase of airtime and bill payments.

Figure 60: Nigeria: Mobile Money Services Utilized



Most Nigerian users send and receive money from family members with most people sending roughly NGN10,000 and receiving roughly NGN20,000 on a monthly basis (Figure 61). In Ghana, money was typically sent to family members and friends mainly in Kumasi and the Greater Accra regions. Other popular locations money was sent to and received from include the Western (Takoradi) Eastern and Northern (Tamale) regions. The amounts were typically less than GHs100 and were sent and received on a largely irregular basis (Figure 62).

Mobile money services were also used to regularly purchase airtime from MTN, Airtel, Tigo (Ghana) and Etisalat (Nigeria) valuing NGN1,000 and NGN3,000 in Nigeria and GHs5 or less in Ghana. This supports interviews with telcos who stated that the majority of the users of mobile money use it to by airtime in small monetary amounts. Further details on the uses and mobile money by users are shown in Figures 63 to 65.

Figure 61: Nigeria Mobile Money Utility Dynamics

Service	Actors	Transaction Value	Frequency
Send	<p>sister family brother children father client customer</p>	<p>10000 50 24000 3000 2000 8000 500</p>	<p>month weekly</p>
Receive	<p>family brother parents wife clients business associates</p>	<p>20000 50000 2000 4000 30000 20 5</p>	<p>monthly whenever weekly</p>
Top Up	<p>airtel mtn etisalat glo</p>	<p>10000 500 3000 2000 200 1500</p>	<p>everyday week thrice monthly weekly</p>
Bill Payment	<p>dstv power nepa</p>		

Figure 62: Ghana Mobile Money Utility Dynamics - Transferring Money 1





	Actor	Location
<p>Receiving money</p>		
<p>Sending money</p>		

Figure 63: Ghana Mobile Money Utility - Transferring Money 2

Received from MM? How much and how frequently?

	Irregular Use	Regular Use	When necessary	Grand Total
Above GHc300	13	7	1	21
Fluctuates	16	12	3	31
Fluctuates less than Ghc300	11	4	5	20
Fluctuates more than Ghc300	1	1		2
Ghc51-Ghc100	29	19	6	54
Ghc101 - GHc150	7	4	3	14
Ghc151 - Ghc200	7	5		12
Ghc201 - Ghc250	2			2
Ghc251 - Ghc300	2	2		4
Less than GHc50	23	7	5	35
Grand Total	111	61	23	195

Send through MM? How much and how frequently?

	Irregular Use	Regular Use	When necessary	Grand Total
Above GHc300	14	10	2	26
Didn't say	4	2	1	7
Fluctuates	11	20	4	35
Fluctuates less than Ghc300	21	15	2	38
Ghc51 - Ghc100	84	30	18	132
Ghc101 - GHc150	18	11	8	37
Ghc151 - Ghc200	32	8	2	42
Ghc201 - Ghc250	2		1	3
Ghc251 - Ghc300	8	2	2	12
less than GHc50	120	26	14	160
Grand Total	314	124	54	492

Figure 64: Ghana Topping Up – How Much vs. Frequency

	when necessary	irregular use	regular use	Grand Total
less than GHc2	1	22	38	61
Ghc3-Ghc5	6	18	39	63
GHc6-Ghc10	1	7	13	21
above Ghc10	1	10	5	16
Varies Considerably	1	2		3
Grand Total	10	59	95	164

Figure 65: Ghana Topping Up – Network vs. Utility

	Both	personal use	transfers	Grand Total
Airtel		10	1	11
MTN	25	88	5	118
Tigo	2	22	2	26
MTN, Airtel	1	1		2
MTN, Tigo	1	1		2
Tigo, Airtel		1		1
All networks	1		2	3
Grand Total	30	123	10	163

5.6.4 Benefits of Mobile Money by Users

The perceived benefits of mobile money services are centered on the convenience, ease, effectiveness and avoidance of stressors associated with traditional banking like queues, ease of use and time savings. In the Ghana study, an incentive, bonus airtime, was another significant reason behind its use.

Figure 66: Nigeria Mobile Money Benefits

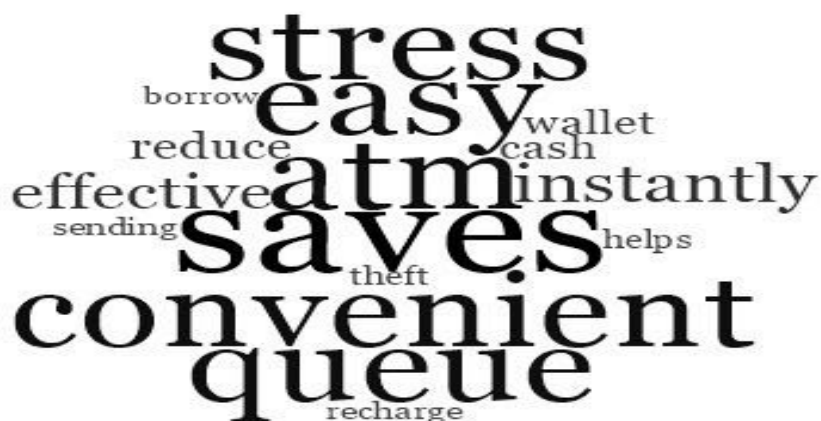
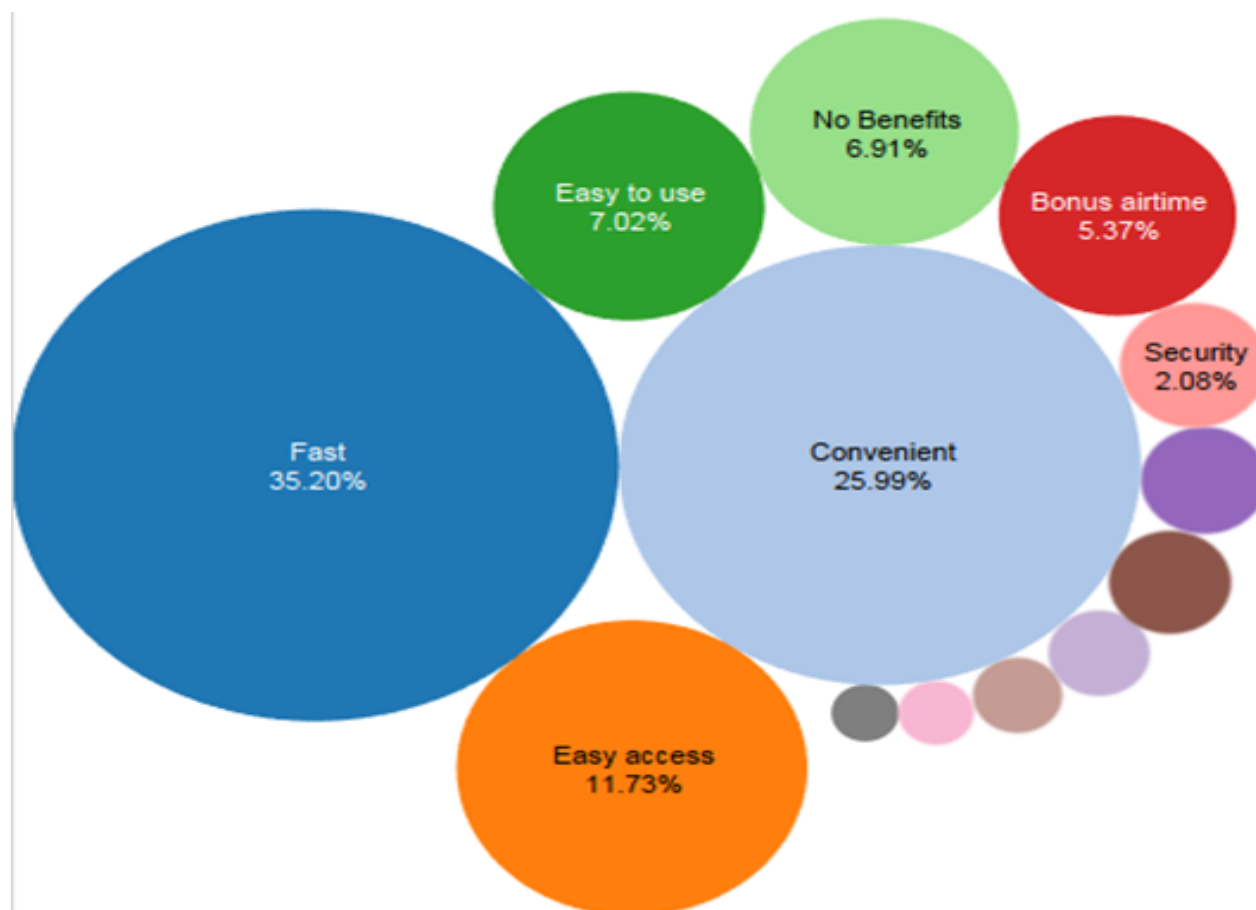


Figure 67: Ghana Mobile Money Benefits



5.6.5 Risks of Mobile Money by Users

In spite of the perceived benefits, the most common problems associated with mobile money services are tied to operational failures experienced like outright service failure and transaction delays. Other issues are related to security, cost, reach and ease of use.

However, in the Ghana study, it must be noted that a majority of respondent had experienced no problems using the service.

Figure 68: Ghana Mobile Money Failures

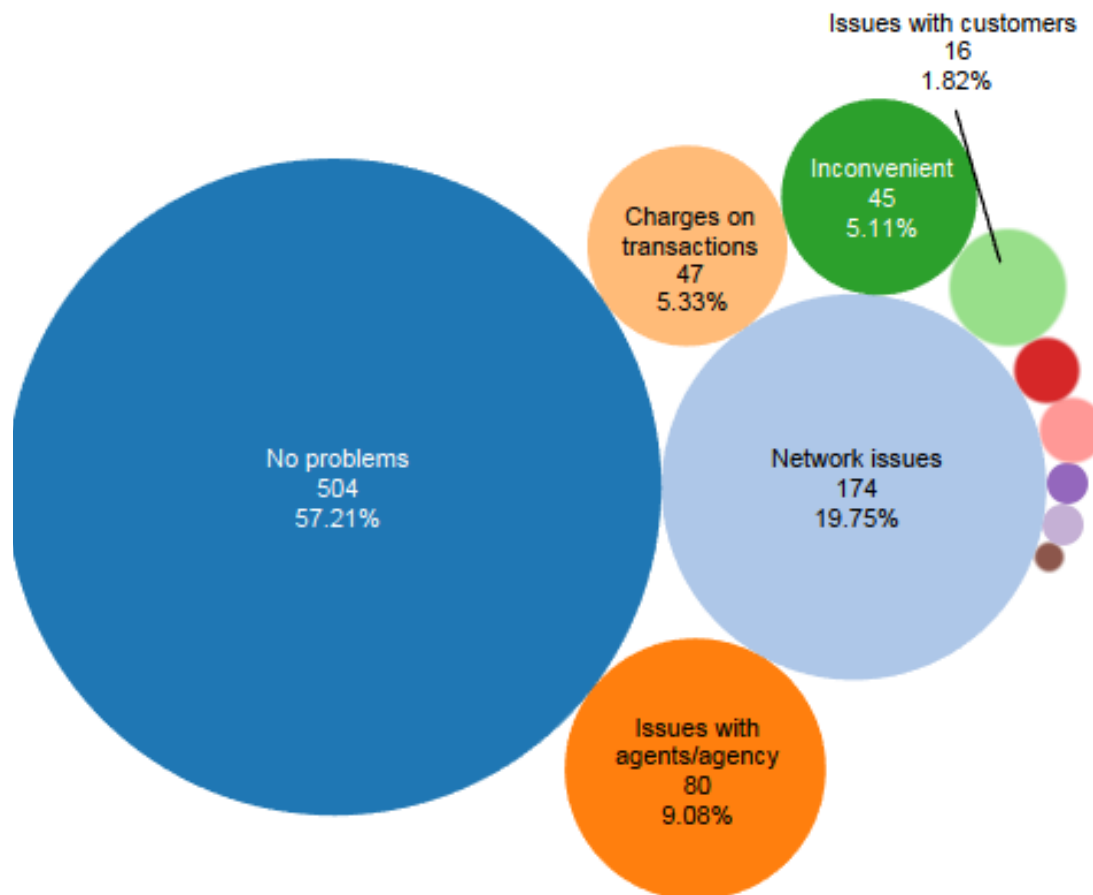


Figure 69: Nigeria Mobile Money Failures



5.6.6 Perceptions of Institutional Trust of Banks & Telcos by Users

In Nigeria, the perceived trust of banks was higher than that of telecommunications operators (Figure 70). In Ghana however, users also had a high degree of trust for their respective telecom operators (Figure 71).

Figure 70: Nigeria User Trust Perceptions (Bank & Telco)

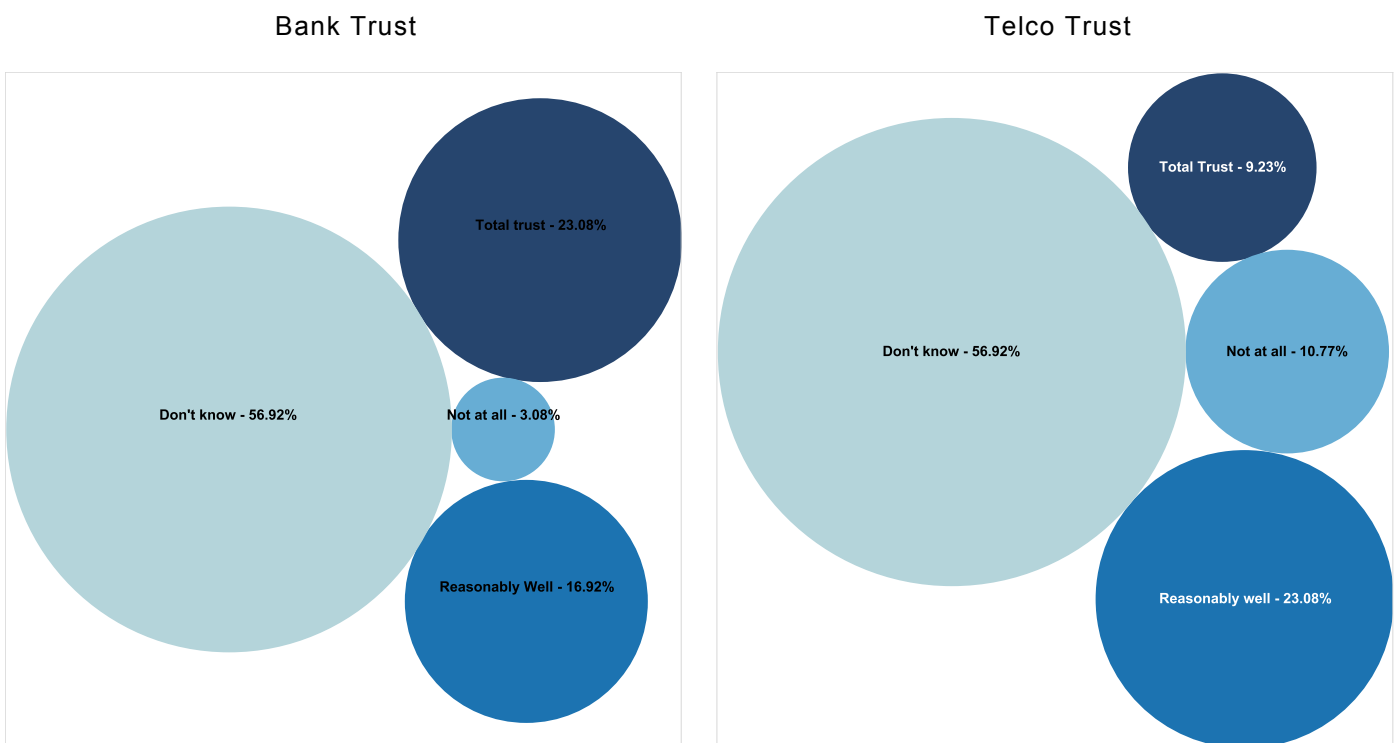
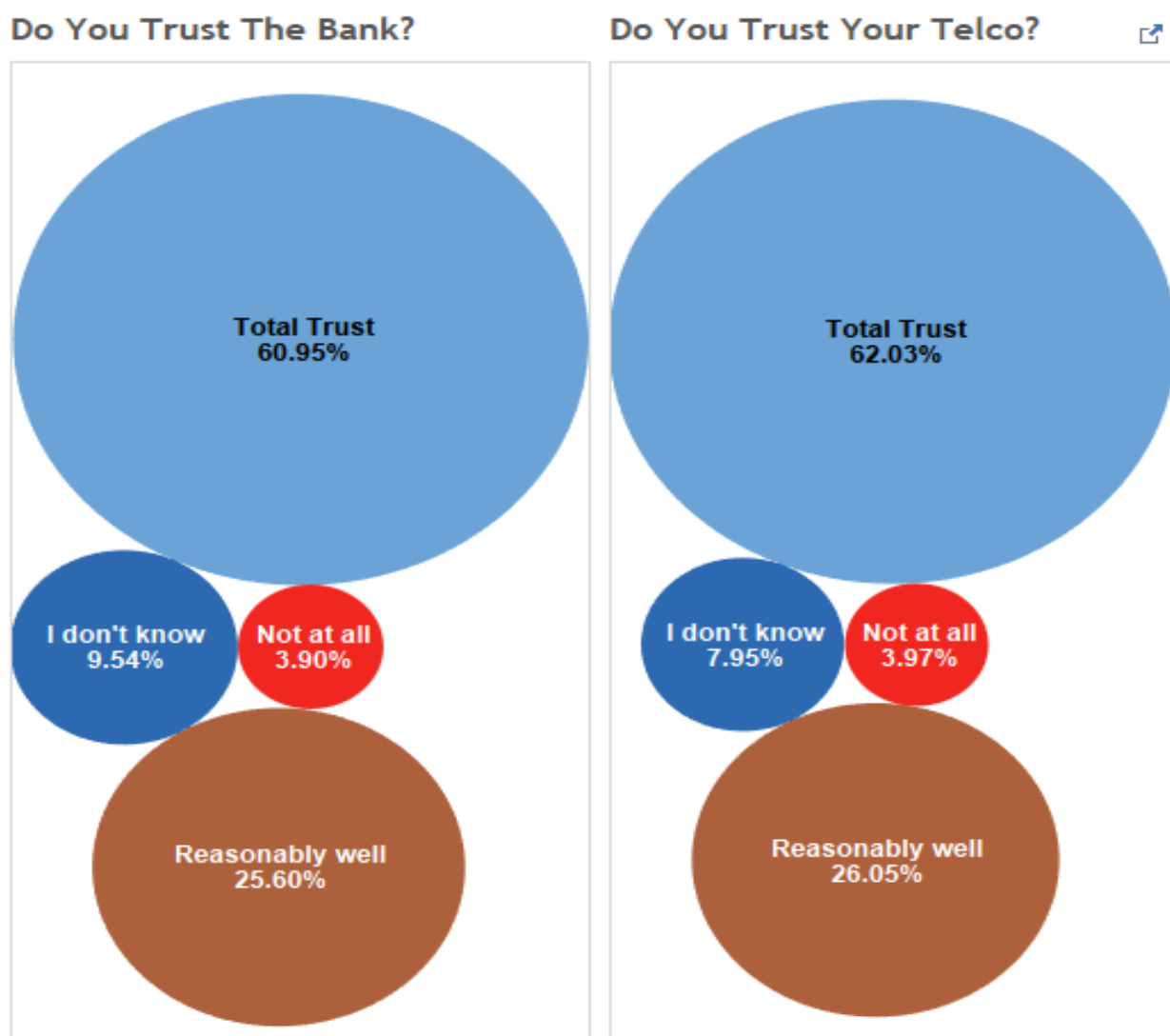


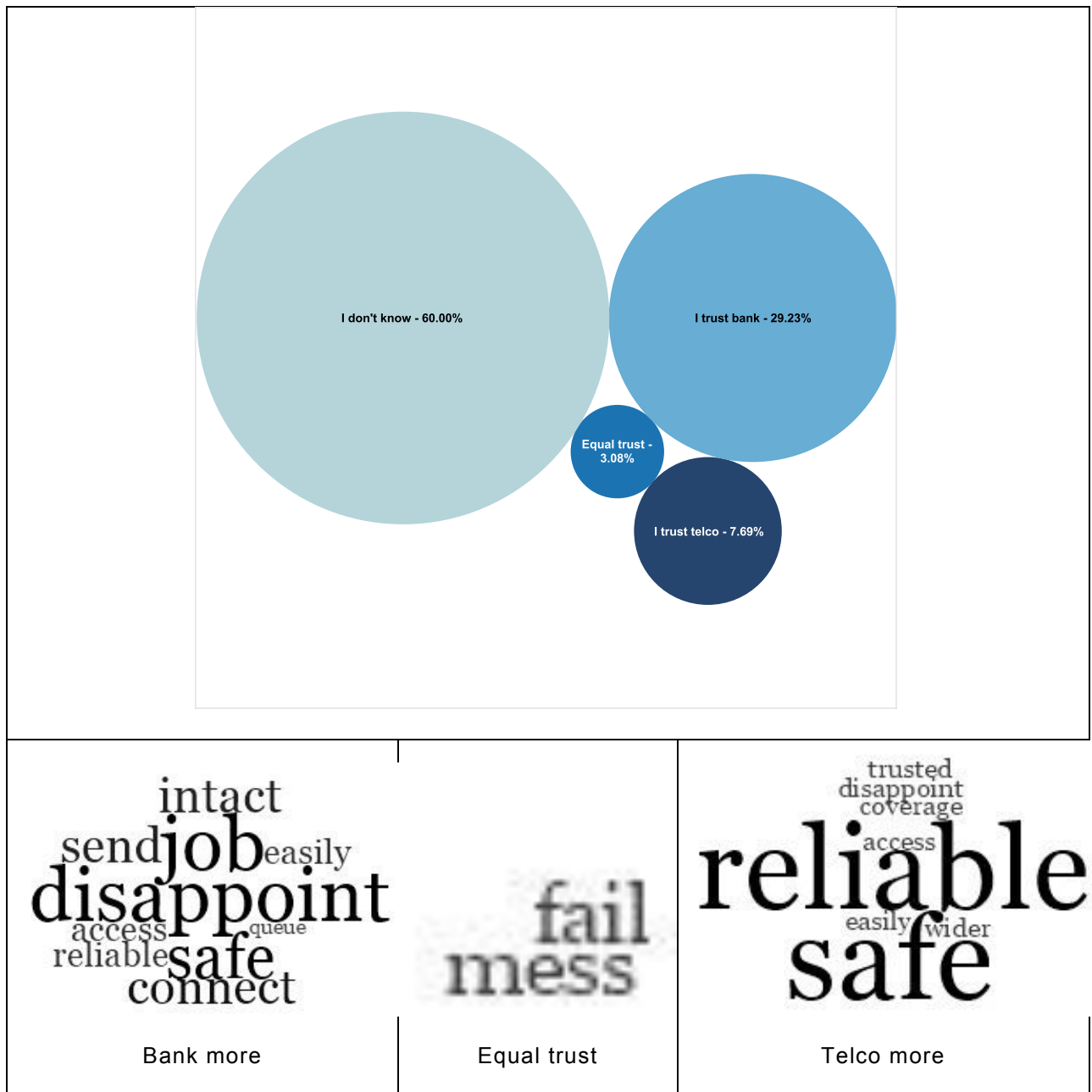
Figure 71: Ghana User Trust Perceptions (Banks & Telco)



5.6.7 Comparative Perceptions of Institutional Trust of Banks Vs. Telcos by Users

Users in Nigeria, like their nonuser counterparts, generally trusted their banks better than they did their telecom operators when it came to handling monetary transactions. Those with a higher degree of trust in banks felt financial transactions were the responsibility of the banks and they have no reasons to disappoint. The security provided by banks, accessibility of branches and connectivity also supported bank trust. Those who had a higher trust perception of the telecoms operators based this on reliability and safety (Figure 72).

Figure 72: Nigeria User Trust Perceptions (Banks vs. Telco)



Ghanaian users on the other hand believed that their telecom operators would be more trustworthy than banks. Most respondents trusted Telco's because it is fast, reliable and secure. Those that trusted banks primarily chose to do so because they believed it was reliable, affordable and secure and they generally had a hard time trusting either service. Only 4.05% of respondents had no particular reason for choosing banks (Figures 73-75).

Figure 73: Ghana User Perception – Bank vs. Telco

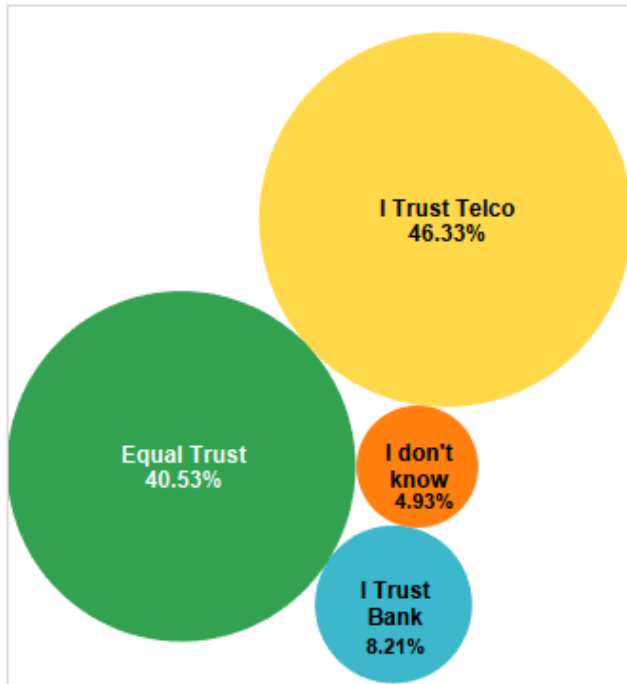


Figure 74: Ghana User – "Reasons I Trust Bank"

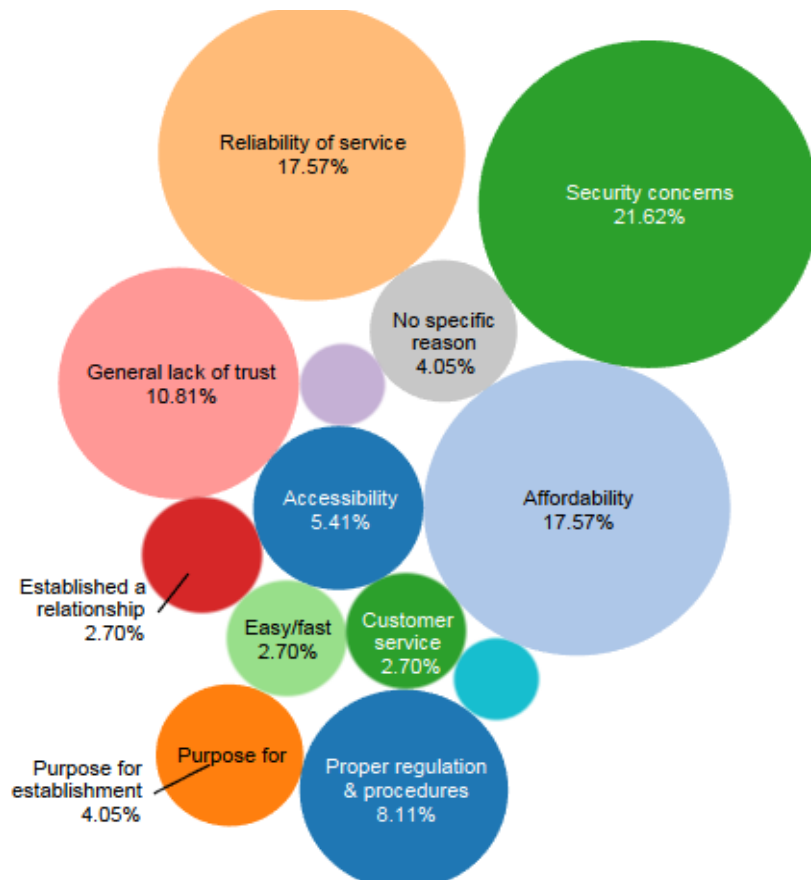
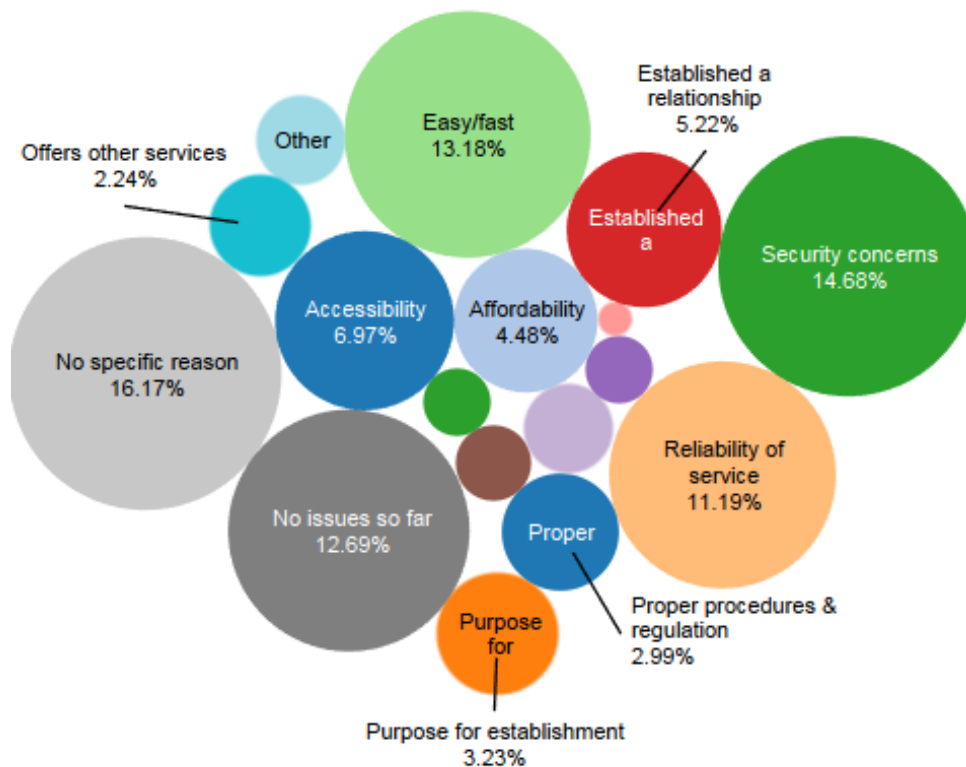


Figure 75: Ghana User – "Reasons I Trust Telco"



5.6.8 User Suggested Areas for Improvement of Mobile Money Services

Other than ease of use, improved access to mobile money services through advertisement and awareness campaigns dominated the range of improvement suggestions in Nigeria (Figure 76). Access was another improvement suggestion proposed through the availability of agents. Service-oriented proposals relate to the availability and use of mobile money in the informal sector like as a payment mechanism for street hawkers. In Ghana, respondents also felt that a general improvement in network quality and coverage, as well as a restructuring of charges would be extremely beneficial

Figure 76: Nigeria Improvement Areas



On utility, other than the use of mobile money for the payment of bills (utility, school), purchases like airtime, business payments, and other areas of utilization include transportation and online use (Figure 77). Another feature some Ghanaian users wanted incorporated would be to operate the mobile money service as a savings or investment account, allowing them to gain interest on their savings or even access to loans.

Figure 77: Ghana Other Mobile Money Uses



6. KEY INSIGHTS

The findings presented demonstrate that the utility of mobile money, although nascent, is yet to meet expectations. Key insights of the mobile money environment and utility are discussed in the subsequent paragraphs.

Awareness

The first of the insights is the low knowledge and awareness perceptions amongst potential users observed in the focus group discussions and surveys. The perception of mobile money amongst the potential user community as a tool to meet their financial needs is relatively low and can only be improved through increased engagement through advertisements and awareness generation campaigns. This perception may be fueled by the relatively few services and service providers in the ecosystem and the lack of operation in the informal sectors - open markets, street hawkers.

Access

In both countries, where the majority of consumer transactions are cash-based and conducted in informal “open” markets, the reach of mobile money services in such environments is non-existent, particularly in Nigeria. Service providers currently participating in the mobile money ecosystem comprise of organized vendors and retailers like utility companies, and so on. The exclusion of the open markets tradesmen, transportation providers, hawkers, and other informal services that are utilized by a large proportion of the population may explain the low adoption rates. Thus, the development of innovative mechanisms that include informal markets in the mobile money ecosystem can only aid and support financial inclusion and adoption.

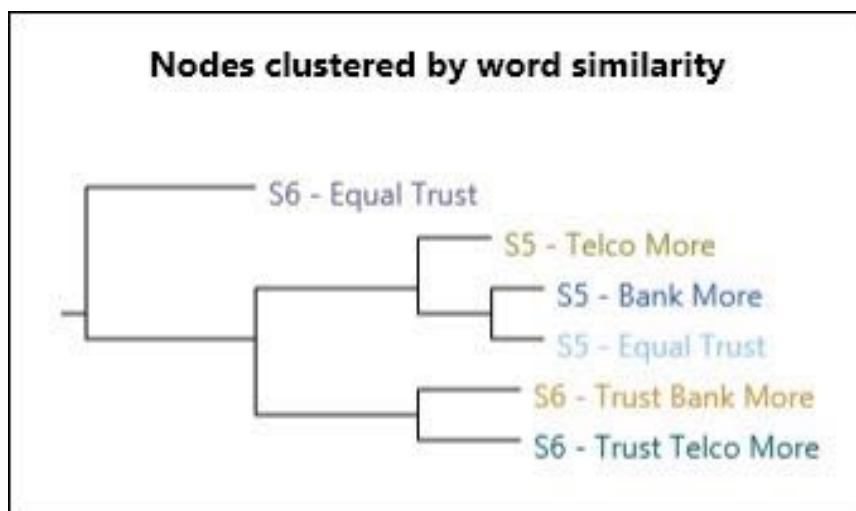
Adoption

In spite of Nigeria’s large population, the adoption rates of mobile money (3% of respondents surveyed) are relatively low; hence the attainment of the national objective - mobile money as a tool for financial inclusion - is yet to be reached. Although a high proportion of the respondents surveyed already indicated access to financial services, the utility of mobile money as an alternative channel was low. Thus, the use of mobile money as an alternative payment system is more consistent with the provider (bank) strategy whose objectives are to generate of high traffic volumes and utility of the platform infrastructure. Strategies for the wide utilization of mobile money would require more awareness amongst the unbanked that requires direct contact to the prospective users or a development of a last mile strategy (using agents) that takes the product closer to the marketplace.

Trust

The phrase “cash is king” rings relatively true of digital financial services that are prone to failure. Thus, the trust in cash is still relatively high as exemplified by keywords from mobile money users (fail, mess) that awarded equal trust to banks and telecomm operators as a result of high digital service failures. This is further demonstrated in the Pearson’s correlation of the trust perceptions amongst non-mobile money users and users (Figure 78). The word similarity of equal trust amongst users is somewhat distinct other responses.

Figure 78: Trust Node Cluster



Ecosystem Expansion

The development of the mobile money ecosystem needs the collaborative partnership between all participants - service providers, banks, operators, and agents. Whilst the agents serve as the channel for the last mile distribution of services, the income-generating benefits to agents must be evident. For agents that service as the last mile distribution channel, profitability is essential. However, this is dependent on their initial outlay (agent registration and wallet balances) and projected incomes; that are dependent on MMO and number of active wallets, agent location, and commissions offered. The use of agents for services is further inhibited by the availability of multiple access channels through app or web interfaces that minimize the need of the agents.

Market Fragmentation

The perception of mobile money as the remedy for financial exclusion as demonstrated in other African countries does not resonate with Africa’s most populous nation. This may be attributed to the number of licensed operators (total of 18) that may have enhanced market fragmentation as opposed to the building the user base. As demonstrated in Table 2 above, some of these operators are no longer active. The leadership of emerging market countries in mobile banking (money) services in Table 11 confirms this²⁴.

Table 11: Mobile Money Development in Emerging Markets²⁵

Country	MM Accounts	MMOs
Kenya	25.3 M	6
Tanzania	11.0 M	5
Philippines	5.4 M	2
Bangladesh	4.5 M	9
Zimbabwe	2.7 M	4
Rwanda	1.7 M	5
Pakistan	1.4 M	7
Cameroon	1.4 M	5
Democratic Republic of Congo	1.1 M	3

Business Model Innovation

Another hypothesis on mobile money performance is related to the underlying business models deployed. Currently, MMO business models are conceptualized as a digital financial service offering convenience to users. An alternative business model may be a digital financial services platform that seeks to connect service providers and wallet holders. This platform-thinking approach will not only enhance network effects²⁶, but will also expand the ecosystem participants to include systems engineers to develop programmatic interfaces for diverse service providers.

²⁴ Bill & Melinda Gates Foundation. (2015). Our Big Bet for the Future.

²⁵ <https://gsmaintelligence.com/topics/3363/dashboard/>

²⁶ Choudary, S. P. (2013). Platform Power (pp. 1–84).

7. CONCLUSION

In conclusion, whilst we sought to explore the dynamics of mobile money utility amongst poor unbanked users, we found that:

- The mobile money services offered are basic and ranked at the bottom of the hierarchy of consumer financial needs²⁷.
- Although the mobile money services offered are supported by a myriad of value creation and delivery processes, the low adoption levels are indicative of additional efforts in the value delivery activities like market development and segmentation.
- Direct marketing is a useful tool to encouraging both awareness and a better understanding of the product. However, more needs to be done to increase base awareness and actually encourage users to try to these platforms.
- Remittances (send and receive) are the most used mobile money services; the purchase of mobile recharge airtime is also popular amongst users.
- In Nigeria, the relatively low adoption and utility rates do not support innovative uses by the targeted users.
- In Ghana, despite the low adoption rate, the service is highly favored amongst those that actually do use it.
- The use of informal savings schemes like susu or ajo that provide savers with a pool of funds to facilitate substantial payments are a popular and preferred savings method. The use of transportation services is a substitute for remittance services; however, the transfer and resale of mobile airtime are also employed for small amounts.
- The use of agents for the last mile delivery of mobile money services has fostered entrepreneurship albeit the generation of extra income is constrained by the low adoption rates amongst poor unbanked users.
- In its current state of adoption, mobile money has not made any impact on the social and economic development of unbanked poor users.

Whilst maintaining the current business models, the success of mobile money services as a tool for financial inclusion requires the alignment of objectives amongst ecosystem participants. Table 12 illustrates this lack of alignment delimits attainment of the overarching objective of financial inclusion.

Table 12: Actor Objectives

Actor	Objectives
Regulator (Central Bank of Nigeria)	Financial inclusion
MM Operator (Bank/MMO)	Reduce account operations costs Platform [capacity] utilization Return on investment Liability generation (wallet balances)
MM Operator (agent)	Transaction/business volumes Profitability
Service Providers (utility)	Collections Cash flow/Revenue
Wallet holder	Convenience, ease of use, reliable, accessible, safety, acceptance, multi-use

²⁷ Jain, A., Zubenko, O., & Carotenuto, G. (2014). A Progressive Approach to Financial Inclusion. MasterCard Advisers.

	Reduce account ownership and management costs
--	---

Unlike Ghana where telecoms operators dominate mobile money operations, the regulatory regime in Nigeria precludes the independent licensing of telecoms operators; although telecoms companies may be members of a bank-led consortium. Thus, in spite of the ownership and management of the core infrastructure, the network, Nigerian telcos are unable to participate independently. Table 12 lists some advantages and disadvantages of the regulatory models.

Table 13: Regulatory Models (Pros & Cons)

Operator	Pros	Cons
Bank-led/Focused	Existing deposit money bank license Access to technology resources for development of MM platform Brand perception	Limited reach Management pressure to optimize investments and demonstrate success in short period Not core business
Non-Bank	Core business	Start-up with limited physical infrastructure, market reputation, access to cash Low brand recognition Limited reach
Telco	Wide reach Existing developed channel structures nationwide	Lacks financial services provider license Not core business

The need of payment systems that aid person-to-person (P2P), person-to-business (P2B) or business-to-business (B2B) transactions cannot be underestimated. At this time this is not entirely true of other financial services like insurance and credit with low physical and digital adoption rates. Thus, whilst some services require critical mass and growth, others are nascent and unrelated to the delivery platform. Hence, the mobile money system requires not just ecosystem development, but also contextual digital financials service innovations similar to payment on delivery (POD) services offered by e-commerce ventures.

Appendices

Appendix 1: Ghana & Nigeria Research Teams

Edward Sakyi Opoku – Lead Coordinator

Survey Enumerators in Ghana

Appiah, Emelia
Ayodele, Morenike
Bruce, Christabelle
Korboe, Samuel
Opoku, Diana
Sarpong, Margaret
Okpoti-Paulo, Ted
Agbenyega, Carl
Abukari, Khadija
Hateka, Abigail
Mensah, Dzifa
Yevu, Esinam
Banini, Mawumefa
Amoah, Kirk
Kyei-Boadu, Naa Sefaah
Musah, Junior
Musah, Sheriff
Joseph, Dery
Richard Ohemeng
Asante Faisal
Roland Dogoe *
Esenam Dogoe *
Selorm Dogoe *
Frances Akrong *
William Partey *

Survey Enumerators in Nigeria

Andy Thompson
Bolaji Adesanya
Christiana Osuji
Dele Akinyemi
Disu Abiodun
Dolapo Adeoye
Dolapo Olanipekun
Funmilayo Olajubu
Henry Ibanga
Issy Egbongu
Jide Olasubomi
Kayode Adebayo
Mbamba Amarachi
Mike Sosanya
Oladapo Jeje
Omoniyi Isaac
Racheal Osibanjo
Roy Jaiyeola
Seun Odeyemi
Temmy Daramola
Titilayo Ogunmuyiwa

* Only for data entry

Appendix 2: Provider Interview Guide

1. What service(s) does [provider mobile money service] offer?
2. How many people have you registered (compared to total subscription)?
3. How often do people activate and utilize your service (compared to the number of people registered on the service)?
4. Who is [provider mobile money service] aimed at? What is your target group? Do you project a change in this target group in the near future?
5. Do you believe that your services can improve financial inclusion for those in the lowest class of society?
6. What have been your major challenges so far? How have you tackled them?
7. Have you considered integrating [provider mobile money service] with any of your other services?

Appendix 3: Focus Group Interview Guide

This interview guide will be spoken in a combination of 3 languages; English, Pidgin or Twi

Good morning,

Thank you for having us here today. We are researchers from Ashesi University and the University of South Carolina who are conducting a study on Mobile Money. We do not represent any telecommunication company; we are doing this primarily to understand what people know about Mobile Money and how it can be made better.

We are not here to teach anyone about Mobile Money. What we are going to do is ask a few questions and then, based on your responses, we will have a discussion. To help me keep track of all that has been said, I will record our discussion so that I can review what we have said here later.

At the end of our discussion you will be paid for the time you have contributed. In order for us to pay you, you must make sure that you stay for the entire discussion; if you leave for a long period of time, we will not be able to give you any money for participation.

The information here will be kept strictly confidential. We will only require your first name and job description.

If we all agree to this, please sign here and then we can continue. If you wish to leave, you are entirely free to do so. Thank you for your help and time.

Respondents Signs contract (group signs single sheet)

Respondents fill out screener.

Thank you very much. So now we can start.

QUESTION ONE

“We all have a phone right?”

What cell phones do you use?

How many chips can it/they handle?

Who are your service providers?

QUESTION TWO

“Do you send money to anyone?” “Who do you send money to?”

What are the various ways you know of giving or transferring money to someone?

- Explore other electronic transfer methods they know. Find out more about them.

QUESTION THREE

“Do you have any savings?”

Where & how do you save your money? (I.e. Susu, Tigo Savings)

QUESTION FOUR

Have you heard about Mobile Money before today? How did you hear about it? What do you know about it?

- If necessary prompt them; Adverts? Friends? Family? Telco operator?

QUESTION FIVE

Do you use Mobile Money and, if so, what do you use it for? Do you know of any other uses for it?

Do you receive or send money?

- Also ask how frequently they use it and how it has helped business and home payments
- What problems do you have using Mobile Money on your phone? Any ideas on how to solve them?
- What do you wish you can do with Mobile money that you cannot currently do?

QUESTION SIX

(If you do not use Mobile Money) Why don't you use Mobile Money?

- Most might say they don't know how to use it/ haven't been taught. Press harder.

Why don't they try and find out, especially if they have heard about it?

If you had money on your phone, what would you use it for?

What would you want Mobile Money to be able to do before so that you started using it?

QUESTION SEVEN

Besides Mobile Money, do you use your phone to do any other financial transactions? (E.g. to invest, insurance?) Do you think you can use Mobile Money to do Susu?

QUESTION EIGHT

Do you have any other questions, or comments about what we've talked about so far?

Appendix 4: Survey Instrument

MOBILE MONEY UTILITY AND FINANCIAL INCLUSION

P

Location:

Enumerator:

1. Demographics

a.) Age: (please tick one)

18-25 (1) 26-35 (2) 36-45 (3) 46+ (4)

2. Mobile Phone Information

a.) How many cellphones do you have?

b.) Brand(s):

c.) Total No. of SIM Cards:

d.) Cell phone providers (*most used*): 1. 2.

3. Using Your Mobile Phone

a.) What do you use your phone for? (**Please tick all that apply**)

Make Calls Text Internet Whatsapp Facebook Email

Investments Insurance Transfers E-banking Savings

Other:

b.) If you use your phone for investments, insurance, transfers, savings or e-banking (or any other financial transactions), could you briefly tell us about it?

4. Using Susu (ONLY IF THEY USE IT. CHECK SCREENER)

a.) When did you start using Susu?

b.) Why did you start doing Susu?

c.) What method do you use for Susu? (What type of Susu do you practice?)

d.) What are the benefits of Susu?

e.) Are there any risks to doing Susu?

f.) How do you get money when you travel out of town? Can you access your Susu when you travel out of town and would you want to?

g.) Do you trust your Susu collector?

No idea (0)

Not at all (1)

Reasonably well (2)

Total trust (3)

Reasons:

h.) **(NO BANK? NO SUSU?)** Do you have any savings? How do you save money?

5. Mobile Transactions: Non –User section.

a.) How did you first hear about Mobile Money? **(Please tick one)**

TV advert Radio Advert Friends/ Family Visit Office Text

Other:

b.) Did you ever try to find out how to use Mobile Money? **(Please tick one)**

Yes No

(If Yes) Additional Info:.....
.....

c.) What do think you can use mobile money for?

d.) Why don't you use mobile money?

e.) How much do you/would you trust a bank with your money?

I don't know **(0)** Not at all **(1)** Reasonably well **(2)** Total

trust **(3)**

f.) Do you trust your primary mobile network operator with your money?

I don't know (0) Not at all (1) Reasonably well (2) Total
trust (3)

g.) Do you trust your mobile network operator with your money as much as you would a bank?

I don't know (0) I trust a bank more (1) I trust them both equally (2)
I trust the Telco more (3)

Reason(s):

THANK YOU VERY MUCH FOR YOUR TIME!!!

6. Mobile Transactions: User Section.

b.) How did you first hear about Mobile Money? *(Please tick one)*

TV advert Radio Advert Friends/ Family Visit Office Text

Other:

c.) Do you still actively use your mobile money service? Yes No

d.) What do you use your mobile money for?

Receiving Money	Sending Money	Topping Up Airtime	Paying Bills	Other Uses
From who?	To who?	How much?	Which bills?	Insurance?
Location?	Location?	Personal use or sent to someone?		Investments?
How much?	How much?	Network?	School fees?	Savings?
How often?	How often?	How often?		

e.) **(If they use more than one SIM)** Which network operator do you use to make mobile transactions? Why did you choose this mobile money cell phone provider?

f.) What are the benefits of Mobile money?

g.) What are some of the problems you have using Mobile Money?

h.) How much do you/would you trust a bank with your money?

h.) I don't know (0) Not at all (1) Reasonably well (2) Total
trust (3)

i.) Do you trust your primary mobile network operator with your money?

I don't know (0) Not at all (1) Reasonably well (2) Total
trust (3)

j.) Do you trust your mobile network operator with your money as much as you would a bank?

I don't know (0) I trust a bank more (1) I trust them both equally (2)

I trust the Telco more (3)

Reason(s):

i.) How do you think Mobile Money can be made easier for you to use? Do you have any suggestions on how the problems you had earlier could be fixed?

j.) What else do you wish you could use Mobile Money for?

THANK YOU VERY MUCH FOR YOUR TIME!!!