



Evaluation of Mobile Money Uptake

FSDMo. 
INVESTINDO EM INCLUSÃO FINANCEIRA

Acknowledgments

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Table of contents

Acknowledgments	
Table of contents.....	3
Acronyms.....	8
Executive Summary	9
1. Introduction	15
2 Methodology	23
2.1 Methodological design	24
2.2 Geographical coverage.....	24
2.3 Quantitative survey	25
2.4 Sample design – Round one of data collection	25
2.5 Sample design – Round two of data collection.....	27
2.6 Qualitative methods – Round one of data collection	28
2.7 Enumerators’ training.....	29
2.8 Methodological limitations	30
3. Findings	33
3.1 Socio-demographic information.....	33
Conclusions on participants’ socio-demographic information.....	39
3.2 Usage of financial services	41
Conclusion on financial services usage.....	49
3.3 Objective 1: Understanding of the use of mobile money in Mozambique.....	50
Mobile money penetration rate in Mozambique.....	50
Perceptions of M-Pesa services among M-Pesa users	52
Further insights on M-Pesa Promoters and agents users	53
Insights in the characteristics of non-users.....	64
Conclusions on understanding mobile usage in Mozambique	66
3.4 Objective 2: Provide conclusions on opportunities and challenges in mobile money market.....	67
Conclusions on opportunities.....	67
Challenges mobile money providers face.....	68
Opportunities for additional services	72
Barriers for usage	72
Conclusions on opportunities and challenges in mobile money market	73
3.5 Objective 3: Provide details on the efficiency, effectiveness and sustainability of the M-Pesa.....	74
Efficiency	74
Effectiveness.....	75
Profitability of the M-Pesa roll-out strategy	76
Conclusions on efficiency, effectiveness and sustainable of M-Pesa promoters’ model	79
4. Conclusions and recommendations	81
Conclusions	81
Recommendations.....	82

References.....	88
Annex A-1: Sample frame round 1.....	91
Annex A-2: Sample frame Round 2	93
Annex B-1: Additional data from data collection Round 1	94
Annex B-2: Additional data from data collection round 2	96
Annex C: Secondary data obtained from M-Pesa data.....	100
Annex C-1 Tariffs & commissions.....	100
Annex C-2 Promoter growth data.....	101
Annex D: Survey Tools	102
Annex D-1: M-Pesa users / Non-users Survey (Round 1).....	102
Annex D-2: KII-Agents Guide	127
Annex D-3: KII-Promoters Guide.....	131
Annex D-4: KII-M-Pesa Staff Guide.....	135
Annex D-5: FGD-M-Pesa users Guide.....	139
Annex D-6: Screening / Penetration survey (Round 2).....	143
Annex E: Terms of Reference.....	147

List of Tables

Table 1: M-Pesa promoters present in Mozambique (snapshot October 2017)	15
Table 2: Primary mobile providers in Kenya and Tanzania	19
Table 3: Overview of conducted quantitative surveys (Round 1, Round 2).....	28
Table 4: Overview of FGDs and KIIs (Round 1)	29
Table 5: Enumerators training programme.....	30
Table 6: Frequency of using their bank (M-Pesa users with bank account N=243, non-users with bank account N=116).	41
Table 7: Usage of their bank (M-Pesa users with bank account N=243, non-users with bank account N=116).	41
Table 8: Correlations between average household income per person (HIP) & usage of financial services (M-Pesa users N=588, Non-users N=591).....	45
Table 9: How long ago M-Pesa registered the account-(M-Pesa users registered own account N=521, Spouse registered M-Pesa account N=32).....	54
Table 10: Selected communities for household survey and Focus Group discussion.	91
Table 11: Selected communities for round 2.	93
Table 12: Level of Education (Round 1, M-Pesa users N=588, Non-users N=591)	94
Table 13: Level of Literacy (Round 1, M-Pesa users N=588, Non-users N=591).....	94
Table 14: Average monthly household income (Round 1, M-Pesa users N=588, Non-users N=591)	94
Table 15: Assets in a household (M-Pesa users N=588, Non-users N=591)	95
Table 16: Usage of financial services (Round 1-Q217, M-Pesa users N=588, Non-users N=591)	95
Table 17: Methods used for saving for those that save money (M-Pesa users N=225, Non-users N=189)	95
Table 18: Financial services (M-Pesa users N=588, Non-users N=591)	95
Table 19: Frequency of M-Pesa services if ever used (Round 1, N=580).....	96
Table 20: Average monthly household income (Round 2: M-Pesa user N=448, Non-user N=383)	96
Table 21: M-Pesa tariffs from-Pesa users in MT (August 2018)	100

List of Figures

Figure 1: Mobile phone usage in Africa	17
Figure 2: Common use of mobile phone in Africa.....	17
Figure 3: Definitions: financial inclusion & financial exclusion	18
Figure 4: Growth in number of M-Pesa users from 2007-2012 in Kenya & Tanzania	19
Figure 5: Financially inclusion in Mozambique	20
Figure 6: Data collection	24
Figure 7: Geographical focus of the study	24
Figure 8: Flow of selecting a participant within the household for survey after screening questions with Adult “X” taking targets (10 M-Pesa and 10 Non-user per community) into account.	27
Figure 9: Zigzag walk for selection of households in Manica (Round 2).....	28

Figure 10: M-Pesa user & non-user representation per gender per province (M-Pesa users N=588, Non-users N=591)	33
Figure 11: Age distribution (per age category) per province (round 1, N=1,179).....	34
Figure 12: Age distribution per province and gender (round 1, N=1,179).....	34
Figure 13: Level of Education (M-Pesa users N=588, Non-users N=591)	35
Figure 14: Level of Literacy (M-Pesa users N=588, Non-users N=591).....	35
Figure 15: Average monthly household income (Round 1: M-Pesa users N=588, Non-users N=591).....	36
Figure 16: Average monthly household income disaggregated per province (Round 1: M-Pesa users N=588, Non-users N=591).....	36
Figure 17: Average monthly household income disaggregated per district (Round 1: M-Pesa users N=588, Non-users N=591).....	37
Figure 18: Main source of household income (M-Pesa users N=588, Non-users N=591).....	37
Figure 19: Occupation of participant (M-Pesa users N=588, Non-users N=591).....	38
Figure 20: Assets in a household (M-Pesa users N=588, Non-users N=591)	38
Figure 21: Respondents that have one or more SIMs (M-Pesa users N=588, Non-users N=591)	39
Figure 22: Usage of financial services (Round 1 Q217, M-Pesa users N=588, Non-users N=591)	42
Figure 23: Usage of financial services disaggregated per province (Q217, M-Pesa users N=588, Non-users N=591)	42
Figure 24: Usage of financial services disaggregated per district (Q217, M-Pesa users N=588, Non-users N=591)	43
Figure 25: Additional extra income as percentage of average household income per person (HIP) (M-Pesa users N=588, Non-users N= 591 out of N=1,179).....	44
Figure 26: Bank account user (M-Pesa users with N=246, Non-users with bank N=117, out of N=1,179)	45
Figure 27: Financial inclusion based on access of financial services (M-Pesa users N=588, Non-users N=591)	46
Figure 28: Financial inclusion based on access of financial services disaggregated per Province (M-Pesa users N=588, Non-users N=591)	46
Figure 29: Financial inclusion based on access of financial services disaggregated per district (M-Pesa users N=588, Non-users N=591)	47
Figure 30: Methods used for saving for those that save money (M-Pesa users N=225, Non-users N=189)	48
Figure 31: Financial services (M-Pesa users N=588, Non-users N=591).....	48
Figure 32: M-Pesa Penetration rates obtained from Round 2 (M-Pesa users N=448).....	51
Figure 33: Used M-Pesa account registration (M-Pesa users N=588).....	53
Figure 34: Reason for selecting M-Pesa for mobile money (Opened own account N=521, Spouse opened account N=32, total N=553)	54
Figure 35: Enrolment of M-Pesa (registered own account or spouse register the account, N=553).....	55
Figure 36: Enrolment of own M-Pesa account by person who knows the roles of agents and promoters. disaggregated per district (N=120).....	55

Figure 37: M-Pesa services ever used, disaggregated per province (Gaza N= 129, Manica N=144, Maputo N=133 Nampula N=174, Total N=580).....	58
Figure 38: Frequency of using M-Pesa services (Round 1 N=588, Round 2 N=453) also graph for round 1 excluding buying airtime.	58
Figure 39: Last time you used mobile money transactions (Round 1 N=540, Round 2 N=453).....	59
Figure 40: Frequency of M-Pesa services if ever used (Round 1, N=580).....	60
Figure 41: Current and maximum amount of MT people have/had in their M-Pesa account (Round 1, N=580)	60
Figure 42: Amount transacted last time by M-Pesa users excluding buying airtime (Round 1, N=580) [Deposit at agent N=484, Buy airtime N=457, Sending remittance/money N= 380, Payment of bills N=201, Receive money N=137, Saving N=79, Withdraw cash form agent N=50, Payment of goods N=50].....	61
Figure 43: Explanation of M-Pesa (Round 1, N=580).....	62
Figure 44: Benefits of M-Pesa mentioned by M-Pesa user (Round 1, N=580)	63
Figure 45: Disadvantages of M-Pesa mentioned by M-Pesa user (Round 1, N=580)	63
Figure 46: Problems with M-Pesa agents by M-Pesa user (Round 1, N=580).....	64
Figure 47: Main reason why people do not have a mobile phone now (Round 1, N=192)	64
Figure 48: How did you hear of mobile money (M-Pesa/MKesh)? non-users (Round 1, N=591)	65
Figure 49: Main reason for not having M-Pesa account (Round 1, N=591).....	65
Figure 50: Non-user knows other persons who use a mobile money account (Round 1, N=508)	66
Figure 51: Mobile network coverage (Round 1).....	68
Figure 52: People that did not go to school, disaggregated per district and M-Pesa user/non user, (Round 1, N=1179)	69
Figure 53: Illiteracy, disaggregated per district and M-Pesa user/non user (Round 1, N=1179).....	70
Figure 54: M-Pesa user representation per gender per province (Round 2: M-Pesa user N=448, Non-user N=383)	96
Figure 55: Average monthly household income (Round 2: M-Pesa user N=448, Non-user N=383)	96
Figure 56: Average monthly household income disaggregated per province (Round 2: M-Pesa user N=448, Non-user N=383)	97
Figure 57: Average monthly household income disaggregated per district/community (Round 2: M-Pesa user N=448, Non-user N=383).....	97
Figure 58: Frequency of using M-Pesa services (Round 2 N=453)	99
Figure 59: Last time you used mobile money transactions (Round 1 N=540, Round 2 N=453).....	99

Acronyms

ATM	Automated Teller Machine
BoP	Bottom of the Pyramid
DFID	Department for International Development (UK Government)
EP	Primary school (“Escola primaria”)
ESG	Secondary school (“Escola Secundaria”)
FGD	Focus Group Discussion
FSDMoç	Financial Sector Deepening Moçambique programme
GPS	Global Positioning System
HH	Household
HIP	Household Income per Person living in the household
ICF	Informed Consent Form
IDIs	Individual Interviews
INCM	National Institute of Communications of Mozambique (“Instituto Nacional das Comunicacoes de Mocambique”)
INE	National Institute of Statistics of Mozambique (“Instituto Nacional de Estatisticas”)
IVR	Interactive Voice Response
KEQ	Key Evaluation Questions
KII	Key Informant Interview
MFI	Microfinance Institution
MFS	Mobile Financial Services
MNO	Mobile Network Operator
MSMEs	Micro Small and Medium Enterprises
MT	Mozambique Metical (currency)
NGOs	Non-governmental organisations
OECD	Organisation for Economic Cooperation and Development
RFP	Request for Proposals
SADC	Southern African Development Community
SIDA	Swedish International Development Cooperation Agency
SSA	Sub-Saharan Africa
ToR	Terms of Reference
UK	United Kingdom

Executive Summary

Background information

The Financial Sector Deepening, Moçambique (FSDMoç) is a six-year programme funded by the UK International Development Agency (DFID) and Swedish International Development Cooperation Agency (SIDA) whose mission is to identify and partner with key market stakeholders, offering targeted investments and insights to promote the financial sector to improve financial inclusion. FSDMoç partnered with M-Pesa Mozambique (2016 to 2018) to increase the uptake of the mobile money in the country and to reinforce M-Pesa's on-going *Pedro* strategy to increase the number of current M-Pesa customers (users) and to accelerate uptake by 1 million more users via the use of promoters. FSDMoç commissioned an end-term evaluation to gauge the results achieved during the two-year partnership to:

- Improve understanding on the use of mobile money.
- Provide conclusions on opportunities and challenges in the mobile market system of Mozambique.
- Provide details on the efficiency, effectiveness and sustainability of M-Pesa interventions in Mozambique.

Methodology

Research design & sampling for the survey

A mixed research approach employing both qualitative and quantitative methods was used. Four provinces were sampled for the study (Maputo city, Gaza, Manica and Nampula) and multi-stage sampling was used to select provinces, districts and communities. The recruitment of households was undertaken randomly using a zigzag pattern and the first adult (18 years or above) who answered the door was eligible to participate in the survey. Respondents were either M-Pesa users¹ or non-users².

Sampling for the qualitative research

Focus group discussions (FGDs) with M-Pesa users and Key Informant Interview (KIIs) with M-Pesa staff, FSDMoç staff, promoters and agents, were undertaken to inform the qualitative part of the study.

Methodological limitations

- Selection bias, especially during the first stage, which was skewed toward provinces and districts where the *Pedro* strategy was being implemented. Generalizability to the whole population is therefore not applicable. Nevertheless, randomization was applied in all the selection stages even at the household level.
- Interviewer bias especially during interviews where it is possible to induce the participant to provide the perceived “right” answers by the enumerator. Undertaking a pilot and a lot of exercises and simulation mitigated this.
- The zigzag selection of households could induce the exclusion of hard to reach households.

¹ M-Pesa users in this study are defined as those adults 18 or above that uses M-Pesa, either his own registered M-Pesa account or someone else's M-Pesa account

² A non-user & M-Pesa users in this study are defined as those adults 18 or above who does not use an M-Pesa account.

Findings

Demographic characteristics

- M-Pesa users have an average age of 32.9 years and non-users an average of 36.3 years.
- M-Pesa users are more literate (94%) compared to non-users (78%). In addition, more (67%) of the M-Pesa users reported to have attained secondary education compared to those that reported attaining secondary education for non-users (41%). There is a positive correlation between education level and the number of new accounts opened by promoters, meaning that the higher the level of education, the more likely a person will open a mobile account.
- M-Pesa users have a higher average income than non-users.
- Non-users are likely to be unemployed (31%) compared to M-Pesa users (18%).
- M-Pesa users are more likely to use other formal financial services like banks, microfinance and insurance corroborated by the existence of a strong positive correlation between average household income per capita and usage of other financial services.
- The majority of M-Pesa users own a mobile phone (92%) compared to non-users (69%).

Objective 1: Improving understanding of the usage of mobile money

- Though the adoption of mobile money is not as solid as in Kenya and Tanzania, the tendency in Mozambique is moving towards Kenya's reality where there is a dominance of one mobile money provider: M-Pesa.
- Households with M-Pesa users have much more income than households of non-users. This suggests that those that have more money have more exposure to M-Pesa services and that targeted M-Pesa rollout interventions are needed to improve financial inclusion of the poorest and hardest to reach.
- M-Pesa penetration rate in urban areas is more than 50% (in Maputo city it is more than 70%) while in the rural areas where the *Pedro* strategy has been rolled out there is a penetration rate of 30% or higher.
- The presence of promoters especially in the provinces in which the *Pedro* strategy is being rolled out has contributed to the mobile money uptake. The presence of promoters in a community in conjunction with age and a well-established agent network can (statistically significant) contribute to the increase in mobile money uptake.

Despite the above highlighted successes, concerns for the mobile money sector, especially M-Pesa include: fraud, inefficient customer care line that does not respond to users' concerns on a timely manner and perceived high tariff rates by the users mainly because of their low purchasing power.

Objective 2: Conclusions of opportunities and challenges in the mobile market system

Opportunities

- There is potential for increase of market share in the mobile money market because of the existence of people who are not financially included. According to the survey results, 55% of the respondents reported to have a mobile money account. There was evidence of high demand of M-Pesa mobile services even in areas where the Vodacom network was poor or non-existent, like for example in Corrane, (Nampula province), Mavonde and Nhaurombe (Manica province) there were people who

had M-Pesa accounts. To use these accounts, they travel to the nearest cities where Vodacom network accessibility is good and agents guaranteed to transact their M-Pesa accounts exist.

- The government of Mozambique is enthusiastic to improve the financial inclusion rate in the country hence in 2016 the government approved the financial inclusion strategy (2016-2022). One of the main pillars of the strategy is to improve access to financial services. This is an opportunity for the mobile money sector to capitalize on the opening (especially on access to financial services) created by the strategy. According to KIIs (M-Pesa & FSDMOg), the existing legislation in Mozambique is not a hindrance to the expansion of the mobile money services.
- Unemployment rate is still high in Mozambique (25% according to Trading economics³), the expansion of mobile money services in the country is an opportunity for job creation. Most of the promoters and agents who participated in the interviews, cited unemployment as one of the main reasons why they are working with M-Pesa. There is willingness of people especially young people to work with mobile money providers to improve their livelihood.
- There is high demand for savings accounts that generate interests, services that facilitate transactions across mobile money operators and loans for agents so that they are able to manage their e-float.

Challenges

- Underdeveloped mobile network infrastructure that slows the progress of mobile money uptake. Due to national regulations, Vodacom and M-Pesa are different legal entities, nevertheless, M-Pesa's mobile money operations depends fully on the network of Vodacom. M-Pesa being the dominant mobile money service provider in Mozambique and the main M-Pesa shareholder limits the permeation of the M-Pesa services in areas where the network coverage of other mobile money providers such as Movitel is strong.
- Low purchasing power of users increases the duration that a firm can expect to reach break-even point. This is because of the low volume of revenue creating transactions translates into a long period of waiting for return on investments. In the M-Pesa's case, an estimated 10.3 months in urban areas are needed to earn enough revenue from the newly signed up clients to compensate the monthly cost of the promoter. In rural areas, the time to generate enough revenue to cover the monthly cost of the promoter is double the time of the urban areas.
- Fraud continues to be a headache in the mobile money industry where innocent people are robbed through identity theft, hacking or some other means.
- Low literacy rate of users especially in the rural areas affects their understanding of the importance of the use of financial products. Majority (41%) of non-users keep money at home for saving purposes.

Objective 3: Details on the efficiency, effectiveness and sustainability of M-Pesa interventions in Mozambique.

³ <https://tradingeconomics.com/mozambique/unemployment-rate>

Efficiency: The following outputs were achieved through the partnership :

- Achievement of set targets within the stipulated timeframe. Additional 1,200,000 M-pesa users within the 2-year period of the partnerships.
- Development of a promoters' model (one of its kind in Africa) to act as a catalyst in the process of increasing the uptake of mobile money in Mozambique.

Effectiveness: The partnership reinforced M-Pesa's penetration rate, which is above 50% in most of the urban areas where the *Pedro* strategy was rolled out.

Sustainability: It would take longer for M-Pesa to break even from investments in rural areas as opposed to investing the promoters' model in the urban areas. There is no incentive for investing in the rural areas for M-Pesa in the short run as a profit making organization due to delays of the return on investments. Subsidies through donor funding could be one of the options available to propagate financial inclusion of mobile money especially in the rural areas.

Conclusions

It is therefore rational to conclude from the findings that:

- M-Pesa users are younger, more urban, better educated and wealthier in relation to the non-users who are likely to have less education, more likely to be unemployed and have lower average household incomes.
- Mozambique's mobile money market is similar to Kenya's in that there is one mobile money operator dominating. Hence, M-Pesa Mozambique could benchmark and consolidate its position through applying the lessons learned from Kenya.
- The promoter model through the partnership improved the uptake of mobile money in the country especially in the urban areas.
- There is a huge potential for mobile money providers especially reinforced by the characteristics of non-users who favour keeping money at home.
- Challenges in the mobile money industry include fraud, low literacy levels, underdeveloped mobile network infrastructures, reduced purchasing power of both users and agents,, which affect their capability to spend.
- The time it takes to break-even especially in rural areas due to reduced purchasing power can be a disincentive for M-Pesa to continue investing in the rural areas hence subsidies through donor funding could be one of the options to boost financial inclusion especially in the rural areas.

Recommendations

FSDMoç/Donor

With investment undertaken during the last two years, the results are positive and favour urban financial inclusion, which is not bad because some people in the urban areas are also financially excluded. There is more work to be done to promote financial inclusion in Mozambique especially in the rural areas.

There is no need to keep subsidizing the promoter model as it is, however, if additional investment from FSDMoç into mobile money services is made to further increase the formal financial inclusion. This could be focused on:

- Promoting M-Pesa services that are targeting new (rural) areas to reach people that are financially informally included and excluded. This requires a cohesive promoter monitoring and incentive scheme.
- Emphasis on customer education (both existing and new clients) could be achieved through transforming promoters to “educators”. This however, requires a solid incentive model for promoters for it to work.
- Collaborating with other NGOs, local entities to boost the financial ecosystem in order to grow/encourage/invest in economic activities in identified potential new areas/villages suitable for introducing M-Pesa.

M-Pesa

Growing M-Pesa, requires stimulating the current mobile money users to transact more, in terms of volume of the transactions, in amounts per transaction, as well as converting the non-users into mobile money users, especially in the rural areas. However, this also requires taking into account:

- Motivating/incentivize promoters to explore the “hard to reach people/areas” and needs a proper monitoring and incentivising mechanism.
- There is a demand for new M-Pesa services to be introduced to end-users: especially savings with interest (also to saving groups) and loans/micro credits.
- Current M-Pesa support structure is under-staffed. Additional organizational support needs to be improved by increasing M-Pesa staff.
- The joint (Vodacom/M-Pesa) customer service line cannot cope with the rapid growth of the number of new clients and needs to be adequately resourced as well. Investing resources and efforts to continuously build customer satisfaction and trust in the M-Pesa organisation and services is crucial.
- Back-end systems should be reliable to deal with the increased number of customers and foreseen transactions that can also deal with increased growth, so that there is no delay or loss of transaction notifications.
- Currently, there seems to be limited usage of data analytics on M-Pesa usage/enrolment. M-Pesa can gain new insights analysing their data to make better decisions on how to gain more new customers and ultimately generate more revenues from M-Pesa transactions.
- Building and retaining customer satisfaction and trust in the M-Pesa organisation and services is crucial to grow the usage of M-Pesa. Address the fraud issue to enhance consumer protection and to regain trust. Victims of fraud need cases to be adequately addressed.

1

Introduction

1. Introduction

1.1 Rationale of the study

The Financial Sector Deepening, Moçambique (FSDMoç) commissioned an end term evaluation to gauge the achievement of results of a two-year partnership between FSDMoç and M-Pesa Mozambique. FSDMoç is a six-year programme funded by the UK International Development Agency (DFID) and Swedish International Development Cooperation Agency (SIDA).

FSDMoç partners with strategic financial institutions and other relevant stakeholders in order to achieve its vision of a dynamic financial sector offering quality services that enable resilience and economic empowerment for all Mozambicans. Its mission is to identify and partner with key market stakeholders, offering targeted investments and insights to promote the financial sector to improve financial inclusion. Against this background, FSDMoç partnered with M-Pesa (mobile money) to help the company expand its existing market and communication strategy (denominated '*Pedro*')¹, which aims to accelerate mobile uptake countrywide. The intervention targeted mobile money usage of microenterprises (such as informal traders) as well as low-income rural and urban households. M-Pesa started implementing the *Pedro* strategy prior to the partnership and the 24-month collaboration between FSDMoç and M-Pesa (that started in April 2016 and ended in March 2018), was aimed at reinforcing the on-going implementation of the *Pedro* strategy (whereby FSDMoç provided co-funding (matching grant) for the roll-out strategy) that primarily focused on the following interventions:

- Hiring and training of promoters for a period of 24 months, see Table 1 for (a snapshot of) the distribution of the promoters across the provinces.
- Reinforcing the consumer awareness campaign through promoters and other means (media).

Table 1: M-Pesa promoters present in Mozambique (snapshot October 2017)

Province	Planned # of M-Pesa promoters	Actual # of M-Pesa promoters
Maputo City	125	96
Maputo Province	80	36
Gaza	50	50
Inhambane	40	43
Sofala	40	40
Manica	40	40
Tete	50	55
Cabo Delgado	30	28
Niassa	20	15
Zambezia	50	50
Nampula	97	98
Total	622	551

Source: FSDMoç - M-Pesa Indicator Reporting Tools. 10 October 2017

¹ The strategy aims to study people's financial needs and develop mobile financial services to satisfy the people's needs in Mozambique. "Pedro" is a name of a person and it is a symbolic representation of the Mozambican population.

The objective of this partnership was twofold:

- Improve the skills and capabilities of the promoters through training.
- Increase and accelerate the current M-Pesa customers (users) by 1 million more users.

The partnership had set a target of increasing the number of clientele by one million more users within two years by the end of the project. The nature of the partnership was a grant with match funding to expand the scope and reach of the *Pedro* strategy including into new geographical areas in which M-Pesa was not yet operating through training and supporting promoters who are contracted by M-Pesa to sign up new customers. M-Pesa mobile money services in Mozambique allow people to transfer, deposit and withdraw money, pay bills as well as buy airtime, electricity (vouchers) and pay bills (cable TV) and pay different services from mobile phone services.

During the start of the evaluation (based on the data provided by FSDMoç), an additional 200,000 customers (signed up via the FSDMoç's funded promoters) had surpassed the target set within the partnership hence a total of 1,200,000 additional M-Pesa users had been signed-up during the partnership period. This is in addition to the other newly signed up M-Pesa clients from other areas where the *Pedro* strategy is applied. According to M-Pesa (reported July 2018) a total of 2,328,895 new M-Pesa accounts were opened from April 2016 to March 2018 through the promoter model.

1.2 Evaluation objectives

The purpose of this evaluation was three pronged:

1. **Improve understanding on the use of mobile money in Mozambique:** This included the pattern of usage (an understanding of the sample that accesses M-Pesa mobile service), users' experiences of mobile money in the context of their wider financial services use (frequency of usage of the service, number and proportion that are classified as active, users' value of transfers, type of use including remittances, distance of transfer and savings behaviour, links to other services (understand other financial services that users and non-users do access, for example how users compare in terms of access and usage of informal services (savings groups, Xitique² or other forms of microfinance or formal banking services).
2. **Provide conclusions on the opportunities and challenges in the mobile money market system.** This included looking at the demand and supply side including on the capability and liquidity of the agent network, fee rates and willingness to pay for mobile money services (M-Pesa).
3. **Provide details on the efficiency, effectiveness and sustainability of M-Pesa intervention.** This included the commercial viability of mobile money in urban and rural areas and the continuation of a rollout strategy. This included a view on the additionality of M-Pesa intervention and, informing future thinking about potential interventions in the mobile money market in Mozambique.

² Xitique is a Bantu word that belongs to the Tsonga linguistic family in Mozambique. The word means a credit or savings mechanism among members of the same community, religion, workplace or other where each member of this group contributes a pre-consented fixed amount, which is given to each member on a rotating basis within fixed rotating periods. It is an informal agreement that does not involve any interests or other financial obligations to the members.

This report is structured as follows: Chapter One lays out the foundation of mobile money services globally and in Mozambique; details the nature of FSDMoç and M-Pesa's partnership & underlines the purpose of the study. Chapter Two highlights the study's methodology and its limitations, while chapter Three presents the findings. Chapter Four presents the conclusions and recommendations. The appendices highlight various aspects of the study: references used, M-Pesa's tariffs for various services, data collection tools (quantitative and qualitative), various statistical results as well as the Terms of Reference (ToR).

1.3 Overall global outlook

According to Fang, Russell & Singh (2015), over 4 billion people termed as the 'Bottom of the Pyramid' (BoP) lack formal financial accounts to save, borrow or transact. Although lacking access to any formal financial services, many of those termed in the BoP have access to mobile phones. Offering access to mobile phone technology can potentially transform lives within the BoP living in subsistence marketplaces³. The mobile phone has played a key role in financial inclusion and has been widely used for providing microfinance services hence the terms mobile banking, mobile payment and mobile finance.

The World Bank defines financial inclusion as access to useful and affordable financial products and services by individuals and businesses that meet their needs. Digital Financial Technology (Fintech) and the global spread of technology have facilitated access to financial services in hard to reach populations at low cost and risk. Bank accounts in high-income Organisation for Economic Cooperation and Development (OECD) countries are **almost** universal which is a contrast to developing countries where only 54% of adults have a bank account (Demirgüç-Kunt et al., 2015). The disparity between the developed and developing world is due to the high cost of establishing and running "bricks and mortar" branches according to Fanta et al (2016). The World Development Indicators Data (World Bank, 2018) indicate that developing countries in South Asia and sub-Saharan Africa have seen rapid growth in mobile phone subscription (see Figure 1 & Figure 2 for cell phone usage in Africa). This indicates that in some developing countries, more people have a mobile phone than clean water, a bank account or even electricity (Fanta et al., 2016).

Figure 1: Mobile phone usage in Africa

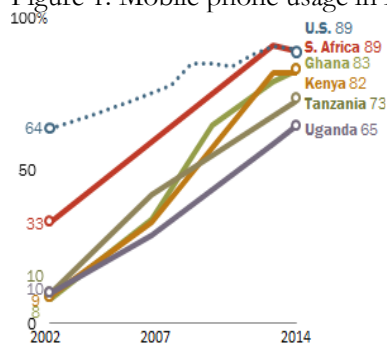
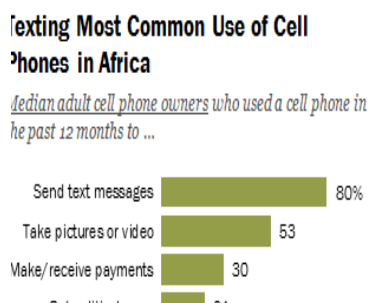


Figure 2: Common use of mobile phone in Africa

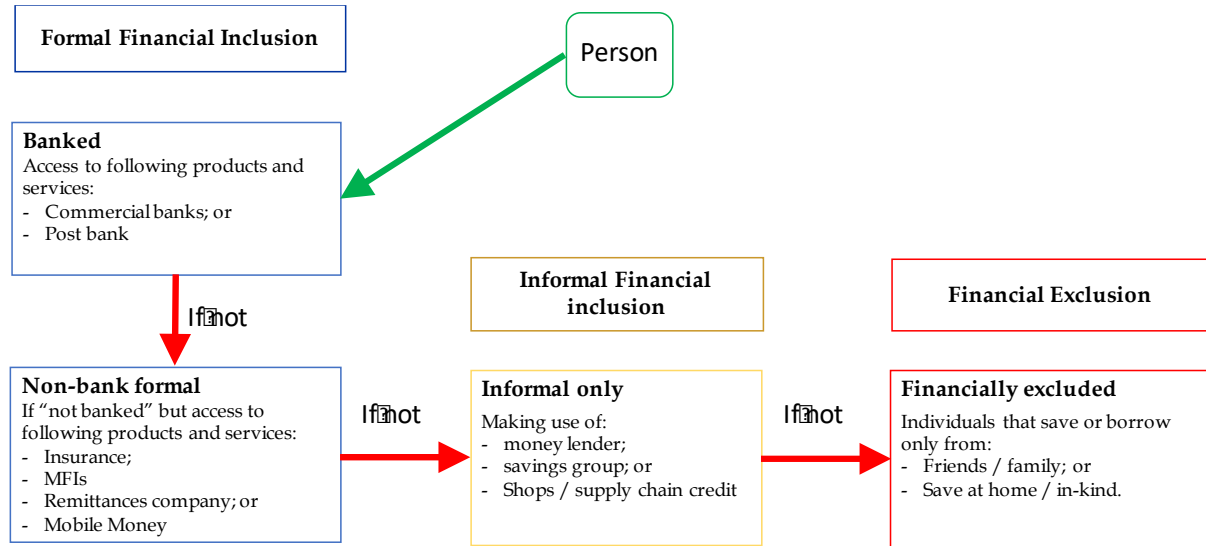


³ Venugopal, M., & Viswanathan (2017): The subsistence marketplaces approach to poverty: Implications for marketing theory. Retrieved from https://www.researchgate.net/profile/Srinivas_Venugopal/publication/302939756_The_Subistence_Marketplaces_Approach_to_Poverty_Implications_for_Marketing_Theory/links/59ea26b1a6fdccf8b08cdb4/The-Subsistence-Marketplaces-Approach-to-Poverty-Implications-for-Marketing-Theory.pdf

Source: Pew Research Center (2014)

Mobile phones are linked to economic development through their effect on financial inclusion (see Figure 3 below for financial inclusion and exclusion definitions).

Figure 3: Definitions: financial inclusion & financial exclusion



Source: FINSCOPE (2014)

Mobile money⁴ has rapidly changed the financial services landscape in several African countries including Mozambique; this is by lowering transaction costs, driving financial inclusion and providing consumers and small businesses with easy, cheap and safe ways to transact. Mobile money usage has been boosted by the penetration of mobile phones (FinMark Trust, 2016). According to GSMA (2015, p.8), mobile money has done more to extend the reach of financial services in the last decade than the traditional banks. This is substantiated by the fact that 19 countries in the world have more mobile accounts than bank accounts according to GSMA (2016). Hoernig & Bourreau (2017) underline that although mobile money is transforming into an alternative to the formal banking system, which has mainly remained elusive to the poor, whether mobile money will live up to the expectations will depend on the following two factors: a) culture & whether local population is in need for mobile money solutions and b) attractiveness of the mobile money solutions including pricing and possible related services (international transfers, merchant payment, savings, loans and insurance).

According to Batista and Vicente (2016), mobile money typically allows four types of basic transactions:

- Cashing-in at a mobile money agent (exchanging physical cash for e-money usable on cell phone);
- Transferring e-money to another cell phone number;
- Paying for products or services at shops taking e-money;
- Cashing-out (exchanging e-money for physical money at an agent outlet).

⁴ Mobile money refers to the electronic representation of conventional money, the value of which is on par with the official currency of the licensing SADC member state, which may be transferrable, redeemable for cash and is generally acceptable means of payment (FinMark Trust, 2016).

Safaricom Limited Company started mobile money service in Kenya in 2007 with a purpose of serving the women groups (*chama*) to enable them to send and receive money to each other in their monthly contribution arrangements. However, the initial trial revealed much broader demand for the mobile money service in moving money around the country consequently, the expansion and evolution of the mobile money services countrywide to satisfy the financial needs of various individuals and groups of interest (Ngugi & Komo, 2017). Though Kenya is a pioneer of mobile money innovation, the Tanzanian mobile money market is also evolving at a rapid pace and taking a more dynamic and different trajectory from Kenya as highlighted by CGAP (2018):

- Safaricom dominates the Kenyan markets whereas in Tanzania there are three primary mobile money providers.

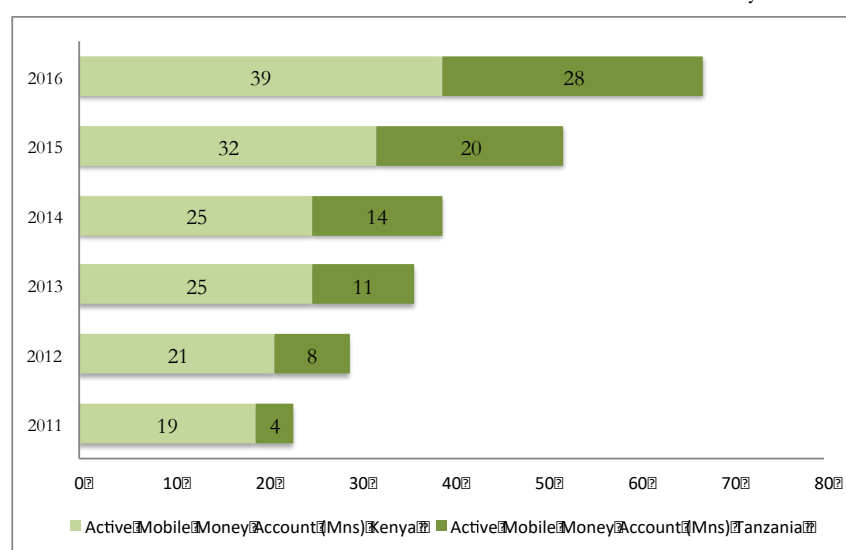
Table 2: Primary mobile providers in Kenya and Tanzania

Tanzania	Kenya
Vodacom M-Pesa (54%)	Safaricom M-Pesa (95.5%)
Tigo Pesa (29%)	Airtel (3.4%)
Airtel Money (13%)	Other (1.1%)
Ezy (4%)	

Source: CGAP (2018)

At least 52% of the 166,000 mobile money agents in Tanzania serve multiple providers while only 4% of the 24,708 mobile agents in Kenya serve multiple providers. The above comparison is interesting because it is a proof that there is a no fit for all mobile money model and depending on each country's demand, infrastructure and strategy, mobile money uptake can take its own unique pathway.

Figure 4: Growth in number of M-Pesa users from 2007-2012 in Kenya & Tanzania



Source: Communications Authority of Kenya (2016); Bank of Tanzania (2016)

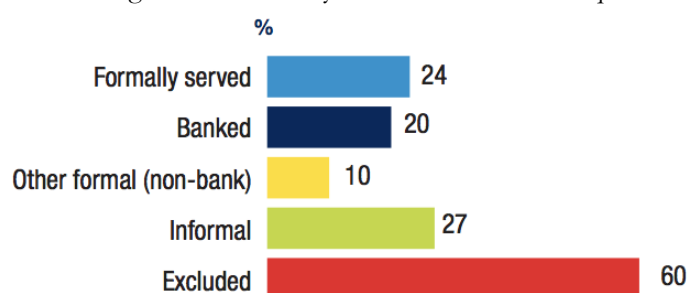
M-Pesa is not only being implemented in Tanzania and Kenya, Vodacom group (2017)⁵ reported that by December 2016, 10 years after introduction, M-Pesa operated in 10 countries: Albania, the Democratic Republic of Congo, Egypt, Ghana, India, Kenya, Lesotho, Mozambique, Romania and Tanzania, and had 29.5 million active users. It is worthwhile noting that mobile money has not been successful everywhere and a good example is in South Africa where the services (of MTN & M-Pesa) were closed in 2016. The following factors were cited as the reasons for the failure (FinMark Trust, 2017): high financial inclusion in South Africa; easy access to Automated Teller Machine (ATM) & retail branch networks & access to banking services through mobile channels. MTN announced in March 2018 that it is aiming for a mobile money comeback in South Africa⁶.

1.4 Mobile money in Mozambique

Mobile money was launched in Mozambique in September 2011 through the mobile money operator Mcel when the mobile money service mKesh was introduced. Vodacom introduced M-Pesa in May 2013. According to Hoernig and Bourreau (2017), the agent network for M-Pesa is more developed than that of mKesh (12,000 agents for M-Pesa and for mKesh around 4,000 agents). Movitel entered the Mozambican market in 2010 and launched its e-Mola (mobile money) in 2017. The Central Bank does not allow mobile money operators to offer savings products of their own, they can partner with financial institutions in order to provide mobile money services according to the Mozambique's legislation that was passed in 2004 (Batista, Vicente & Yang, 2015). This is slowly taking place in Mozambique where M-Pesa has partnered with Standard bank and BCI bank to provide financial services to the population.

There were around 3.4 million M-Pesa users in Mozambique by July 2018 of which the majority are active users⁷ that conduct at least one transaction a month according to M-Pesa's headquarters' Head of Sales (July 2018). Given the promising growth of M-Pesa, it is becoming clear that mobile money could play a key role in boosting financial inclusion in Mozambique given the limited financial inclusion in the country. According to FINSCOPE consumer survey (2014), only 24% of adults in urban areas had access to formal financial services.

Figure 5: Financially inclusion in Mozambique



Source: FINSCOPE Customer survey (2014).

⁵ <https://www.vodafone.com/content/index/media/vodafone-group-releases/2017/m-pesa-10.html#>

⁶ <https://www.developingtelecoms.com/business/operator-news/7717-mtn-aiming-for-money-mobile-comeback-in-sa-following-return-to-profit.html>

⁷ The average number of M-Pesa transactions per active M-Pesa user in Mozambique 2018 is 15.35 (source M-Pesa July 2018).

The country has huge disparities between people outside the key cities mainly due to infrastructure, which is concentrated in the urban areas. Access to financial services is very limited in Mozambique specifically in rural areas. Savings methods for the rural population are often limited to keeping money at home, keeping money informally or participating in the savings groups (FSDMoç, 2014).

There are over thirteen million subscribers of mobile phone services in 2016 (INCM, 2017) in Mozambique. Despite this, there are limited secure savings and transfer options particularly in the rural areas and mobile money services have the potential to offer the possibility of saving securely and transferring money faster and more securely at considerably lower rates than the existing formal or informal channels used in the rural areas (Batista & Vicente, 2016). In July 2016, Mozambique introduced a new financial inclusion strategy designed to increase access to financial services from 24% to 60% of the population by 2022.

Tidd & Bessant (2014) underline that a key to the M-Pesa's success is that it benefits from what are called 'network effects'. The system only works when enough people use it but once word of mouth recommendations reach a critical number of subscribers, the system becomes viable and then new uses are found for the platform. Mobile money then offers a gateway to loans, salary payments and bill payments, effectively offering a banking system for the traditionally unbanked. This is important in the context of a country where 80% of the population does not have access to the traditional banking system. The study on the economic impact of introducing a new mobile money service (Batista & Vicente, 2016) indicates that introducing mobile money in poor rural areas might serve as an important positive role in improving risk sharing between rural households in these locations and their migrant networks. In light of their findings, improving the positive economic impact of mobile money services for rural populations could potentially be achieved by using mobile money as a platform to offer micro credit and formal micro insurance products. These products could allow broadening the positive impact of mobile money from improved resilience to shocks, to productive investment potentially capable of lifting households out of poverty.

1.5 Common terms used in the report

M-Pesa: (M for Mobile and pesa is Swahili for Money) is a mobile phone based money transfer, financing and microfinance service, launched in 2007 by Vodafone for Safaricom and Vodacom, the largest mobile network operators in Kenya and Tanzania⁸

M-Pesa Agent: An authorised person who can provide information on M-Pesa and help with opening an M-Pesa wallet; deposit cash and help M-Pesa users transact (M-Pesa digital portal). M-Pesa agents are required to open two accounts: float accounts which enable them to handle clients transactions (deposits and withdrawals) and working account which allow them to perform agent side transactions and, this is the account that M-Pesa commissions are paid into⁹.

⁸ <https://www.mitpressjournals.org/doi/10.1162/itgg.2007.2.1-2.63>

⁹ <https://biasharapoint.com/blog/biasharapoint-how-to-do-float-and-cash-management-in-mpesa-agency-outlet/>

M-Pesa Super Agent: A company or a business that works in conjunction with the network provider of buying and selling electronic float to M-Pesa agents to allow them to realise quick turnaround for float transactions so as to be able to maintain maximum availability for their M-Pesa businesses (M-Pesa digital portal).

M-Pesa Promoter: This is an authorised person by M-Pesa to recruit additional M-Pesa users. His or her role is to market the M-Pesa services to potential clients and facilitate the opening of an M-Pesa wallet. Promoters are only in Mozambique implementing the Pedro Marketing and communication strategy in order to expand the outreach of M-Pesa in the country (M-Pesa Marketing Manager, Mozambique) (M-Pesa Headquarters' personnel during the Key Informant Interview-KII).

2

Methodology

2 Methodology

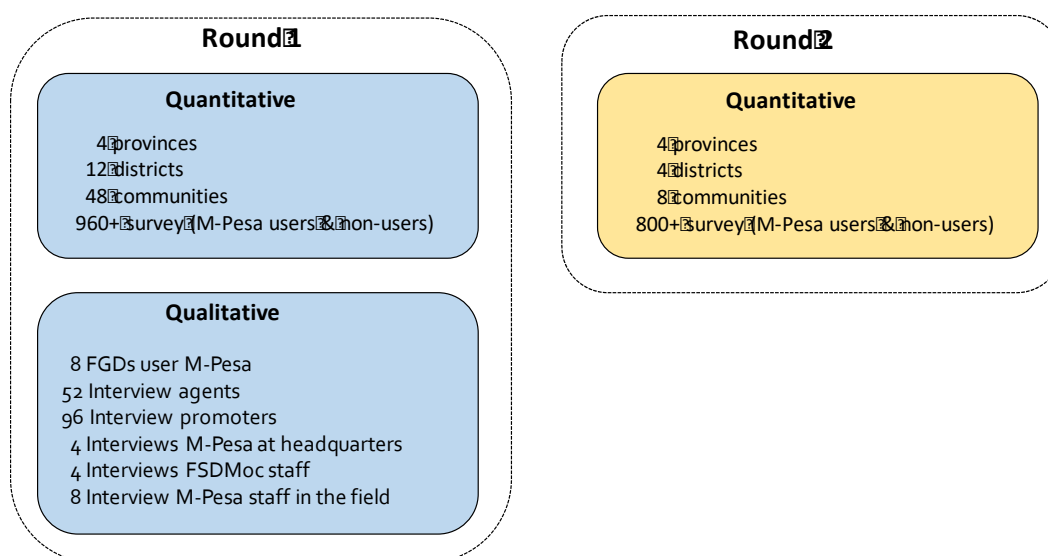
2.1 Methodological design

The mixed methods research design developed by the FSDMoç team in conjunction with Maraxis was used to obtain different but complementary data on the same topic in order to understand the research problem and triangulate key evaluation questions to probe the reliability of the results. Quantitative and qualitative data collection was designed to provide an evidence base for analysis of all three-evaluation questions. Data collection methods are summarised in Figure 6.

The research involved three stages:

1. Secondary data analysis: Review of various documents on mobile money services to substantiate or present a basis for comparison against primary data obtained from the field.
2. Quantitative research: Primary data was collected from the field via household survey.
3. Qualitative research: This entailed using focus group discussions (FGDs) of M-Pesa users & undertaking key informant interviews (KIIs) with the key stakeholders involved in the partnership (FSDMoç staff; M-Pesa staff; M-Pesa promoters; M-Pesa agents).

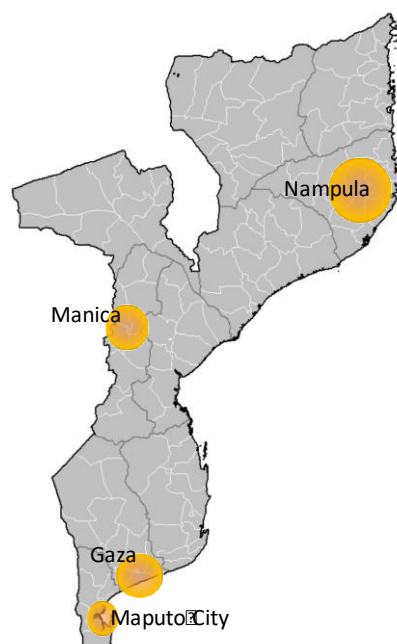
Figure 6: Data collection



2.2 Geographical coverage

M-Pesa is operating across Mozambique in Maputo city, and the provinces of Nampula, Zambezia, Tete, Cabo Delgado, Niassa, Sofala, Manica, Inhambane and Gaza. Data collection was undertaken in the Maputo city, Gaza, Manica and Nampula provinces (see Figure 7). Data collection for round 1 took place in a total of 36 communities (3 communities per District, 3 Districts per province, 4 study Provinces) while data collection for round 2 screening took place from a total of 12 communities (2 communities per province from 1 community per district) - see annex A-1 & A-2 for complete list of districts and communities.

Figure 7: Geographical focus of the study



2.3 Quantitative survey

A descriptive research design (correlational/observational) was used for the purpose of this study. The survey instrument (questionnaire) was composed of the following components: Informed consent; screening questions; socio-demographic questions; access and usage (which were different for M-Pesa users¹³ and non users¹⁴). See Annex D for the full survey tools.

2.4 Sample design – Round one of data collection

Multi-stage sampling was used to select 4 provinces, 12 districts and 36 communities for this study. In order to ensure the representation of regions across Mozambique and taking into consideration the budget constraint, the following selection of provinces was proposed: one southern province (Gaza province), one province in the central region (Manica province) and one from the northern region (Nampula), and Maputo city. Maputo city has its own unique characteristics and dynamics being the country's capital and, it was therefore imperative to collect data from the city where the findings were compared with those of other areas for any significant differences or similarities in trends, access and usage.

M-Pesa provided the sample frame of the provinces and districts, where M-Pesa is rolling out the *Pedro* strategy (new and existing areas) however; the list did not have the detailed names of the communities composing the districts. A complete list (with all the communities) of these provinces where M-Pesa is rolling out the *Pedro* strategy was obtained from the National Institute of Statistics (INE) and this was used to sample the study population. This study's focus was on the impact of the partnership between FSDMoç and M-Pesa particularly linked to the rolling out of the *Pedro* strategy.

¹³ An M-Pesa user is a person that uses M-Pesa, either his own registered M-Pesa account or someone else's M-Pesa account

¹⁴ A non-user is a person that does not use an M-Pesa account.

Selection of the provinces

The selection of provinces was undertaken to ensure:

- Coverage of both “new” as well as “existing” areas in which M-Pesa has been rolling out the *Pedro* strategy.
- The inclusion of the district’s capital city in the study.
- Promoters who were actively involved in opening new accounts for new M-Pesa clients (*Pedro* strategy implementation through FSDMoç’s support).

Selection of the districts

The selection of districts was undertaken to ensure:

- Coverage of both “new” as well as “existing” areas in which M-Pesa has been rolling out the *Pedro* strategy.
- That they were districts with promoters who were actively involved in opening new accounts for new M-Pesa clients (*Pedro* strategy implementation through FSDMoç’s support).
- That the three districts partaking in the studies were randomly selected from the list of those districts within a province that M-Pesa was active and had promoters.

Selection of the communities

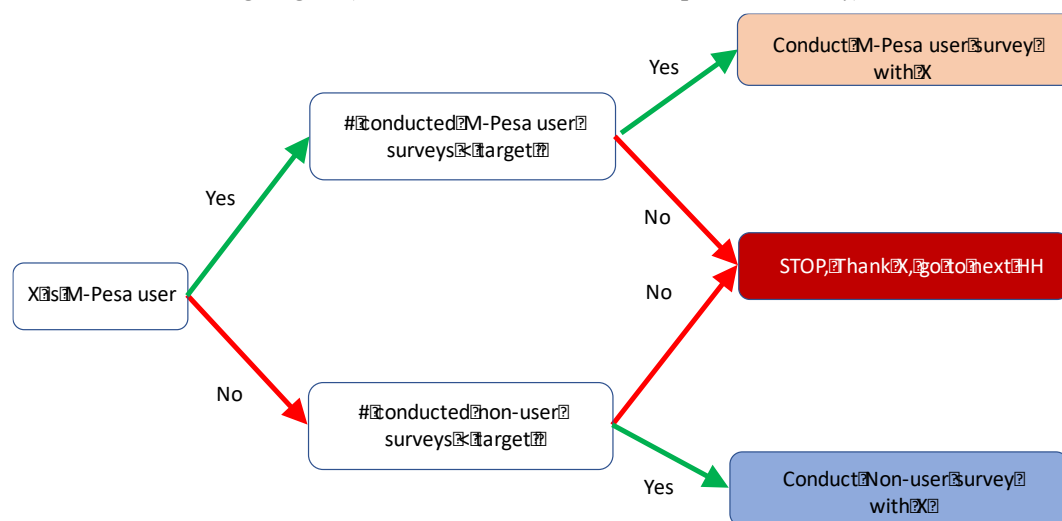
Community selection was undertaken based on the following criteria:

- Communities with and without promoters.
- Coverage of both urban and rural communities (using INE 2018 classification).

See Annex A-1 for the selected provinces, districts and communities.

A “zigzag” walking pattern was used within a selected community to recruit households in a random manner. The person that opened the door after knocking at the selected household was selected as the participant of the household survey if he or she was 18 years and above. The flow (implemented via survey software) of the survey is depicted in the Figure 8 below.

Figure 8: Flow of selecting a participant within the household for survey after screening questions with Adult “X” taking targets (10 M-Pesa and 10 Non-user per community) into account.



2.5 Sample design – Round two of data collection

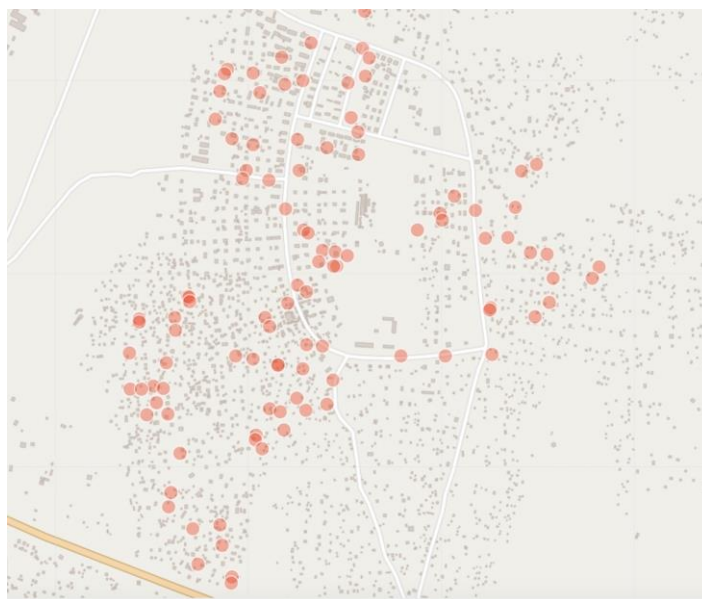
Though this was a one-phase design, some of the enumerators focused more on achieving the targets (10 M-Pesa users and 10 non-users per community) consequently leading to under-achievement with regard to the screening process itself (not all households visited were screened by some enumerators despite being part of the protocol). This meant that the data collected was not sufficient to deduce mobile money penetration rates in the different communities. It was therefore necessary to undertake a very short second round household survey with the specific purpose of understanding M-Pesa’s usage penetration rates. Round 2 was therefore limited to re-visiting a few communities (2 communities per province) that focused on the screening process (asking a few questions only for verification/validation) that could offer evidence on the mobile money penetration rate in Mozambique. Eight communities were revisited during the second round survey.

The screening target per community during the second round survey was 100 adult participants per community, using the same participants’ recruitment approach applied for the first round survey: a “zigzag” walking pattern to select the households randomly and interviewing persons who were 18 years or older that opened the door (see also Figure 9). The selection criteria for revisiting 2 communities per province was aimed at having a balance in:

- Promoter availability (yes/no).
- Type (rural/urban).
- Spread in proportion having a TV asset (as a proxy for household wealth).
- Spread in average household income per person.

See Annex A-2 for the communities that were revisited during the second round survey.

Figure 9: Zigzag walk for selection of households in Manica (Round 2)



The following table (Table 3) presents an overview of all the data collection (quantitative: round 1 and round 2).

Table 3: Overview of conducted quantitative surveys (Round 1, Round 2).

	Quantitative Round 1		Quantitative Round 2
	HH survey- M-Pesa users	HH survey (non-users)	Household survey
Target	480	480	800
Actual	588	591	831

Data analytics for both round 1 and 2 surveys involved provision of descriptive statistics through graphic and table analysis (simple and cross tabulations) as well as inferential statistics such as correlations (Pearson correlation between continuous variables; Eta statistic for strength of association between a nominal variable (for example gender) and a scale variable (for example total number of transactions in 2018), Chi square test of association between two nominal values and multi-regression analysis to predict the value of a variable from other two or more variables.

2.6 Qualitative methods – Round one of data collection

This approach employed qualitative methods that included focus group discussions (FGDs) and key informant interviews (KIIs). FGDs were undertaken with the M-Pesa users that did not participate in the survey. Two FGDs (with M-Pesa users per province) were conducted out of the 12 communities per province hence a total of 8 focus groups. The selection of the two communities that participated in the FGDs was randomly undertaken whereby two districts were included. The FGD participants were recruited through the zigzag pattern the same process as was used to recruit households' participants for the quantitative survey. This methodology was used in order to maximize the selection of various people from different homesteads in the community and from different areas as opposed to recruiting people living in the same area or neighbourhood in order to get diversified views with regard to M-Pesa usage. The

established minimum number of the FGDs was six and maximum twelve. As a precaution, the enumerators recruited more people to guarantee participation if someone did not show up because there were cases where people would promise to participate and never showed up.

In-depth discussions with users during the FGDs focused on their perception, attitudes towards mobile money services within the local socio-economic, cultural context as well as the broader context of financial services usage and access. In addition to the FGDs, the following KIIs were undertaken:

- KIIs with M-Pesa staff and management sought to focus on the commercial viability of M-Pesa and the *Pedro* strategy rollout. In particular, this looked at the selection of districts, the training and management of promoters; the management of the agent network, customer care and overall profitability.
- KIIs with M-Pesa agents probed questions around the existing liquidity of the agent network, experiences of use and access, and views and perceptions of the customer base (frequency of use, ease of use, types of usage). These interviews also explored the role of ‘super-agents’, who formed part of the agent sample.
- KIIs with M-Pesa promoters looked into their experience with customer sign-up, on locations for maximizing uptake, and on the information they provide to prospective customers. Ideally, some observation of current practices was also possible. Similarly to the survey instruments, prior to administering any interviews or Focus Groups, an informed consent was administered.

Table 4: Overview of FGDs and KIIs (Round 1)

	Qualitative			
	KII promoters	KII agents	FGDs with M-Pesa users	KII M-Pesa & FSDMoç Staff
Target	52	96	8	16
Actual	71	77	8	20

Data analytics for the qualitative data involved the use of transcribed summaries to establish meaning and colour coding to establish a theme around a certain category based on the responses from the different participants.

2.7 Enumerators' training

A total of sixteen (16) data collectors (14 enumerators and two senior consultants) partook in the collection of both qualitative and quantitative data. The enumerators were identified through Maraxis database (data collectors who had been engaged before in similar assignments). Prior to data collection, a five-day training took place in Maputo with the following objectives:

- To introduce and acquaint to the enumerators the study protocol;
- Underline the principles of research ethics that would be used during data collection;
- Piloting the tools in order to familiarize the enumerators with a real study situation and, to iron-out any ambiguities with the tools that came up during the pilot.

The Maraxis senior experts¹⁵ facilitated the training during the five days (see Table 5 below for training schedule). Three teams were dispatched to collect data in the provinces. The composition of the team was undertaken as follows:

- To ensure gender balance in case, there were situations where cultural practices stipulated that a certain gender would be appropriate to engage with a certain group (female enumerators interviewing female participants if needed).
- All the team members spoke the local language of the province that they were dispatched to: Changana for Gaza province; Chitewe for Manica Province and Macua for Nampula Province.

Table 5: Enumerators training programme

Days	Topic
1	Introduction to research protocol: introduction to research ethics
2	In-depth analysis of the data collection tools: questionnaire, KII and FGD guides
3	Exercising with the tablets and simulations KIIs and FGDs
4	Pilot using the tools in Matola: focus was on the content of the tools as opposed to process
5	Feedback and recapping on the protocol and logistics for field data collection.

Lessons learned

- It is important to always train more enumerators, in case of non-performance or sickness of one of the team members.
- Going through the data collection tool in a classroom set-up and then piloting the tools in a real set-up builds enumerators' confidence and is a good way to identify inconsistencies and ambiguities in the data collection tools.
- During the pilot, in addition to reviewing the content, it is equally important to review the process (though the protocol included the screening process as one of the important stages, the enumerators focused on the targets and some forgot the screening process completely)
- Simple and straightforward instructions especially with regard to the process are necessary to avoid any potential confusion while in the field.

2.8 Methodological limitations

Screening process errors: The focus of attaining the survey targets for M-Pesa users and M-Pesa non-users by the enumerators (10 M-Pesa users and 10 M-Pesa non-users per community) during the first round survey introduced errors during the screening process in that the enumerators' fully concentrated on attaining these targets and little attention was given to the screening process. This resulted in the availability of limited data, which could inform mobile money penetration rate in Mozambique. Consequently, the screening process had to be repeated (round 2 survey) in the four provinces.

¹⁵ Daan Velthausz & Rotafina Donco

Selection bias: The first stage process of selecting provinces and districts was heavily skewed towards areas (Provinces and Districts) where M-Pesa is operating the *Pedro* strategy (selection bias) and this was undertaken purposely because the focus of this study was to understand the effects of the *Pedro* communication and marketing strategy within the two years of partnership between FSDMoç and M-Pesa and, including provinces or districts that were not covered yet by the marketing strategy at this point would not add any value to the study. Due to this lop-sidedness, the results are not generalizable to the whole population. To minimize the selection bias effects of the first stage sampling (selection of provinces and districts), randomization was used to select the study communities and, the usage of ziz-zag walk pattern to recruit the households, was purposely implemented in order to enhance randomization. Due to the relative small number of surveyed participants per community, the starting point of the random walk had the likelihood of affecting the selection of hard to reach households.

Interviewer bias: Where the enumerator consciously or unknowingly leads the participants to respond “correctly” hence coercing the participant to answer in a certain way especially during interviews. To minimize this risk, enumerators engaged in numerous simulations and exercises before going to the field.

3

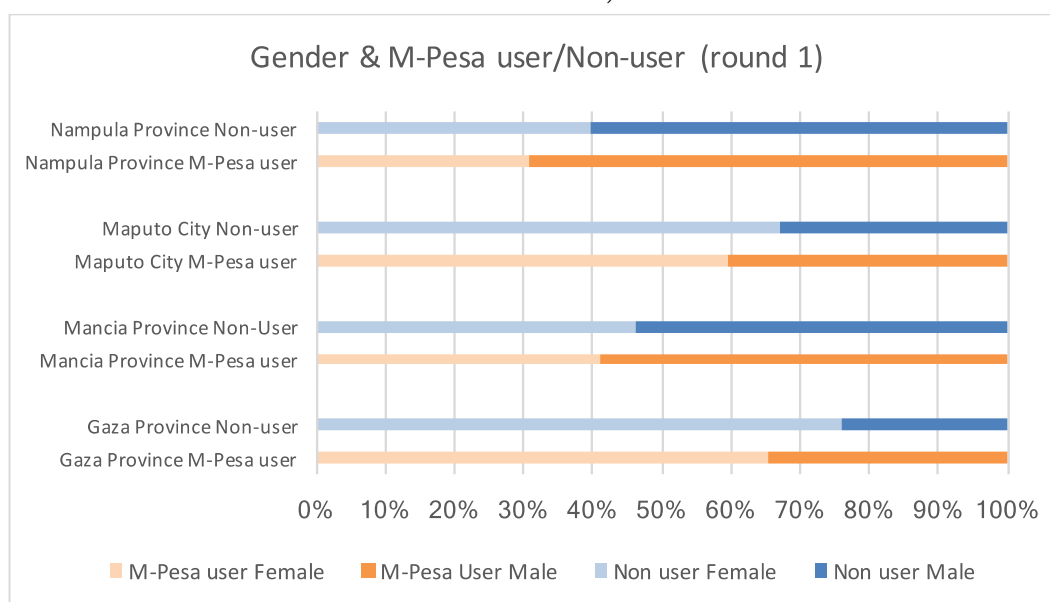
Findings

3. Findings

3.1 Socio-demographic information

A total of 1,179 respondents (51% women and 49% men) participated in the first round survey and 831 (55% women and 45% men) partook in the second round survey in the study provinces: Maputo city, Manica, Gaza and Nampula provinces, see Figure 10 for gender disaggregated data per community for M-Pesa user for round 1 (and Figure 54 in Annex B-2 for round 2). A total of 588 M-Pesa users participated in the survey against 591 non-users (non-users defined as a person that does not use M-Pesa account in this study) and, out of all the respondents who reported to have a mobile account, only 1.7% reported to have mobile account with other mobile money providers other than M-Pesa.

Figure 10: M-Pesa user & non-user representation per gender per province (M-Pesa users N=588, Non-users N=591)



The composition of the focus groups (M-Pesa users who did not participate in the survey) was not gender balanced (in the four provinces) because most groups were composed of more men relative to women (a ratio of 4:1). Two probable reasons might have been the cause of this skewed participation: a) Trust issues might have played a significant role because the recruitment used a zigzag method and solely depended on the enumerators' persuasive skills. To make a decision on whether to participate, the potential FGD recruits had to trust the enumerator despite not knowing him or her. Most of the societies in Mozambique are patriarchal in nature, and women especially in the rural areas are supposed to consult their male counterparts before making any decisions (even participation of an event)¹⁶. This might have constrained their participation in the FGDs.

There was an equal representation during round one survey (N=1,179) of both married (47%) and single (46%) respondents, 6% reported to be widows/widowers while 2% were divorced. Further, 90% (Round

¹⁶ Confirmed during a CATI mobile study in 2016 where women, had to call their husbands to request for permission to participate.

1, N=1,179) reported to own the houses they live in. Out of all respondents during round one, 68% reported having electricity in their houses and less than half (48%) reported having piped water in their houses. The average age for participants was 32.9 years for M-Pesa users and 36.3 years for non-users. On average, the surveyed M-Pesa users were younger than non-users. See Figure 11: and Figure 12 for M-Pesa user and non-user age distribution.

As can be noted, most of the M-Pesa users are young while the oldest interviewed was 89 years old. It was equally interesting to know that though majority of the M-Pesa users are young people, the elderly do also use mobile money services and should not be forgotten as potential mobile money clients.

Figure 11: Age distribution (per age category) per province (round 1, N=1,179)

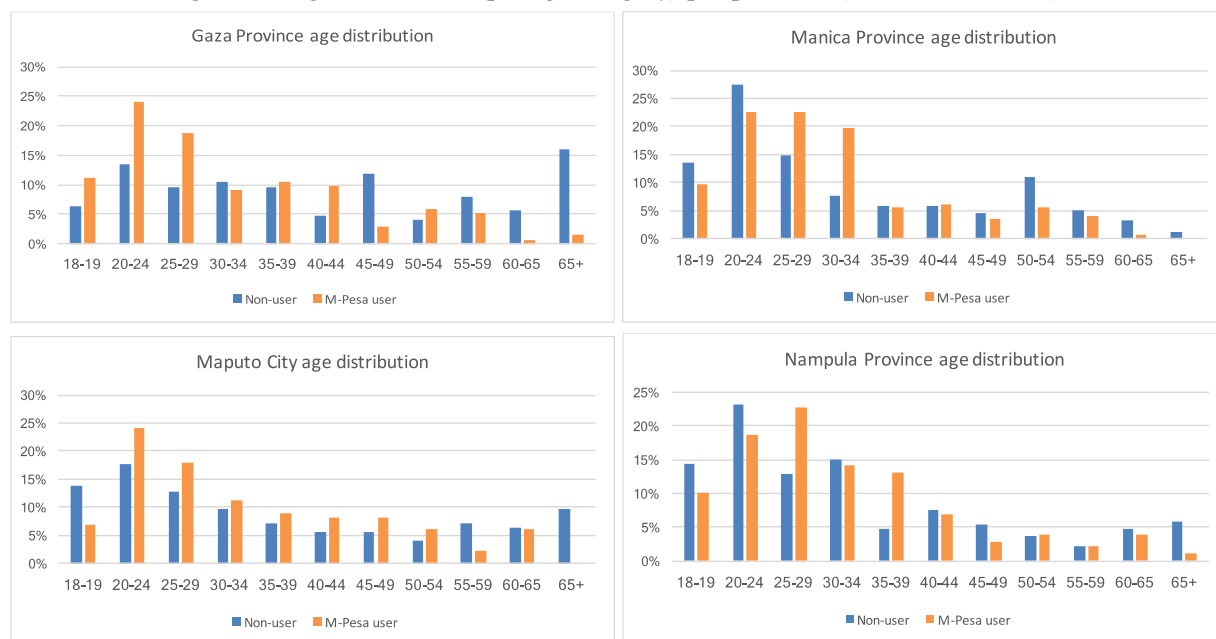
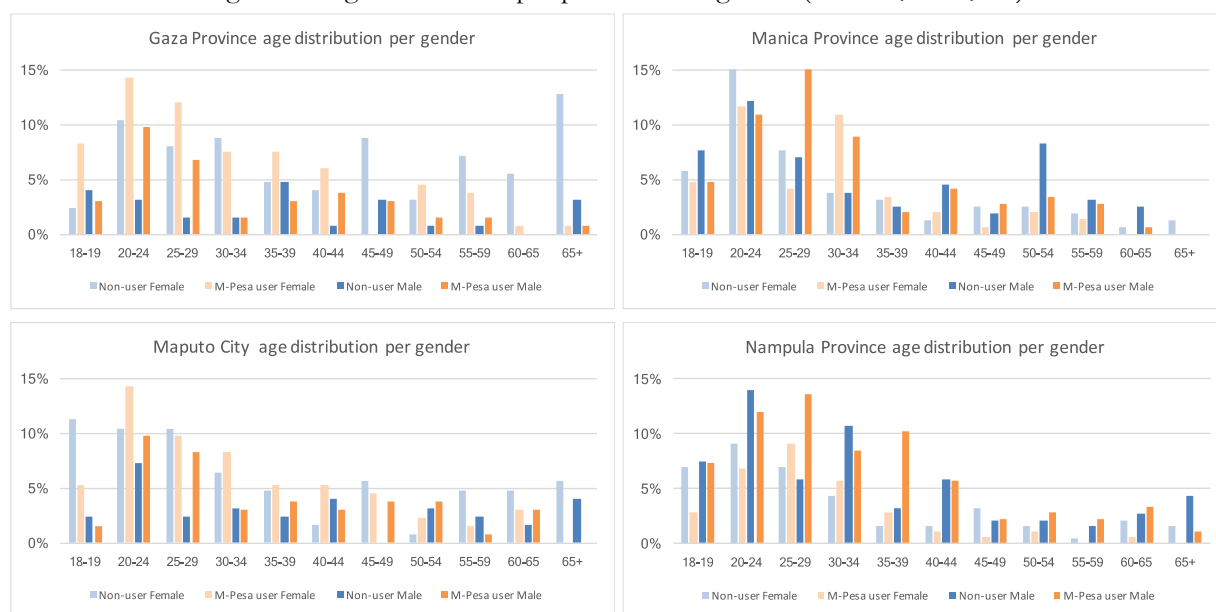


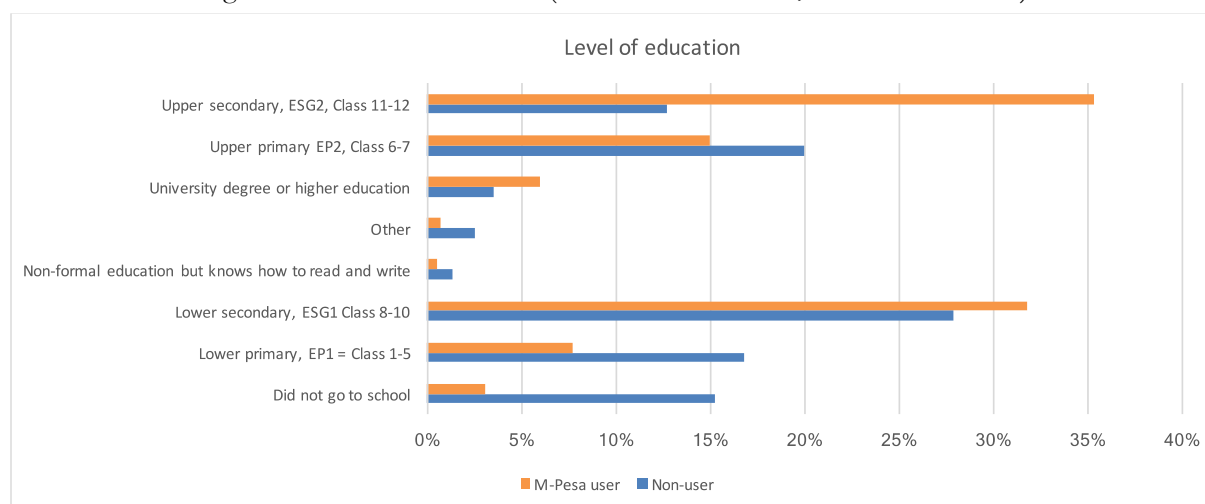
Figure 12: Age distribution per province and gender (round 1, N=1,179)



The following can be noted from the survey data with regard to M-Pesa users and non-users:

M-Pesa users on average have higher education than non-users (Figure 13, Table 12 in Annex B-1). This was also noted in the FGD participants' composition where almost all the participants spoke Portuguese and there was no need to use the local language during the discussions¹⁷. The majority of the M-Pesa users have a secondary (lower & upper) level of education (67.2% N=588), compared to non-users' secondary education level of 40.6% (N=591). It is worth noting that Maputo city had the highest proportion of university respondents (13%, N=1,179) while Gaza province had the highest proportion of respondents who did not go to school (22%, N=1,179).

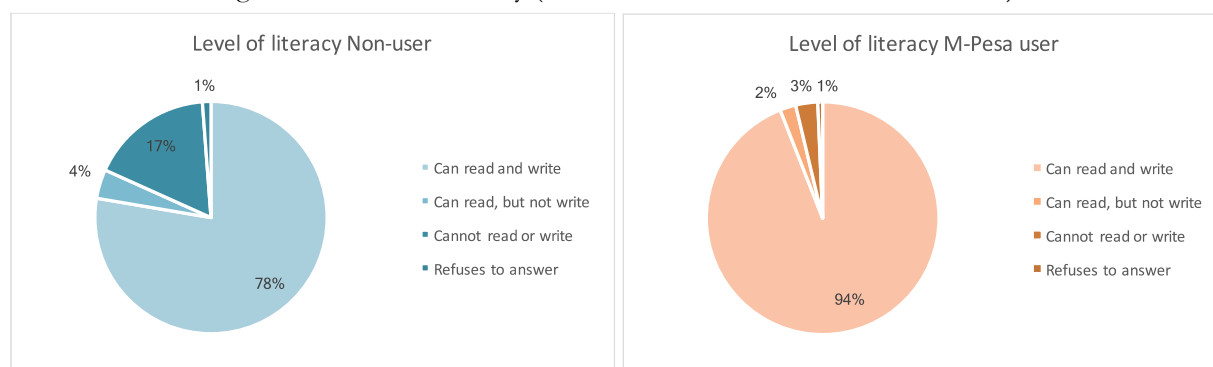
Figure 13: Level of Education (M-Pesa users N=588, Non-users N=591)



In addition, there is statistically significant association between the total number of new M-Pesa accounts (data obtained from M-Pesa 2018: number of accounts opened by promoter) during the two year period (of the FDSMoc promoter subsidised intervention), and the highest level of education achieved of the respondents [$X(88)=376.68, p=.000$], and the strength of the correlation is moderate (correlation coefficient $(r) = .526$), meaning that the higher the level of education a person has, the more likely he/she is to open an M-Pesa account.

M-Pesa users are on average more literate than non-users (Figure 14, Table 13 in Annex B-2).

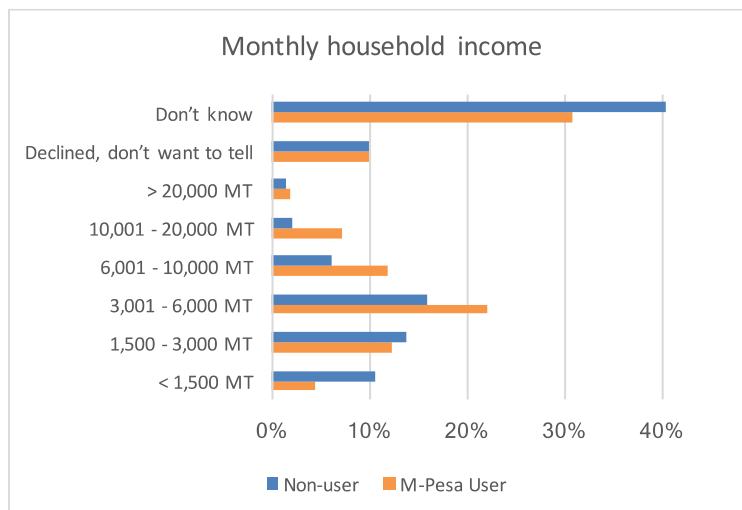
Figure 14: Level of Literacy (M-Pesa users N=588, Non-users N=591)



¹⁷ Demographic information was not collected from the FGD participants and this was deliberate because this was being implemented in the same communities via the survey.

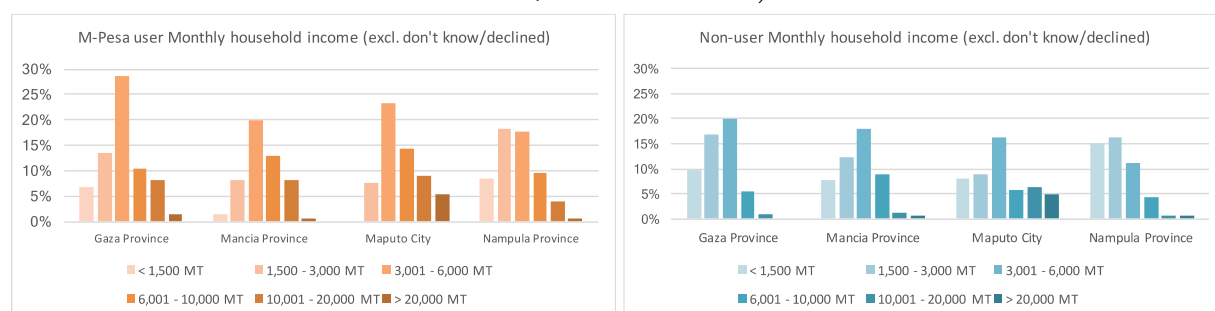
In addition, M-Pesa users on average have higher monthly household income than non-users (Figure 15, Table 14 in Annex B-1) for round 1 (Figure 55 and Table 20 in Annex B-2 for round 2).

Figure 15: Average monthly household income (Round 1: M-Pesa users N=588, Non-users N=591)



Interestingly, most of the respondents reported “don’t know” with regard to their average income (Figure 15). This might be because they legitimately did not know their average income or did not want to tell. However, for those who reported, the majority have an average income from 3,001 to 6,000 Meticaís (MT)¹⁸. While all the provinces have an average income ranging from 1,500 MT to > 20,000 MT, surprisingly, Maputo city province (M-Pesa users & non-users) does not differ so much in terms of income trends from the other provinces and, this is important to note because it confirms that even in the capital city, poverty (majority of the respondents are in the monthly income range of 1,500 - 3,000 MT, £20 - £40) is prevalent and due to this, there is a likelihood of financial exclusion as well (Figure 16 and Figure 17).

Figure 16: Average monthly household income disaggregated per province (Round 1: M-Pesa users N=588, Non-users N=591)

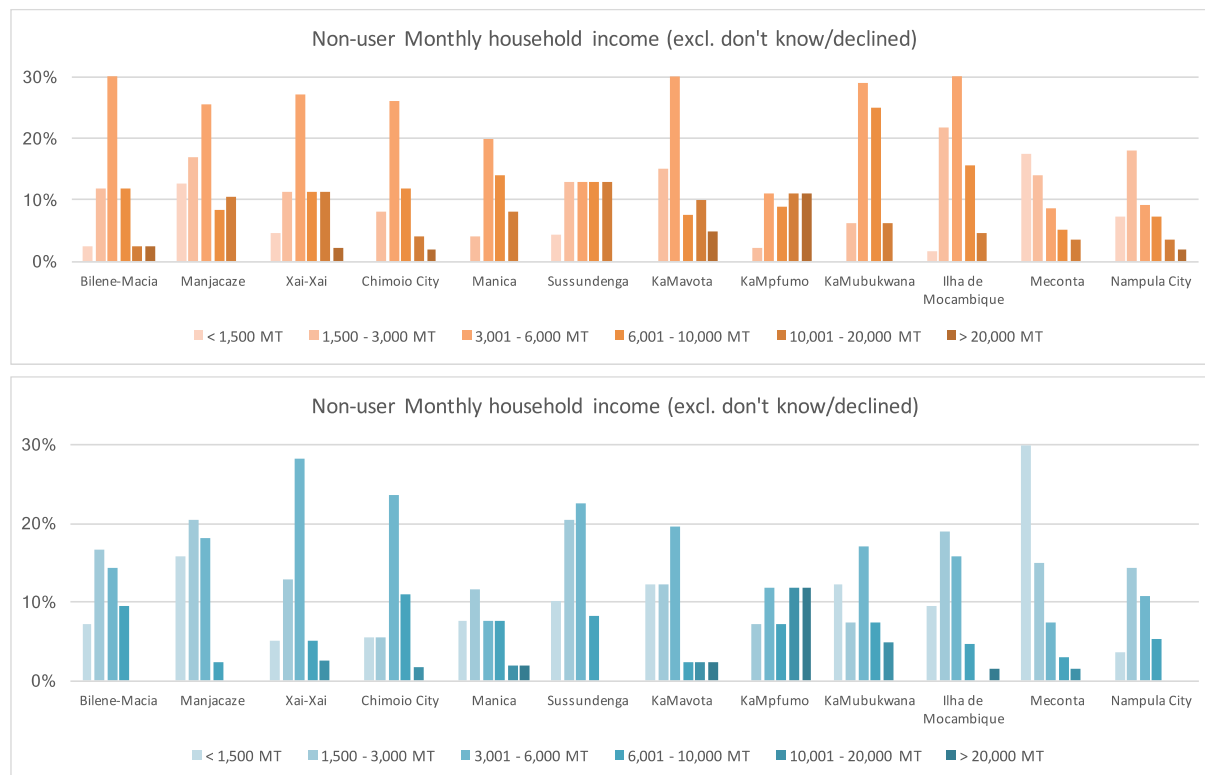


Note¹⁹: <1,500 MT = <£20; 1,500 - 3,000 MT = £20 - £40; 3,001 - 6,000 MT = £40 - £80; 6,001-10,000 MT = £80 - £135; 10,000 - 20,000MT = £135-£270; >20,000MT = > £270

¹⁸ As of August 2018, 1 US Dollar (USD - \$) = 58 MT; 1 Pound Sterling (GBP - £) = 74 MT.

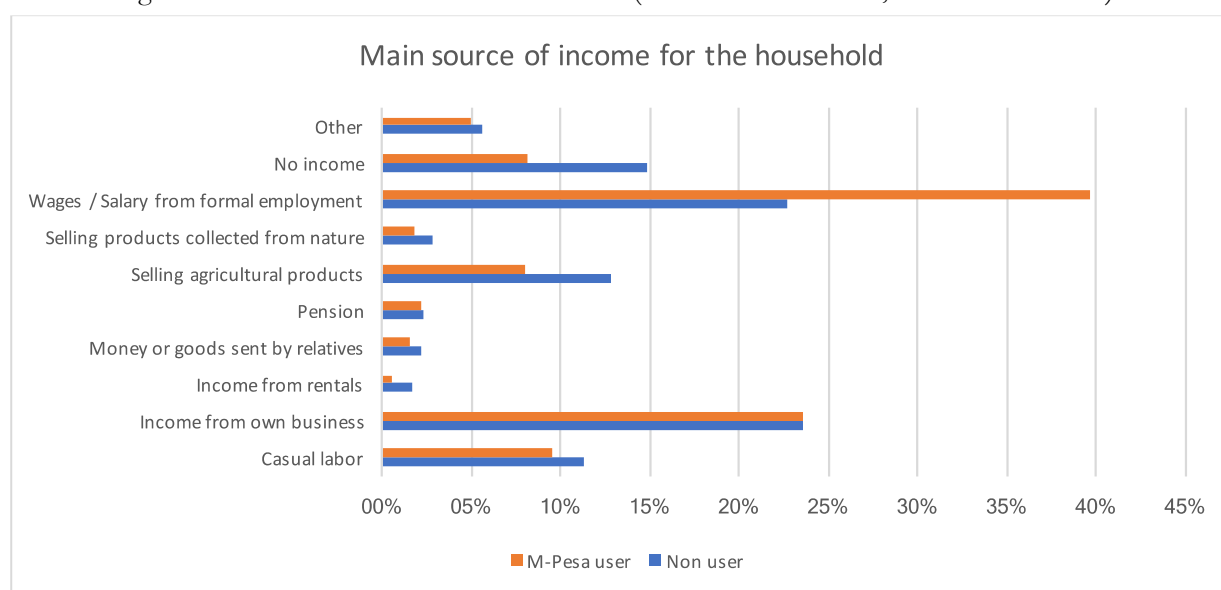
¹⁹ <1,500 MT = < \$26; 1,500 - 3,000 MT = \$26 - \$52; 3,001 - 6,000 MT = \$52 - 103; 6,001 - 10,000 MT = \$103-\$172; 10,000 - 20,000MT = \$172 - \$343; >20,000MT = > \$343. Exchange rates above via Google on 15th August 2018.

Figure 17: Average monthly household income disaggregated per district (Round 1: M-Pesa users N=588, Non-users N=591)



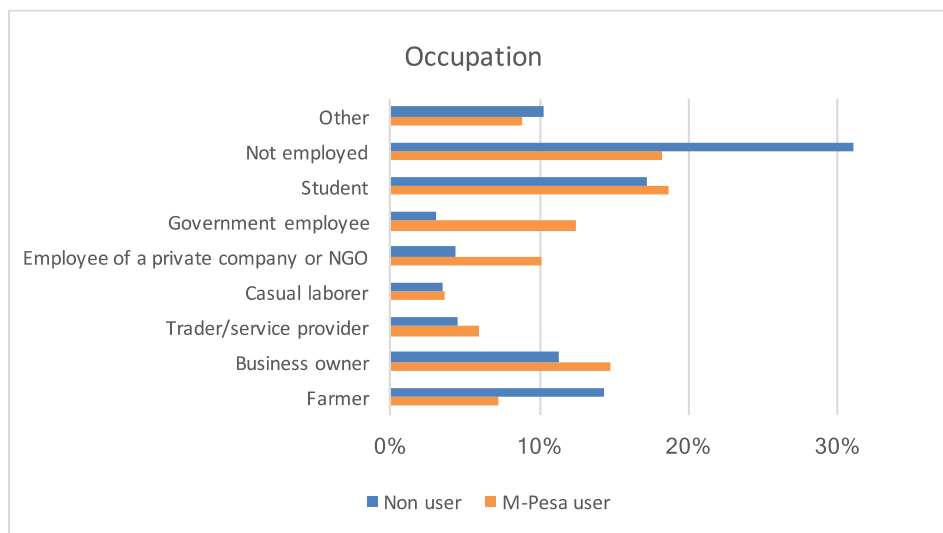
The main source of income is wages/salary, followed by income from own businesses for both M-Pesa users and non-users (Figure 18). Non-users also depend on selling of agricultural products more for their income as opposed to M-Pesa users. Most non-users also reported to have no income compared to M-Pesa users.

Figure 18: Main source of household income (M-Pesa users N=588, Non-users N=591)



Non-users are more likely to be unemployed (31.1%) than M-Pesa users (18.2%) and are less likely to be employed at government, non-governmental organisations (NGOs) or engaged in business. Non-users are more likely to be farmers (Figure 19). In the FGDs, most of the participants were business owners because of their frequent reference to their businesses during the discussions.

Figure 19: Occupation of participant (M-Pesa users N=588, Non-users N=591)



M-Pesa users have on average more assets, in particular, they are more likely to have a mobile phone (92% M-Pesa users versus 69.4% Non-users), see Figure 20, Table 20 in Annex B-1. 24% of the people (N=1,179) have smartphones. It was found that 64% of all the respondents have **one** SIM of which 75% is Vodacom; 17% Movitel and 8% Mcel. When taking multiple SIMs into account, people have the following SIMs: Vodacom (68.9%) Movitel (30,5%) and Mcel (18.5%). Some of the communities where data collection had poor or no Vodacom network coverage such as Corrane in Nampula and Nhaurombe in Sussundenga and Mavonde in Manica.

A large portion of the non-users (45.4%) has a Vodacom SIM, but do not have an M-Pesa account.

Figure 20: Assets in a household (M-Pesa users N=588, Non-users N=591)

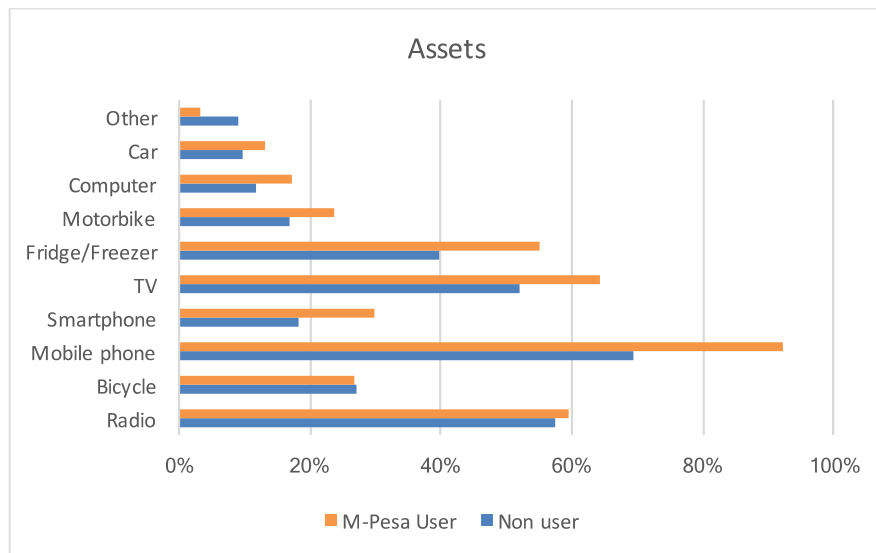
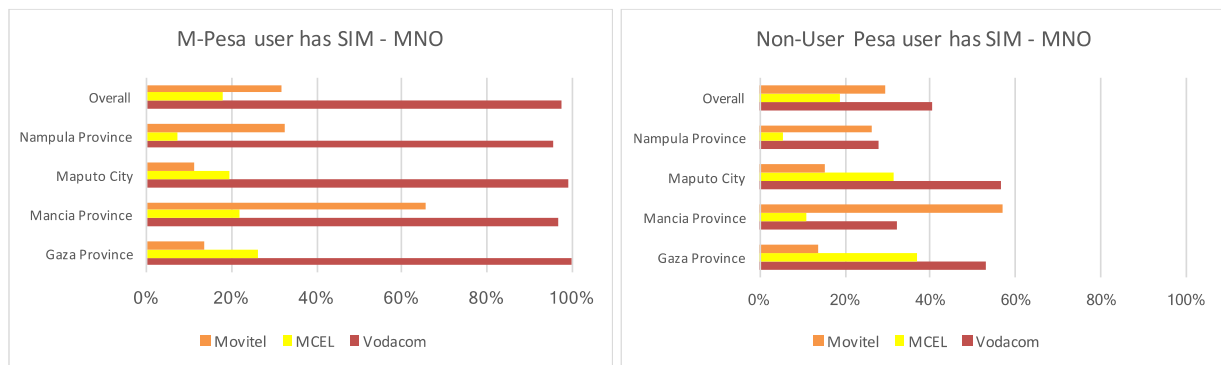


Figure 21: Respondents that have one or more SIMs (M-Pesa users N=588, Non-users N=591)



Conclusions on participants' socio-demographic information

As per the socio-demographic information presented above, the following demographic characteristics can be deduced:

- M-Pesa users are younger and better educated, and more likely to read and write Portuguese. The non-users have the highest proportion of those respondents that “did not go to school” of 15.2% relative to M-Pesa users of 3.1%. This finding is important because it clearly shows that people who are literate are more likely to use financial services such as mobile money. In the rural areas however, many people have low literacy levels and this might consequently lead them to shun financial services or products meant to facilitate their lives. The correlation between the level of education and total number of newly opened accounts validates this statement by corroborating that the higher the level of education, the higher the likelihood that people will be attracted to mobile money services and open their own accounts for financial transactions. Tailor-made strategies (not one size fits all strategy) for financial inclusion are therefore necessary to enhance financial inclusiveness especially in the rural areas.
- Many of the M-Pesa users are students or are employed especially in government institutions, Non-Governmental Organizations (NGOs) or self-employed (business-owners) and their main source of income is either from formal employment or from their businesses.
- Majority (92%) of the M-Pesa users own a mobile phone and 29.9% of these cell phones (of M-Pesa users) are smartphones. 69.4% of non-users on the other hand own a mobile phone. When

asked why they do not own a phone, 36% of the non-users that do not have a phone cited other reasons (lack of money) followed by 31% who reported that their cell phones were stolen or lost.

- Poverty is also prevalent in the urban areas including Maputo city province. The average monthly household income per person in Maputo city is higher (729 MT per person) compared to the Nampula (389 MT); Manica (559 MT); and Gaza (639 MT). The national average is 525 MT (9 US\$), which is very low compared to other countries in the world²⁰.
- Households with M-Pesa users have much more income than household of non-users. This suggests that those that have more money have more access to M-Pesa services and that targeted M-Pesa roll out interventions are needed to improve financial inclusion of the poorest and harder to reach.

²⁰ <https://www.worlddata.info/average-income.php>

3.2 Usage of financial services

M-Pesa users are more likely to have a bank account (42.3% M-Pesa users have a bank account, versus 17.9% of non-users). In addition, the M-Pesa users seem to use their bank accounts slightly more frequently (see Table 6). However, both M-Pesa users and non-users, that have a bank account, use their bank account for the same services, see Table 7. M-Pesa users in urban areas are more likely to have a bank account (45.2%) than in rural areas (32.2%).

Table 6: Frequency of using their bank (M-Pesa users with bank account N=243, non-users with bank account N=116).

Frequency of using bank	M-Pesa user	Non-user
Every day	2.5%	2.6%
Once a week	21.8%	12.9%
Once a month	62.1%	56.0%
Once every 3 months	3.7%	11.2%
1 year ago or longer	0%	0%
Never	2.1%	0%
Can't remember	7.8%	17.2%

Table 7: Usage of their bank (M-Pesa users with bank account N=243, non-users with bank account N=116).

Usage of the bank	M-Pesa user	Non-user
Pay bills	22.5%	21.7%
Save/Deposit money	45.4%	47.2%
Withdraw cash	78.3%	82.1%
Receive money from others	55.4%	55.7%
Send money to people	34.5%	37.7%
Buy airtime	24.1%	23.6%
Loan/credit	4.8%	1.9%

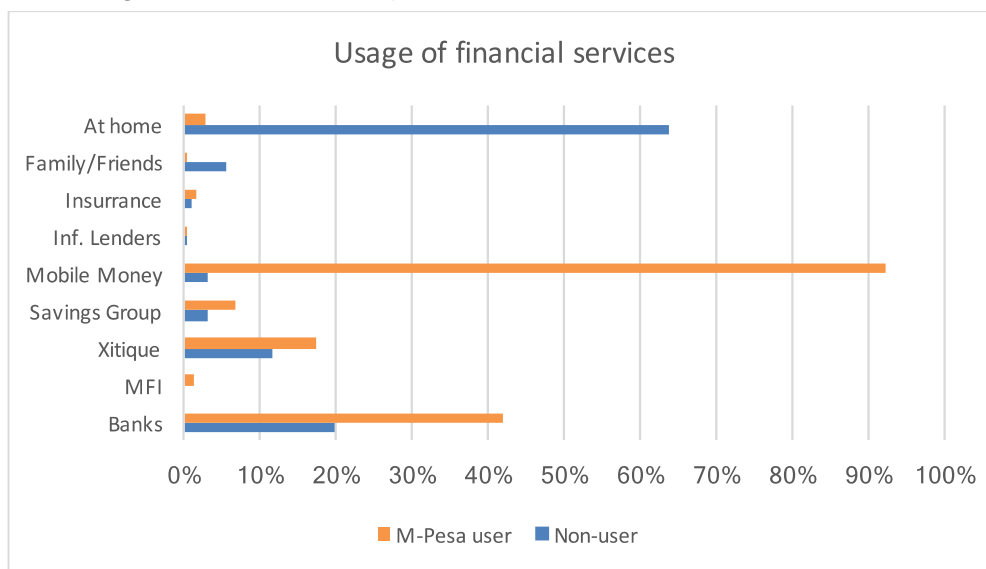
M-Pesa users are more likely to use formal financial products (see Figure 22 and Table 16 in Annex B-1):

- Bank (41.8 % M-Pesa user versus 19.8% Non-user)
- MFI (1.2 % M-Pesa user versus 0% Non-user)
- Xitique (17.3 % M-Pesa user versus 11.5% Non-user)
- Savings Group (6.8 % M-Pesa user versus 3% Non-user)
- Nampula province has the lowest rate of M-Pesa users who use the bank relative to others while Manica and Gaza province have the highest proportions of the respondents who use savings group (Figure 23).

While for non-users (see Figure 22 and Table 16 in Annex B-1):

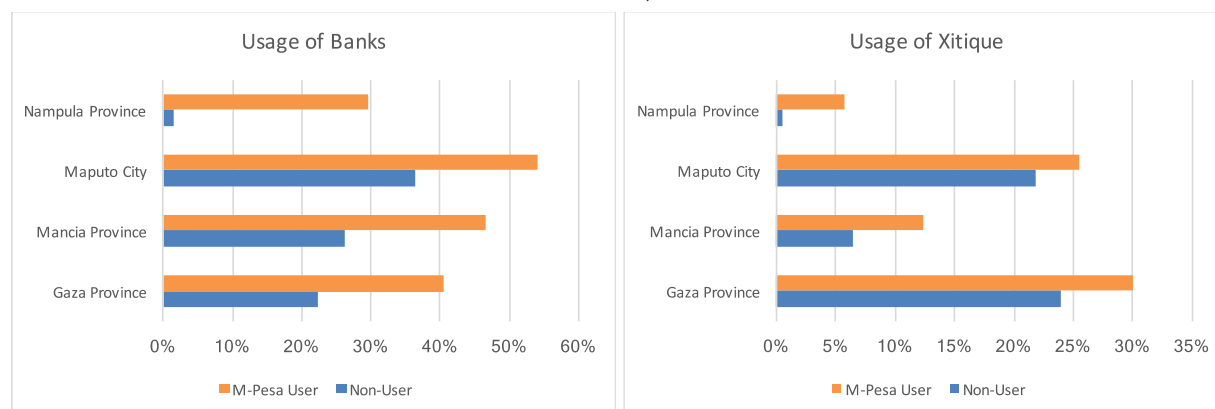
- Rely on family and/or friends to save or borrow money (5.4% Non-users versus 0.5% M-Pesa users)
- Do not use any financial services and keep their money in a safe place at home (63.8% Non-users versus 2.9% M-Pesa users)

Figure 22: Usage of financial services (Round 1 Q217, M-Pesa users N=588, Non-users N=591)



Most non-users in the four provinces have the highest proportion of keeping money at home, Nampula province however, has the highest number of respondents reporting that they keep money at home relative to the other three provinces (Figure 23).

Figure 23: Usage of financial services disaggregated per province (Q217, M-Pesa users N=588, Non-users N=591)



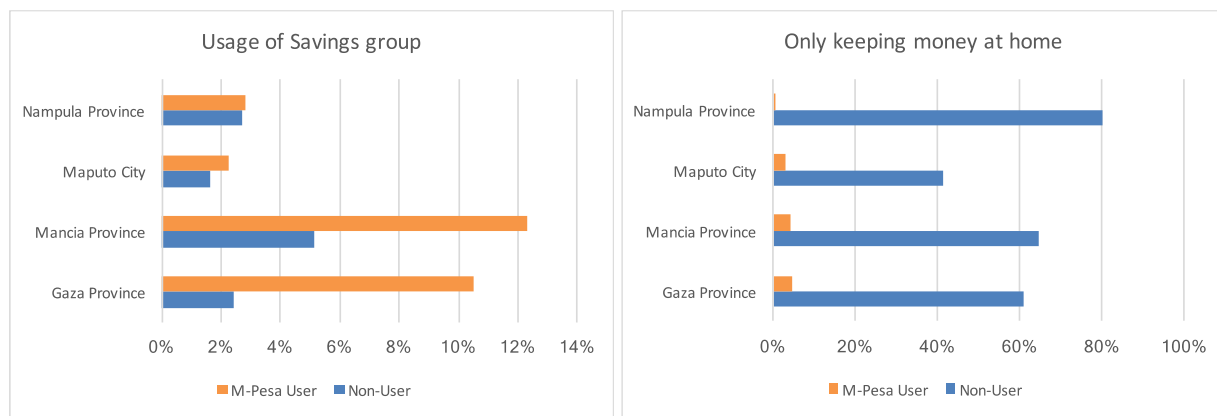
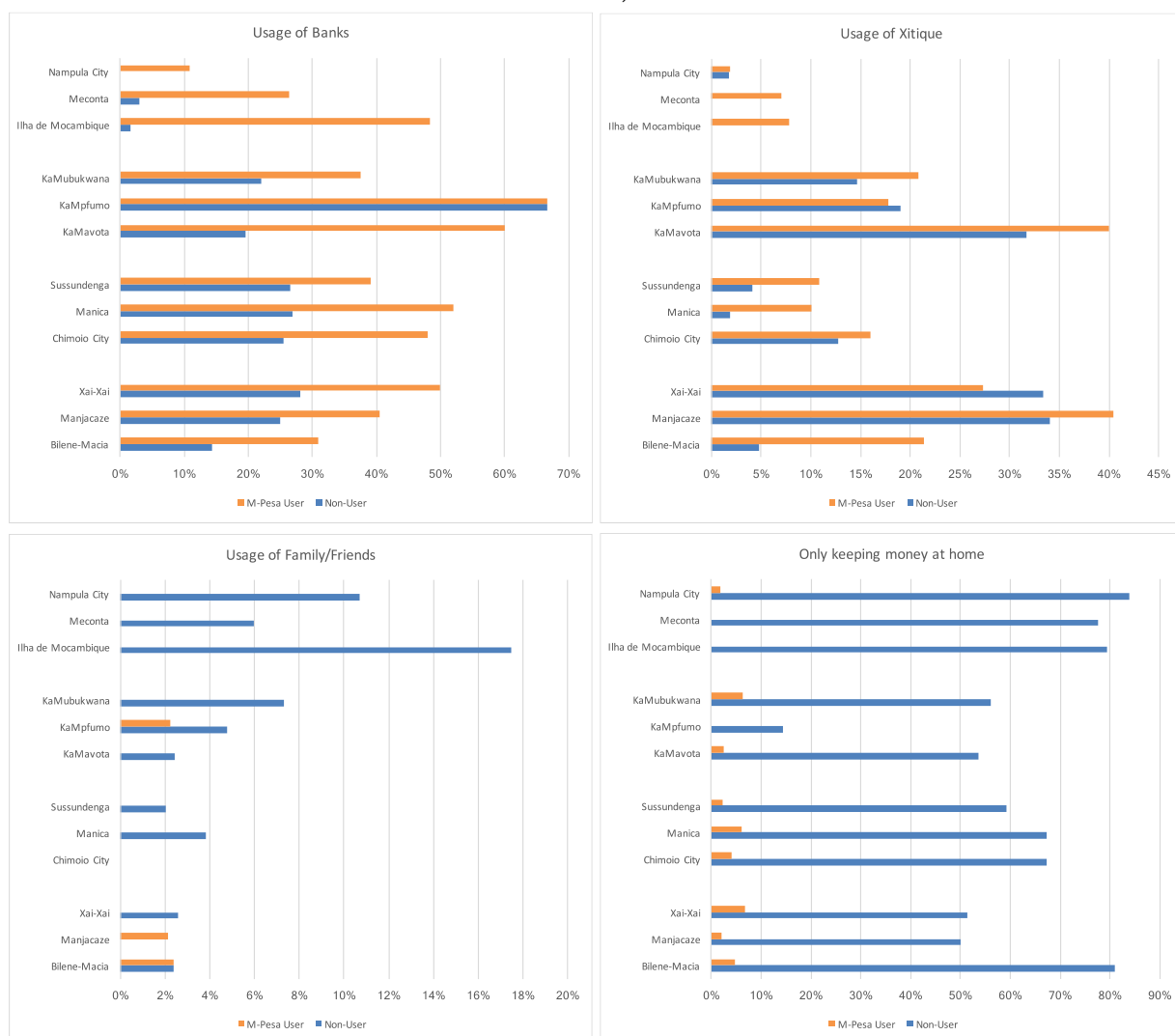


Figure 24: Usage of financial services disaggregated per district (Q217, M-Pesa users N=588, Non-users N=591)



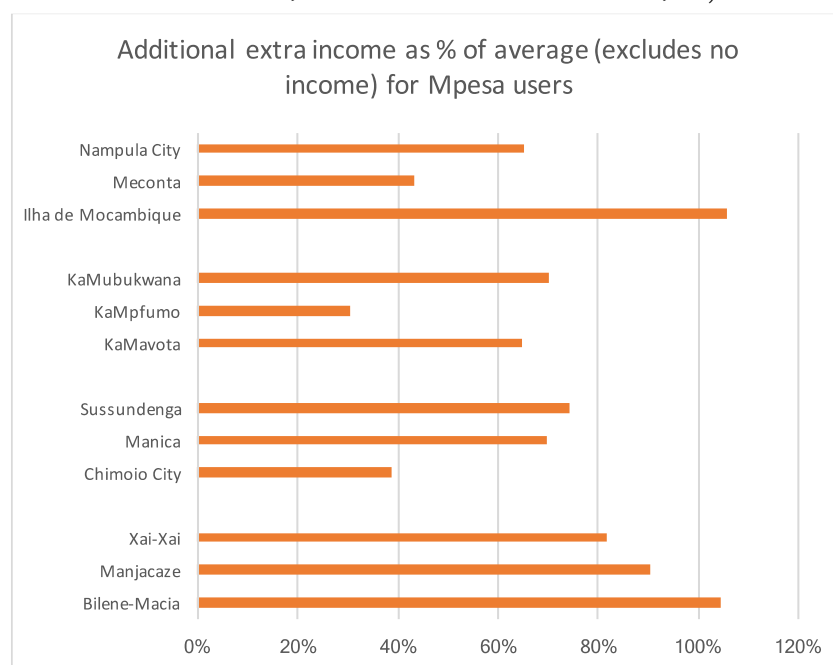
As can be expected, the highest percentage of people who use banks for financial services are in Maputo city province represented by 45.5%, while Nampula province is lagging behind with only 15.2% of the respondents hence this is a huge potential for mobile money services.

Though Maputo city province has the highest rate of using banking services, 54.5% reported to not using the banking services. The results confirm that even in the urban areas like Maputo city, there are people who do not use formal financial services like the bank or mobile money hence could be a potential market for the mobile money services as well.

As poorer households and non-MPESA-users are likely to live in larger households, the household income per person (HIP) can be used instead of the total household income. When looking at the percentage of additional income per person households with an M-Pesa user have much more money than household of non-users (around 70% as a proportion of reported average income, see Figure 25).

This suggests that those that have more money have more access to M-Pesa services and that targeted M-Pesa roll out interventions are needed to improve financial inclusion of the poorest and harder to reach.

Figure 25: Additional extra income as percentage of average household income per person (HIP) (M-Pesa users N=588, Non-users N= 591 out of N=1,179)



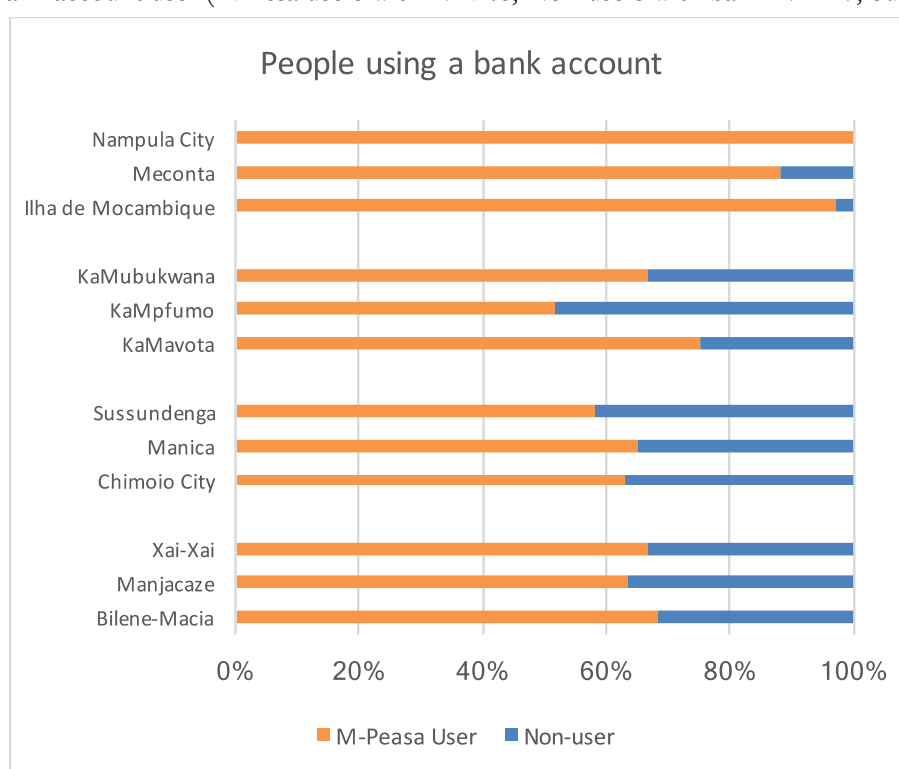
The correlation of household income per person (HIP) and usage of other financial services (Bank, Microfinance, Xitique, Money lenders & insurance) is positive and strong which means that the higher the average house income per person, the more likely the person will use these financial services. On the other hand, the correlation between HIP and savings groups and friends & family is negative, which means, the higher the average household income per person the less likely the person will use these services (Table 8).

Table 8: Correlations between average household income per person (HIP) & usage of financial services (M-Pesa users N=588, Non-users N=591)

Financial Service	Correlation of HIP with Financial Services
Bank Accounts	0.808
Microfinance	0.877
Xitique	0.891
Savings Groups	-0.164
Money Lenders	0.692
Insurance	0.960
Friends and Family	-0.764

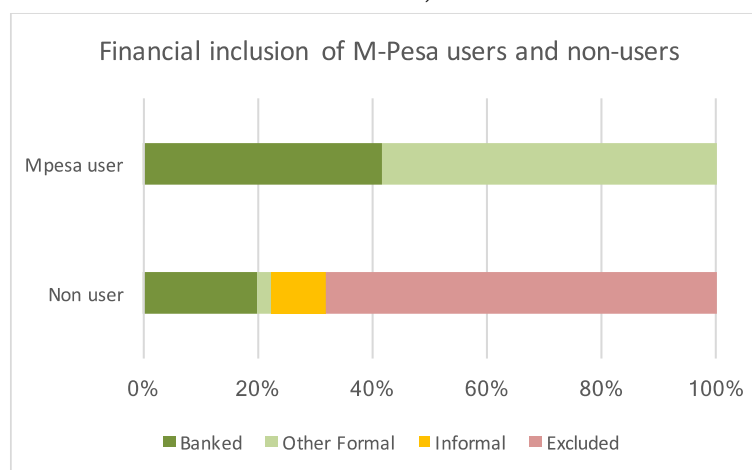
When looking at participants that use a bank account, 67.8% also use M-Pesa mobile money whereas 32.2% do not use a bank account (see Figure 26). Although the minority use bank accounts (41.8 % M-Pesa user versus 19.8% Non-user, see Figure 22) it does indicate that M-Pesa benefits those who are already financially included.

Figure 26: Bank account user (M-Pesa users with N=246, Non-users with bank N=117, out of N=1,179)



M-Pesa users are either banked or else (by definition due to their M-Pesa mobile money account) formally financially included. See also section 1.3 Figure 3 for financial inclusion and exclusion definitions. Of the non-users, 22.5% are financially included (banked or other formal service) and 9.5% are informally included. However, the majority are financially excluded (67.9%) (See Figure 27).

Figure 27: Financial inclusion based on access of financial services (M-Pesa users N=588, Non-users N=591)



Maputo City has the least number of financially excluded people while Nampula province has the most financially excluded (Figure 28).

Figure 28: Financial inclusion based on access of financial services disaggregated per Province (M-Pesa users N=588, Non-users N=591)

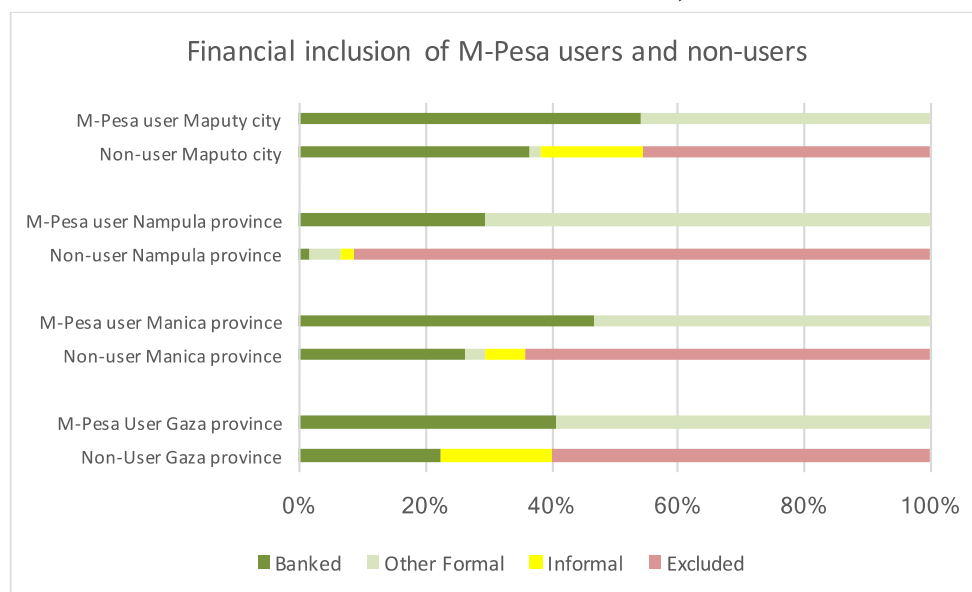
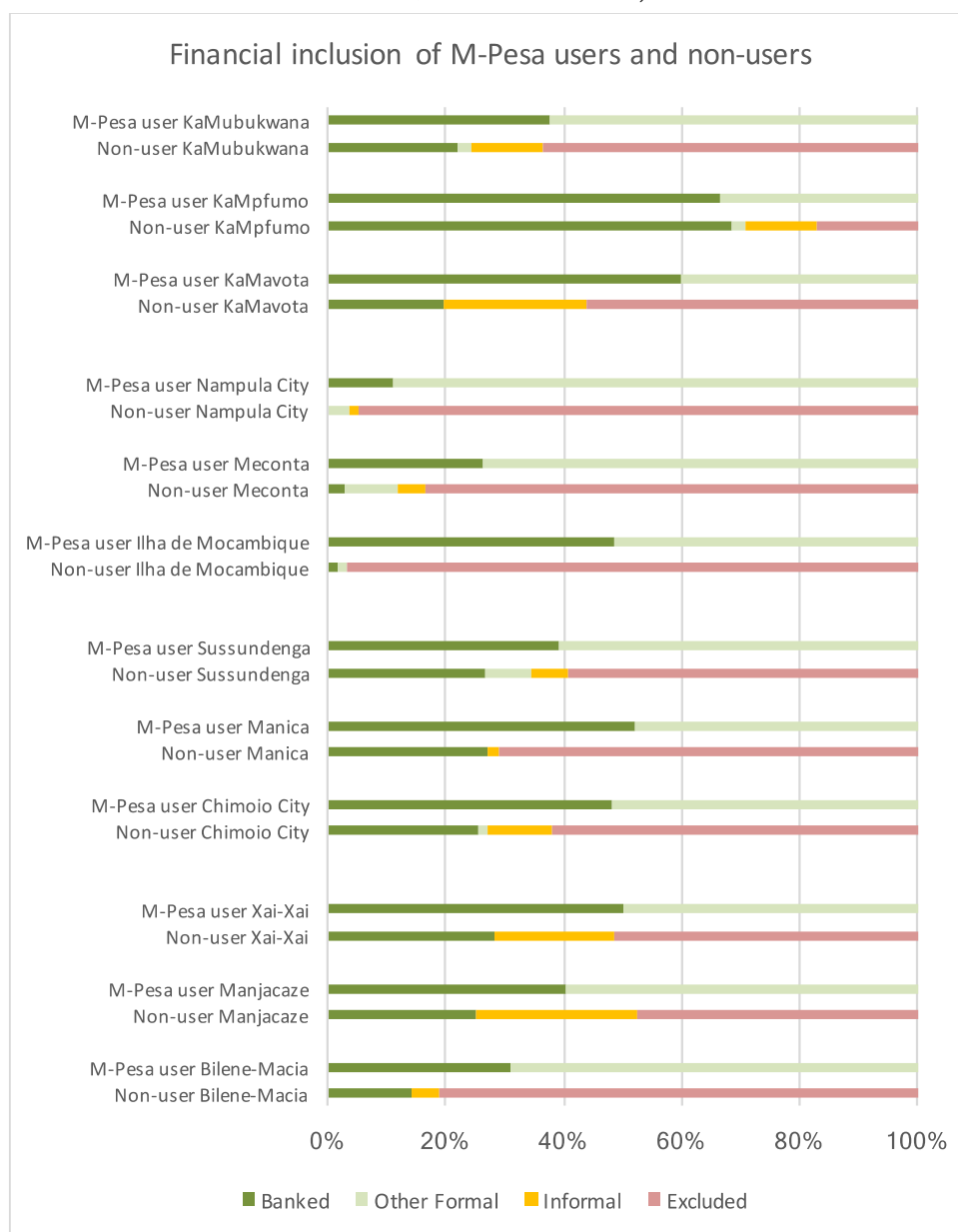


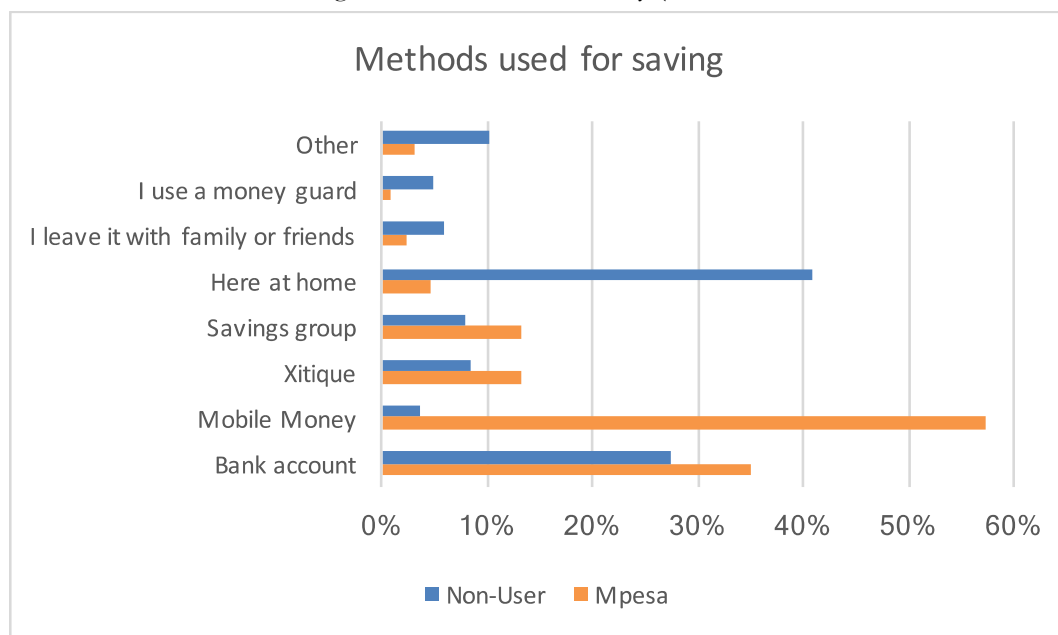
Figure 29: Financial inclusion based on access of financial services disaggregated per district (M-Pesa users N=588, Non-users N=591)



In addition, the following observations are worthwhile noting:

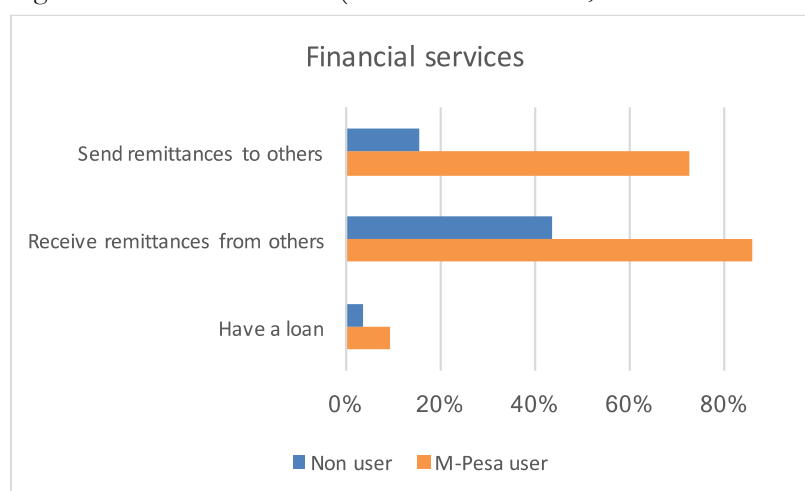
- M-Pesa users are more likely to save more money than non-users (43.4% M-Pesa users saved money in the last 30 days versus 32 % of non-users saved money in the last 30 days).
- M-Pesa users use Mobile money as a saving method (57.3%) followed by the bank (34.9%) whereas non-users save at home (40.7%), Figure 30 and Table 17 in Annex B-1.

Figure 30: Methods used for saving for those that save money (M-Pesa users N=225, Non-users N=189)



- M-Pesa users are more likely to have a loan (9.2% M-Pesa users versus 3.4% Non-users), see Figure 31 and Table 18 in Annex B-1.
- M-Pesa users are more likely to receive remittances from others (85.9% M-Pesa users versus 43.7% Non-users)
- M-Pesa users are more likely to send remittances to others (72.9% M-Pesa users versus 15.3% Non-users).

Figure 31: Financial services (M-Pesa users N=588, Non-users N=591)



The questions with regard to the usage of specific financial services as above presented were only administered in the survey. The FGDs on the other hand explored the experience that the M-Pesa users have with their accounts, savings as well as the services they would like supplemented by M-Pesa that are not part of the current menu of the services that are provided. Responses from the various FGDs participants with regard to savings conveyed mixed messages and this depended on where the participant

resided. Those in the urban areas highlighted that it very hard to save using M-Pesa and perceived M-Pesa as a means of encouraging spending, while in the rural areas, the scenario was different in that the users found M-Pesa a very useful means to save. This is likely so because of the ease in accessibility of the various financial services that urban dwellers have compared to their counterparts in the rural areas.

- *“It is very difficult to save using M-Pesa. The minute I have money in my account, I am forced to spend particularly on buying airtime”* - a M-Pesa user in Bagamoio – Maputo city
- *“I requested M-Pesa not to provide me with a PIN to discourage withdrawal, as soon as I had enough money, I requested for the PIN, withdrew and started my own business”* - M-Pesa user in Messica district, Manica province.
- *“I am always without balance because the initial capital has to come from us. I wish M-Pesa had a loan mechanism to its agents where reimbursement could be at the end of the month through discounting my monthly commissions”* - Agent from Ilha de Mocambique – Nampula province

With regard to additional services not currently provided by M-Pesa that would facilitate M-Pesa users, the overall feeling was that of satisfaction with the current services that are being provided. The following services however, were perceived by the majority of the FGD participants to be necessary additions:

- Savings account using M-Pesa that earns interest over time.
- The capability of transacting with different operators in addition to transacting to M-Pesa users.
- Possibilities of loans to agents from M-Pesa that could be reimbursed via deductions from earned commissions.

Conclusion on financial services usage

The following can be concluded based on the above-mentioned findings:

- That M-Pesa users are more likely to use other financial services compared to non-users. This is probably so because they are highly educated compared to non-users. In addition, they are more likely to be employed working for the government; NGOs or owning their businesses while non-users are likely to be unemployed and most of them practising agriculture for subsistence (Figure 19).
- Despite the higher percentage of bank usage among M-Pesa users compared to non-users; 41.8% vs. 19.8% respectively, more than half M-Pesa users (58.2%) do not use bank services. This situation is worse for non-users where more than three quarters (80.2%) do not use bank services. These findings indicate that there is room for improvement in Mozambique with regard to the facilitation of accessibility to financial services by the population, especially the 67.9% of the non-users that are financially excluded.
- The main means of saving for the future for M-Pesa users is through the mobile money (41.2%) and banks (35.7%) while for non-users they mostly save at home (31.7%). This underlines that there is a disconnect for non-users with regard to accessibility of financial services probably due to limited financial literacy, which leads them to shun financial services even if they are accessible because of various factors; low level of education which is exacerbated in rural areas, limited understanding of the benefits of using formal financial services, perceiving the paper work as being complex process, overall perception that formal financial services are elitist (KIIs with M-Pesa

personnel). This finding is validated by FSDMoç's 2014 study²¹ that reported that savings methods especially in the rural areas are limited to keeping money at home, informally or in savings groups.

- Supplementary services that would add value to the M-Pesa users include: Savings accounts that earn interest; interoperability between other mobile network providers to facilitate transactions among various mobile operators [according to CGAP (2018)²² interoperability in Tanzania is a reality and is being facilitated by the fact that 52% of the 166,000 mobile money agents serve multiple providers] and, mobile money users can transact amongst the different mobile providers; loan services especially to agents.

3.3 Objective 1: Understanding of the use of mobile money in Mozambique

Mobile money service use is growing in Mozambique although not yet to levels seen in Kenya and Tanzania. The FGD participants confirmed that the following mobile money providers are servicing the Mozambican market: M-Pesa (Vodacom network), MKesh (Mcel Network) and e-Mola (Movitel network) however M-Pesa is the dominant market player. Out of the respondents who reported to have a mobile account (N=602) during the round 1 survey, 97.7% reported that had an M-Pesa account. In round 2 survey, 94.5% (N=474) of all mobile money accounts are M-Pesa accounts. Intriguingly, even in some communities like Nhaurombe (Manica province) and in Corrane (Nampula province) where the Vodacom network coverage is weak or non-existent (and most residents use Movitel network), they reported to have both M-Pesa and e-Mola accounts. When the FGD participants were asked the reason they maintain both accounts they cited the following reasons:

- They have e-Mola mobile money account because Movitel network coverage is good at the community level.
- They have M-Pesa accounts because of the well-established agents network; e-Mola, which is still at its inception phase, has few agents.
- The respondents like the fact that M-Pesa has different type of services, meaning they do not have to move from one place to another to buy electricity bills or pay cable TV.
- The participants of these areas were keen to have access to inter mobile money services where an e-Mola client could be able to interact/transact with an M-Pesa client.

Mobile money penetration rate in Mozambique

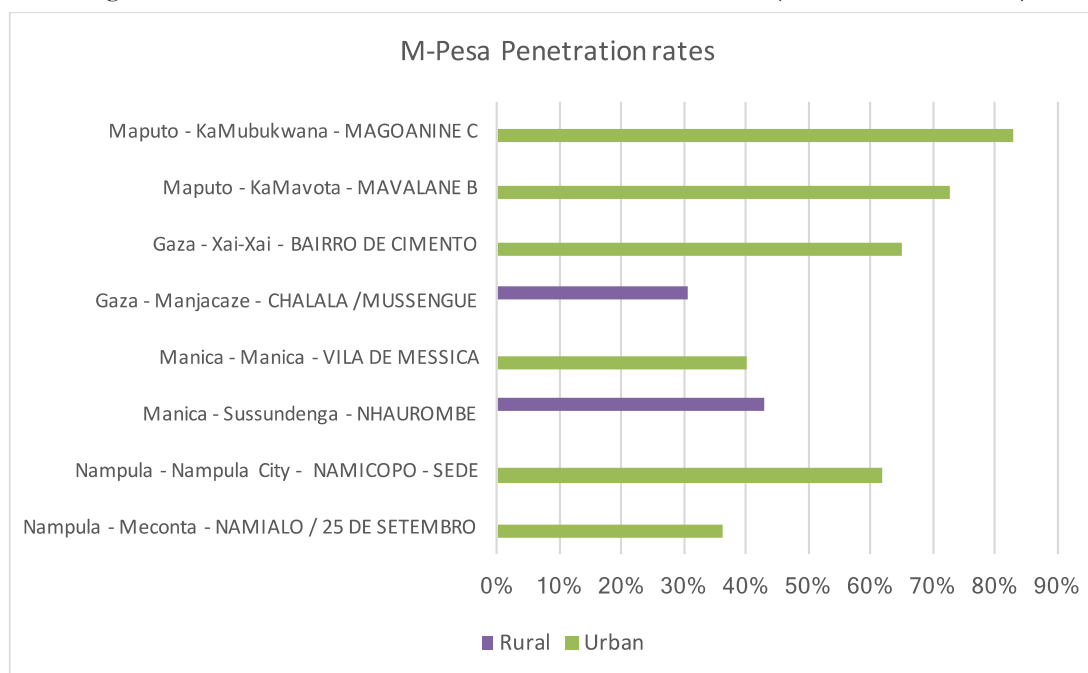
This section presents findings from the Round 2 of data collection, which focused on understanding the prevalence of mobile money use via a random sample in selected communities. There is a high penetration rate of more than 50% in all the urban areas (with the exception of Manica –Vila de Messica and Nampula Meconta- Namialo/25 de Setembro). This is arguably so because in Meconta Namialo, though M-Pesa users exist, there are neither agents nor promoters hence users have to travel to the Meconta city to undertake transactions - the Focus Group participants as well as the enumerators who undertook data collection in Nampula confirmed this. In Messica, Manica province where there are agents and promoters, the penetration rate is still low compared to the other urban areas with the same conditions. This might be so because of the mobility of promoters and the fact that in some of the areas, the promoters are just starting to mobilise their clients for sign up. The two rural areas that were included in the second round survey

²¹ <http://FSDMoç.com/wp-content/uploads/2017/07/Advancing-Financial-Inclusion-fos-Smallholders-in-Mozambique.pdf>

²² <http://www.cgap.org/data/infographic-tanzanias-mobile-money-revolution>

(Gaza Manjacaze-Chalala/Mussengue and Manica Sussundenga-Nhaurombe) are both below the 45% mark as far as the penetration rate is concerned (Figure 32).

Figure 32: M-Pesa Penetration rates obtained from Round 2 (M-Pesa users N=448)



In addition, although mKesh was introduced a while back and had (according to previously publicised figures) a reasonable number of clients (474,000 users with a PIN, 60,000 active users that do at least one transaction per month)²³; the current survey data (both round 1 and round 2) indicate that not many people are using mKesh mobile money: 0.7% in round 1 (N=1,179) and 3.1% in round 2 (N=831) have an mKesh mobile money account. People who reported to have an mKesh mobile money account are also likely to have an M-Pesa account (> 75%). M-Pesa users in the focus groups reported that they use/prefer M-Pesa as opposed to the others (mKesh and e-Mola) because M-Pesa has more users, more agents in the communities and has more services and a stable network.

M-Pesa headquarters' staff confirmed that M-Pesa has (in practice) a *"monopoly position"* in Mozambique with respect to the mobile money industry. mKesh on the other hand has lost significant market share because Mcel has been struggling in the recent years as a mobile network operator (MNO) to sustain its services. The FGD participants in the rural areas confirmed to using the network that has coverage and mostly it is Movitel. Mcel coverage is limited to urban areas while Vodacom covers some parts of the rural areas and almost all urban areas. According to round 1 survey results, 74% (N=1,179) of the respondents reported that the coverage was good (83% use Vodacom network either alone or in combination with the other networks (48% Vodacom network alone; 10% both Vodacom and Mcel; 7% a combination of Vodacom, Mcel & Movitel and 19% both Movitel and Vodacom). M-Pesa has also invested a lot in Marketing (TV and radio advertisements) as well as focus on marketing using a dedicated growth strategy (*Pedro*) via promoters. This has worked so far especially in the districts where promoters are operational because of the

²³ Pita,J., (2016): mKesh Mozambique Retrieved from <https://www.theigc.org/wp-content/uploads/2016/03/6.-Joel-Pita-mkesh-Mozambique.pdf>

existence of a significant strong positive correlation between the total new accounts opened and the total number of promoters working in a district [$.748, p=.000$]. This means that the presence of promoters in the districts that they are working in either urban or rural has boosted the signing up of new M-Pesa accounts. In addition, when a multiple regression was run to predict total number of accounts opened in 2018 from the total number of active promoters in a community; total number of active agents in a community and age, these variables statistically significantly predicted the total new number of opened M-Pesa accounts [$F(2.44,2)= 16.707, p<.005, R^2=.150$]. All the three variables added statistically significantly to the prediction $P<.05$. This means that the presence of promoters in a community in combination with other factors (age and a well-established agent network) can contribute to the increase in mobile money uptake.

Perceptions of M-Pesa services among M-Pesa users

Despite the promoter's model yielding positive impact, Vodacom's mobile network infrastructure does not cover some areas in the rural regions. FGD participants from Corrane (Meconta) reported that they also use e-Mola mobile money by Movitel because of the good network coverage. They have M-Pesa because of the agents network, ease of use and the wide range of services. They however, have to travel from Corrane to the Meconta city to transact using the M-Pesa mobile money account.

Despite M-Pesa's dominance, users (via FGDs), agents and promoters (via KIIs) were wary of the following:

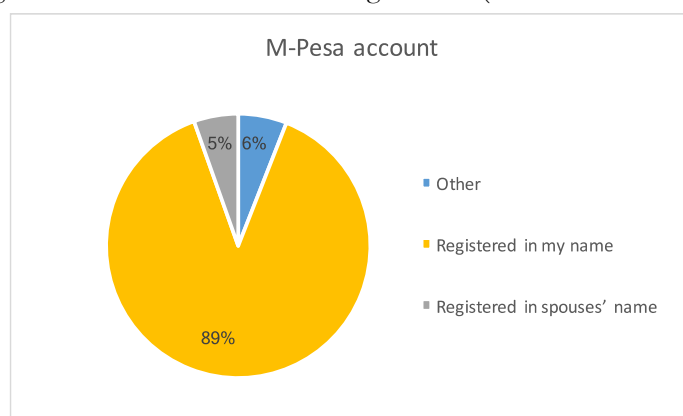
- **Fraud:** The existence of so many cases where unknown persons steal users' accounts (hacking, identity theft).
- **Customer care service:** All (users, promoters, agents) expressed disappointment with the M-Pesa's customer care service/line by highlighting that in most cases, problems are never solved or receive minimal attention and urgency they deserve. An example that was often cited was when users erroneously transfer money to the wrong numbers.
- **System failure:** This was a problematic issue in Manica province that kept popping up particularly with the agents. The agents and users were concerned because, not uncommonly, especially in the middle of a transaction, the system freezes/stops or takes too long to complete a transaction. When this happens, the probability of fraudulent acts happening within the time that the system is unstable is high.
- **High tariff rates:** There have been a lot of complaints with regard to the current tariffs that most users perceive to be high and implemented drastically by M-Pesa. See Annex C-1 for the M-Pesa tariffs. Most of the FGD participants are of the opinion that the price increase was not properly communicated and, some were quick to add that M-Pesa is taking advantage of the population because of its monopolistic nature. The agents considered withdrawal as one of the favourite transaction as it brings more money to their business as opposed to deposits. Interestingly, the opposite was true for the users who viewed the increase as very steep especially on the withdrawals.

- *“M-Pesa needs to address the fraud problem otherwise we shall loose a lot of our clients, which is not good for us”* - An agent in Chimoio city, Manica.
- *“The tariffs are very steep and were increase haphazardly by M-Pesa without proper communication and this discourages some of us from using the M-Pesa services”* - An M-Pesa user in Maputo.

Further insights on M-Pesa Promoters and agents users

Most of the respondents' M-Pesa accounts (89%; N=588) are registered under their own names Figure 33. In this regard, the owners have the freedom to use their accounts for various transactions according to their wishes without any restriction. 5% of the M-Pesa accounts are registered under their spouses' names and 6% registered in other people's names (those mentioned in “other” include father, mother, sister, son, daughter, niece, nephew).

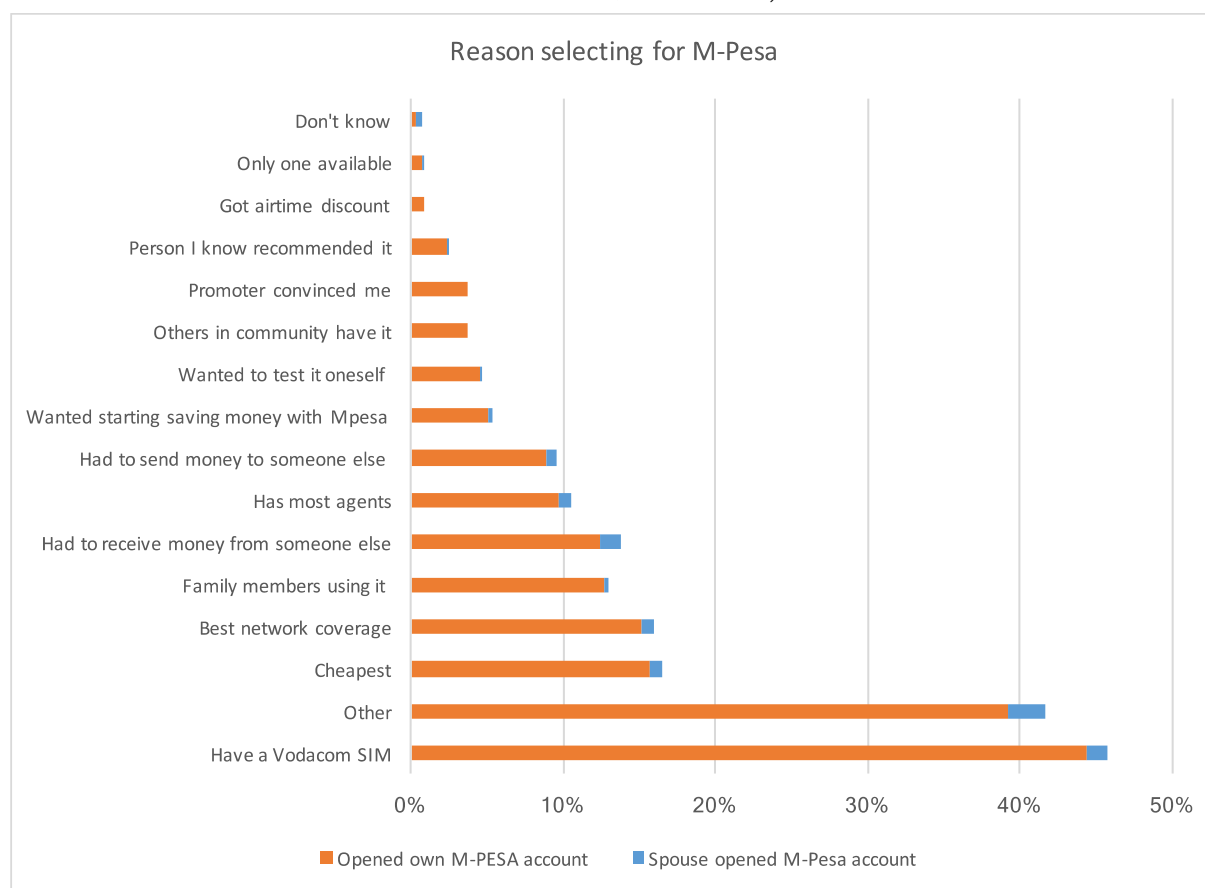
Figure 33: Used M-Pesa account registration (M-Pesa users N=588)



The main reason that most of the respondents (47%; N=553) use M-Pesa instead of using another mobile money service is because they have a Vodacom SIM followed by “other” reasons (42%; N=553) (Figure 34). The following main themes emerged from the qualitative “other” responses:

- M-Pesa is very simple and easy to use.
- M-Pesa is faster to undertake transactions.
- M-Pesa is secure.
- Not having a bank account

Figure 34: Reason for selecting M-Pesa for mobile money (Opened own account N=521, Spouse opened account N=32, total N=553)



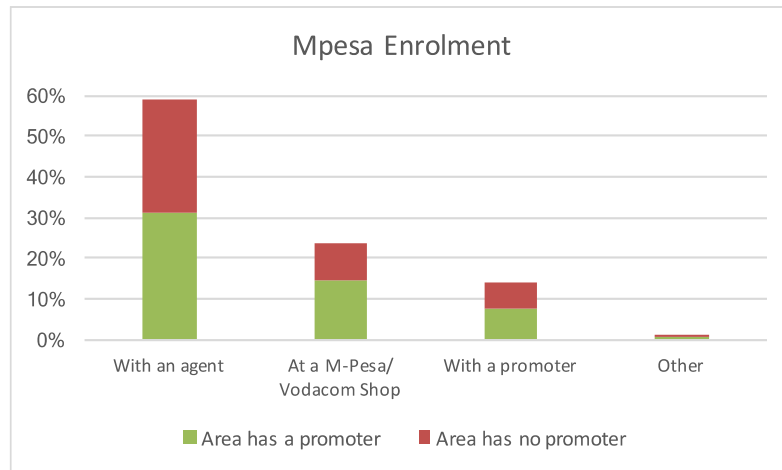
Most of the respondents (45.3%; N=521) reported to have registered their own accounts more than two years ago, while 34.5% (N=521) registered their own accounts between 1-2 years ago.

Table 9: How long ago M-Pesa registered the account-(M-Pesa users registered own account N=521, Spouse registered M-Pesa account N=32)

How long ago was the account registered	Registered own account	Spouse registered account
0 - 3 Months	4.6%	9.4%
4 - 6 Months	6.0%	15.6%
7 - 12 Months	7.5%	18.8%
1 - 2 Years	34.5%	31.3%
> 2 years	45.3%	12.5%
Can't remember	2.1%	12.5%

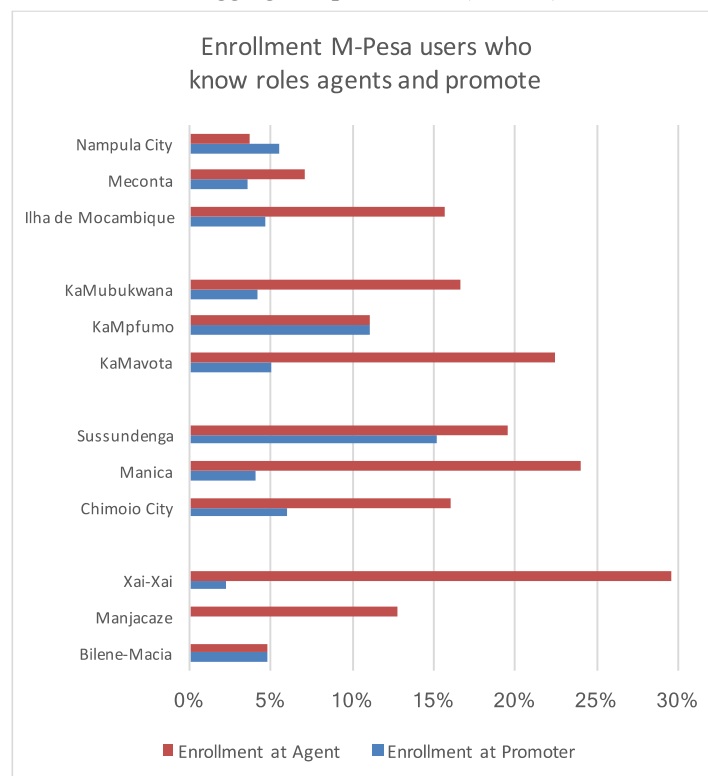
More than half of the M-Pesa users (59%) were enrolled with an agent, followed by 25% at Vodacom/M-Pesa shop. There is not much difference on where the registration of the M-Pesa account took place in areas with and without the promoters. In both cases (with and without promoters), agents undertook most of the M-Pesa account registrations. This was followed by an M-Pesa shop and then by a promoter (see Figure 35).

Figure 35: Enrolment of M-Pesa (registered own account or spouse register the account, N=553)



However, people might not know the difference between agent and promoters. From the question asked after where they enrolled for M-Pesa (Q304) asked if they understand the role of an agent (Q325) and the role of a promoter (Q331). When they indicated they did not know the roles, enumerator read to them the role after asking Q325, and Q321 respectively. The M-Pesa users that indicated they did know both the roles of an agent and promoter (120 out of the N=588) enrolment with an agent was still 2.75 x higher than enrolment with a promoter.

Figure 36: Enrolment of own M-Pesa account by person who knows the roles of agents and promoters. disaggregated per district (N=120)



The promoters' concept in Mozambique was only introduced two years ago (as part of FSDMoç and M-Pesa's partnership) while the majority of the accounts were registered one or more years ago. In addition, not all areas have the same amount of promoters; further, promoters are always mobile in search of clients. In Maputo city for example, promoters reported during the KIIs that they are trying to undertake their work deeper into the suburbs because it is difficult to enrol new clients in the city due to saturation hence are constantly on the move. On the other hand, in Manica and Nampula provinces, according to the promoters they are in the cities and have to travel to areas outside the cities even to other districts to undertake their promotion work. Consequently, implying that areas that do not currently have a promoter, could have had a promoter in the past months and people could have registered a while back with the promoter who moved to a new area in search of new clients.

"Our work requires us to move from one place to another mobilizing and registering users because we have a daily target of 9 clients and 216 registered M-pesa user per Month" - A promoter in Xaixai Gaza province.

Promoters perceive their work as challenging and highly competitive because in addition to competing amongst themselves, they also compete with the agents and the Voda/M-Pesa shops that also register new clients. Some of the agents especially in the cities were informed and aware of the promoters' role while some were not. 60.0% of the M-Pesa users (Round 1, N=588) know what the role of an agent is, while only 36.1% of the M-Pesa users (Round 1, N=588) know what the role of a promoter is. 56.5% of the M-Pesa users (Round 1, N=588) have not seen any promoter in their community.

M-Pesa Promoters

Role:

- To enrol new clients, opening new accounts for them
- To inform clients of the M-Pesa services and how to use the existing M-Pesa services.
- To refer clients with problems to M-Pesa customer care line.

The promoter gets a basic salary per month for which he/she needs to achieve at least a target of 216 new clients. A bonus is paid on a monthly basis if more clients are achieved above the target.

Possible fraudulent action of promoters: "Fraud-19":

This is a common fraud that promoters have turned to in order to achieve their targets as reported by M-Pesa personnel that participated in the study. When the client does not have enough cash and is willing to open an account and does not want to deposit the initial amount of 20 MT (or does not have the 20 MT), which is prerequisite for opening an M-Pesa account, the promoter prepays the 20 MT, creates the new account for the client, withdraws together with the client at an agent the 20 MT, of which 19 MT is actually paid in cash, and 1 MT retained as the transaction fee. With the increase in tariffs however, this practice is becoming less favourable because the minimum withdrawal fee is currently 10 MT hence if the promoter deposits this amount, then 50% of his/her money will be retained as transaction tariff.

Mitigation against "Fraud 19": M-Pesa only considers the new client as "actual new client" if that client has conducted at least some (other) transactions in the first 30 days. Although this works pretty well against "fraud-19" it does create confusion with the promoters especially when discussing the achieved monthly targets as not all new clients are actually accounted toward the monthly targets due to this fraud.

"It is becoming very costly for us to help our clients. The transaction tariff is 10 MT and we are losing out if we deposit 20 MT on behalf of the client" - A promoter in Xaixai Gaza province.

M-Pesa Agents

Role:

- To facilitate transactions (withdrawal of cash, deposit of cash);
- To manage his/her cash liquidity;
- Agents (is only allowed to) get commissions on transactions (deposit cash and withdrawal of cash, commission depends on the transaction amounts, the higher the more commission with a minimum of 2 MT), which are automatically transferred to the Agent's M-Pesa account on a monthly basis.

Possible fraudulent action of Agents:

In addition to their commission, they demand, especially if there are no banks around, or other agents, extra cash payments from the users for the services rendered: withdrawal of cash, deposit, transfer, bill payment.

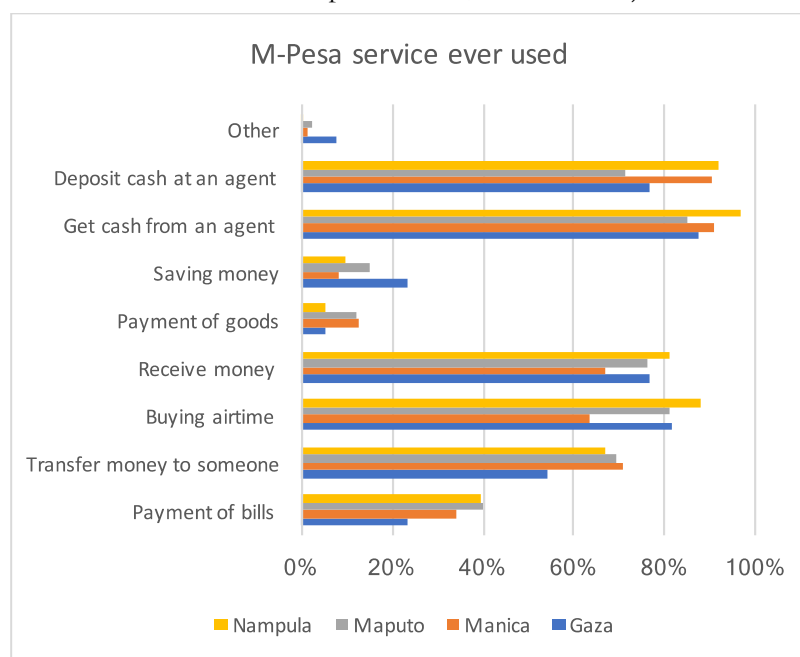
If the agent is also a merchant and sells goods, instead of allowing the M-Pesa users to pay directly for the goods, the agent demands that the client conducts a cash-out transaction, for which he/she gets a commission, and then demands that the client pays him the cash for the goods as confirmed by the FGD participants.

Most of the M-Pesa users (90.5%) reported that they use their accounts (N=580) to withdraw money from the agents followed by depositing (83.4%), buying airtime (78.8%) and receiving money (75.8%), see Figure 37.

Conditions for maintaining the M-Pesa account:

It is worthwhile mentioning that "buying airtime" is one of the services that is provided by M-Pesa. Though buying airtime is not a financial service, most of the users often buy airtime as it is more attractive to buy airtime due to the incentives provided if one buys via M-Pesa (for example, double the amount of airtime when bought via M-Pesa compared to other ways of buying airtime). M-Pesa users also buy airtime in order to remain "active Vodacom" users. If an M-Pesa client does not use the Vodacom account/SIM at least once per 3 months to make a Vodacom "transaction" (sending SMS, make a mobile phone call), Vodacom deactivates the number, including the M-Pesa account. To ensure that this does not happen, most M-Pesa clients buy airtime, which does not require a lot of money to guarantee that their Vodacom numbers and M-Pesa accounts remain active.

Figure 37: M-Pesa services ever used, disaggregated per province (Gaza N= 129, Manica N=144, Maputo N=133 Nampula N=174, Total N=580)

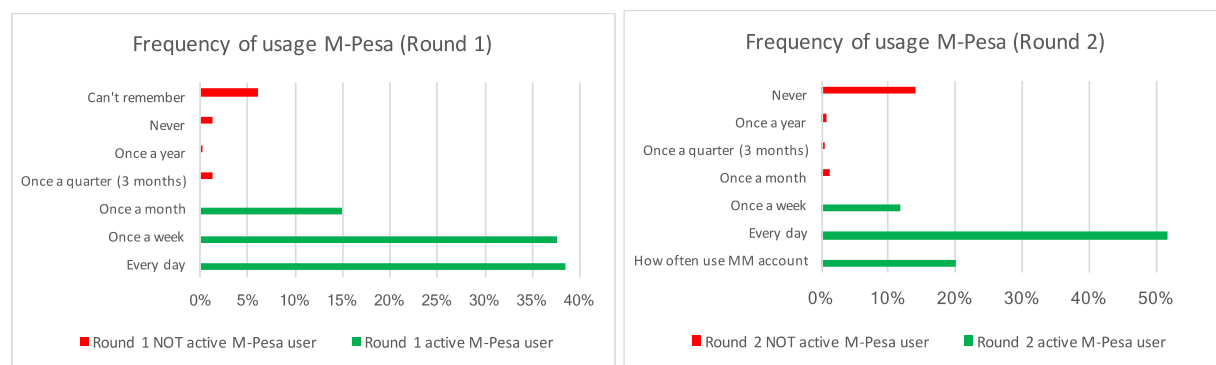


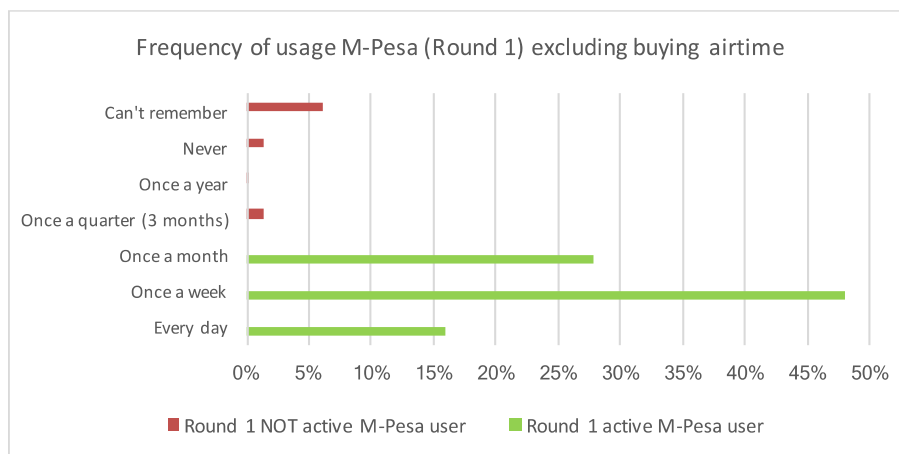
Less than half (34.7%) of the people who use M-Pesa to pay bills reported that they buy electricity vouchers (96.5%), water (14.5%); TV (16.4%) and municipality tax (1.5%).

Despite mentioning in the FGDs that women are more likely to use mobile money to save compared to men, intriguingly, the data does not corroborate this because there is no significant difference in terms of gender between the M-Pesa users who reported to save for future expenses: Female (43%, N=280) and Male (44%, N=308). Most respondents save mainly for medical expenses (36%, N=444); 22% for future expenses when there is no money.

Most M-Pesa users are active, defined by M-Pesa as one transaction or more per month. At least one fifth of all M-Pesa users (data from Round 2) use it daily, while at least one third use it weekly (data from Round 1), see Figure 38.

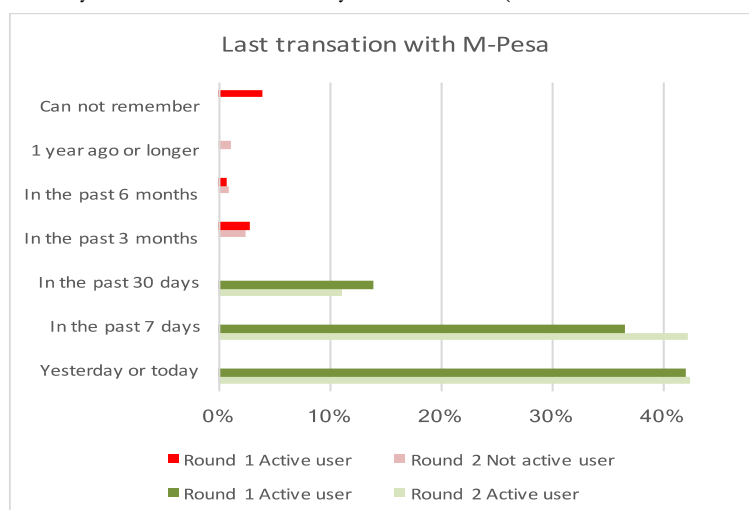
Figure 38: Frequency of using M-Pesa services (Round 1 N=588, Round 2 N=453) also graph for round 1 excluding buying airtime.





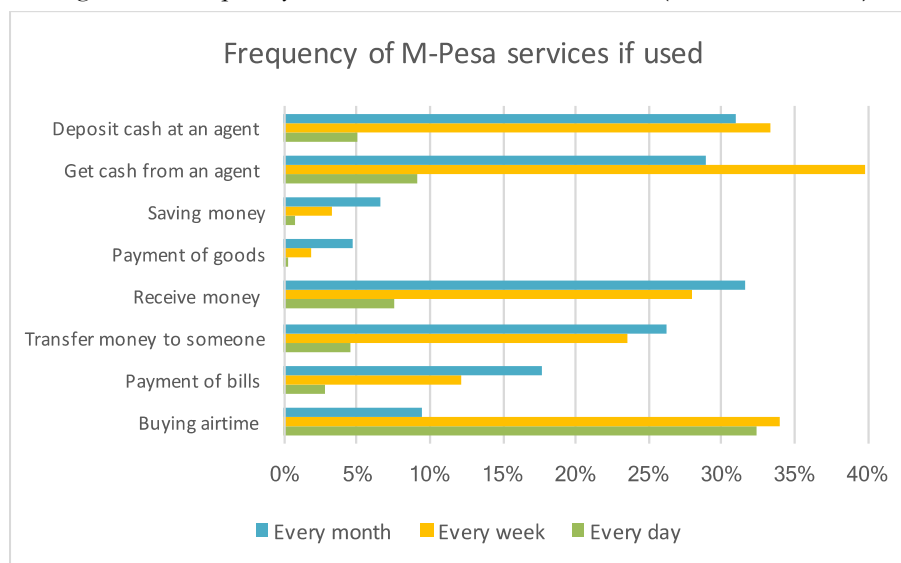
This is in line with the response to the question “when the last M-Pesa transaction was conducted by M-Pesa users” for round 1 and round 2. The majority reported to have used transactions yesterday or today followed in the last 7 days (Figure 39). This shows that the M-Pesa users do transact and this was corroborated by M-Pesa personnel who underlined that there is frequent use of the M-Pesa accounts however, most users buy airtime for their phones and this is usually in small amounts.

Figure 39: Last time you used mobile money transactions (Round 1 N=540, Round 2 N=453)



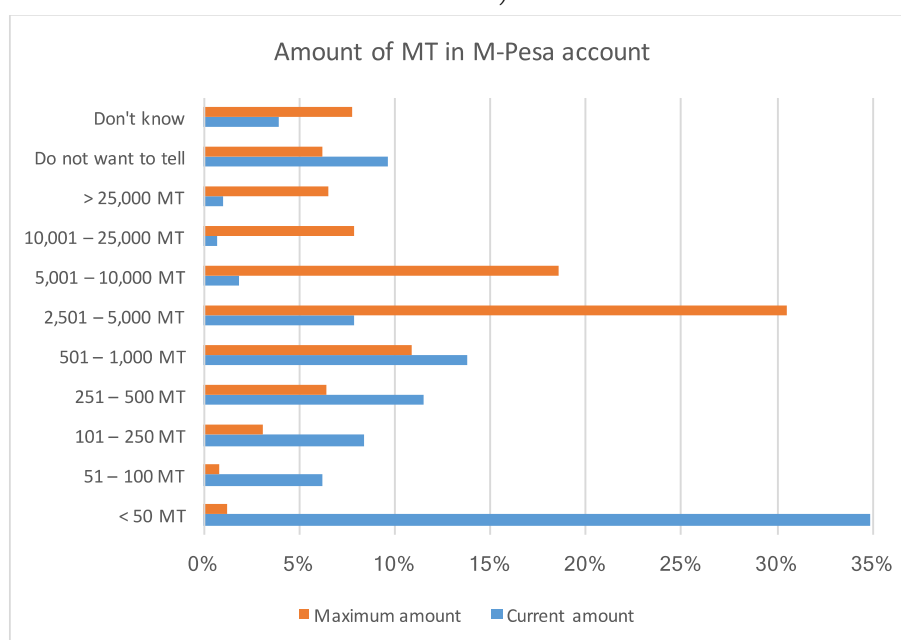
Most frequently, used M-Pesa services as reported include: Buying airtime (one third daily) while get cash, deposit cash, transfer and receive money are also used weekly by one third of the respondents, see Figure 40, Table 19 in Annex B-1.

Figure 40: Frequency of M-Pesa services if ever used (Round 1, N=580)



The amount in Meticaís (MT) that people have in their M-Pesa account is highlighted in Figure 41. The majority (35%) have less than 50 MT in their account (less than £0.67 or \$0.85). The average amount in MT that is currently being held per account according M-Pesa for Mozambique is 236.9 MT (£3.20 or \$4) (source M-Pesa, July 2018), and the averages for the three covered districts in round 1 for each of the four provinces are: Gaza: 237 MT, Manica: 257 MT, Nampula: 228 MT and Maputo city: 230 MT.

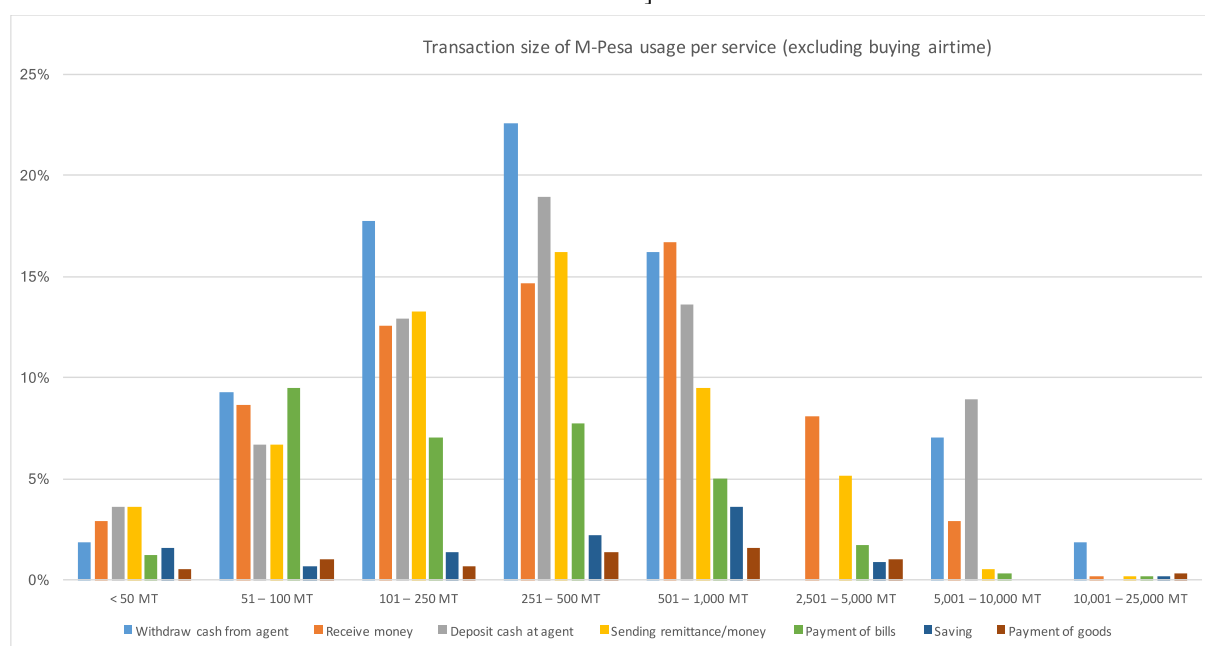
Figure 41: Current and maximum amount of MT people have/had in their M-Pesa account (Round 1, N=580)



As mentioned before (see Figure 37), people normally use their M-Pesa accounts to withdraw money from their agents (90.5%) followed by depositing (83.4%), buying airtime (78.8%) and receive money (75.8%). The distribution of transaction size per type is listed in Figure 42. The most frequent transaction size is less than 50 MT and is predominantly for buying airtime (50.3%), buying airtime has no transaction fees (see

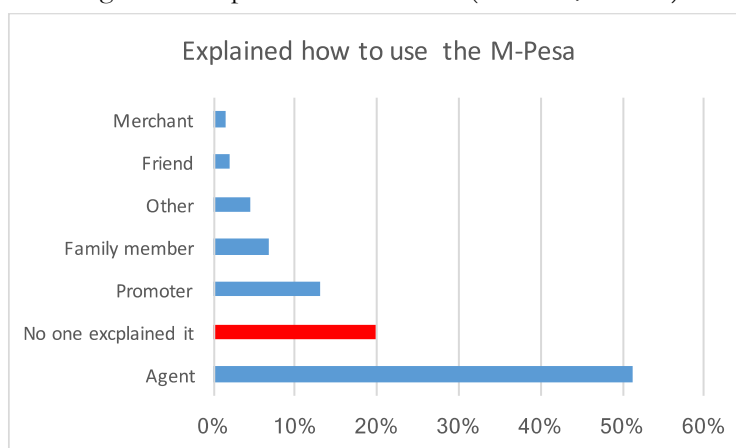
Annex C-1 for tariffs). When excluding buying airtime, the most frequent transaction size is 215 MT - 500 MT (see Figure 42) for withdrawal of cash, deposit of cash, receiving money and sending money. This was validated by the M-Pesa's Head of Sales & Communication, who highlighted that the vast majority of the M-Pesa transactions are below 700 MT (£9 or \$12) and cover both daily payments of utilities as well as Person-to-Person transactions.

Figure 42: Amount transacted last time by M-Pesa users excluding buying airtime (Round 1, N=580) [Deposit at agent N=484, Buy airtime N=457, Sending remittance/money N= 380, Payment of bills N=201, Receive money N=137, Saving N=79, Withdraw cash form agent N=50, Payment of goods N=50]



Although most (94%) M-Pesa users know the basics of M-Pesa, and the majority got some explanation of what M-Pesa is all about and how to use it, 19.7% did not get any explanation from the competent persons (Voda/M-Pesa shops, agents, promoters). Promoters are supposed to explain what M-Pesa is all about and how to use it, however, only 13.1% of the respondents reported to have received explanations on M-Pesa usage from the promoters. Most (51.2%) of the M-Pesa users reported that the agents are the ones who provided them explanations and guidelines on M-Pesa usage. Arguably so and as confirmed above, many of the M-Pesa users opened their accounts more than two years ago before the promoter model was implemented.

Figure 43: Explanation of M-Pesa (Round 1, N=580)



With regard to the knowledge by M-Pesa user on transactional tariffs (see Annex C-1 for the M-Pesa tariffs), daily limits, most of the 97% of M-Pesa users do NOT know (daily) transaction limits²⁴; and 71% of M-Pesa users said they do NOT know the transaction fees per service. For those that indicated that they do know the transaction fees, when asked what the minimum transaction fees is per transaction type, only around 67% of them knew exactly or (closely) the actual transaction fees of the various services

This was also obvious during the focus group discussions (surprisingly so this includes some of the agents). Paradoxically, the same FGD participants complained of the increase of M-Pesa tariffs yet they did not have any clue of the rate of the increase. This clearly indicates that there is room for improvement particularly in educating M-Pesa users and potential users on the details of the M-Pesa services.

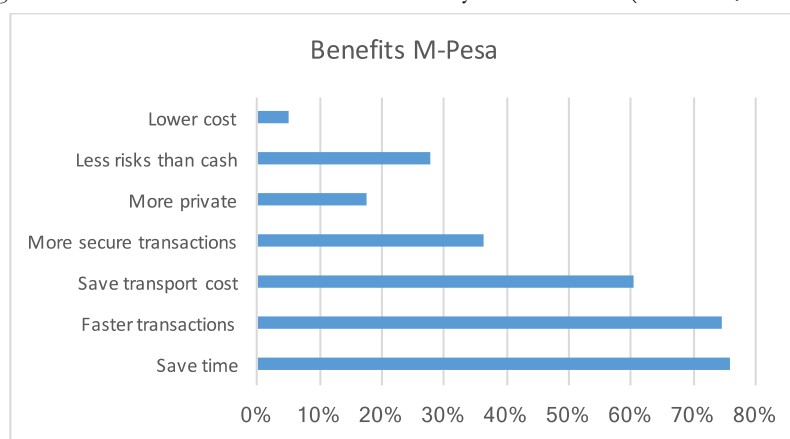
- *“There is no limit, one can withdraw or deposit any amount at any time even 100,000 MT per day if you have the money”* - M-Pesa user in focus group discussions in Maputo city.
- *“I am not sure of the tariffs for withdrawals or deposits, but I know at the end of the month I get a commissions from M-Pesa the reason am motivated to continue this work”* - An agent in Meconta city, Nampula province.

Most of the M-Pesa users are content using the services because the account enables them to save money and to undertake transactions faster and anywhere (Figure 44).

“M-Pesa is a bank in our hands” - An M-Pesa user in Manica province.

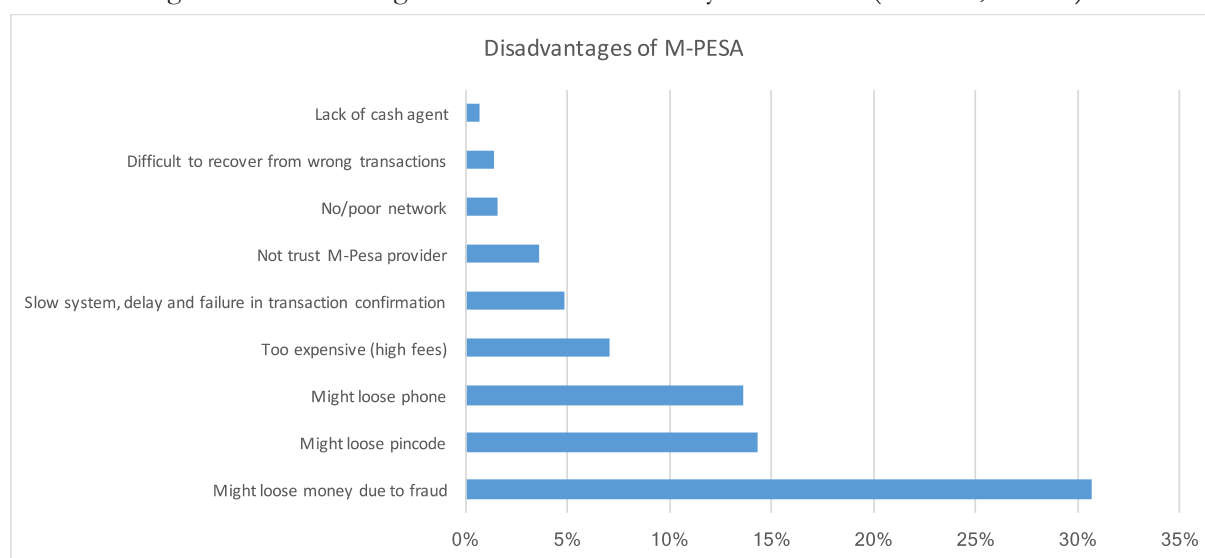
²⁴ M-Pesa transaction limits: Tear-1 customer: 80,000 MT per year; Tear-2 customer: 3,000,000 MT per year; Daily transactions 25,000 MT; M-Pesa account limit: 125,000 MT; and Max 3 M-Pesa accounts per Vodacom SIM

Figure 44: Benefits of M-Pesa mentioned by M-Pesa user (Round 1, N=580)



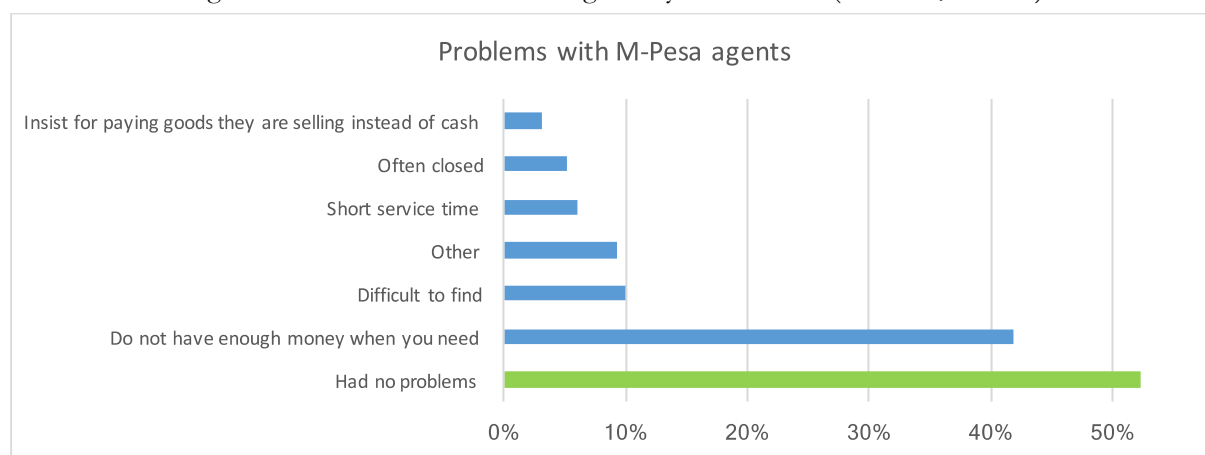
Fear of losing money was highlighted as main disadvantage (Figure 45).

Figure 45: Disadvantages of M-Pesa mentioned by M-Pesa user (Round 1, N=580)



Most (70.7%) of the M-Pesa users go to any agent they can find when in need, while only 7.0% will visit the same agent for mobile money services. Majority of the M-Pesa users reported to not have any problems with agents however, the main bottleneck was that agents do not have enough money when users need it (Figure 46).

Figure 46: Problems with M-Pesa agents by M-Pesa user (Round 1, N=580)



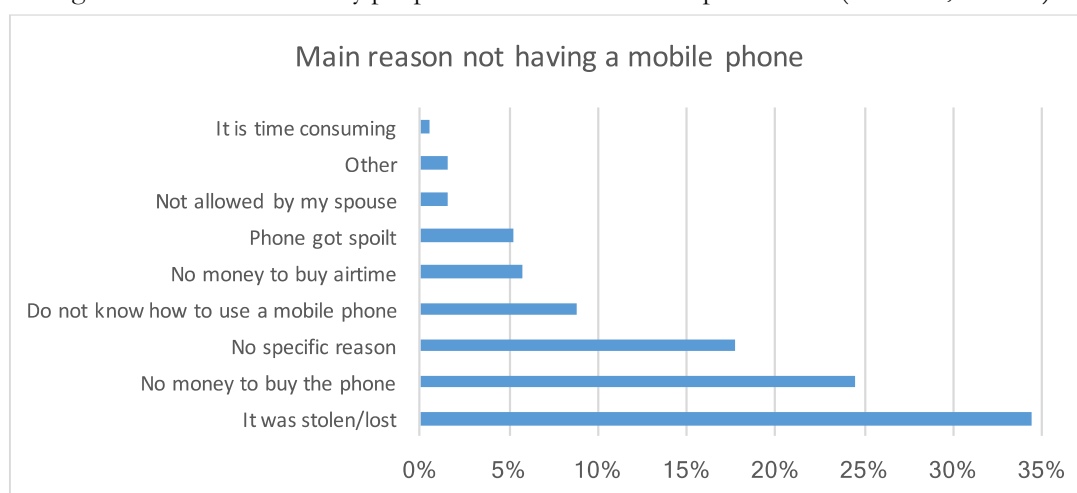
90.5 % of the M-Pesa users do not use alternative services differently since they have M-Pesa, while 6.6% use them less and 2.9% use them even more.

94.7% of the M-Pesa users (Round 1, N=588) would recommend M-Pesa to others.

Insights in the characteristics of non-users

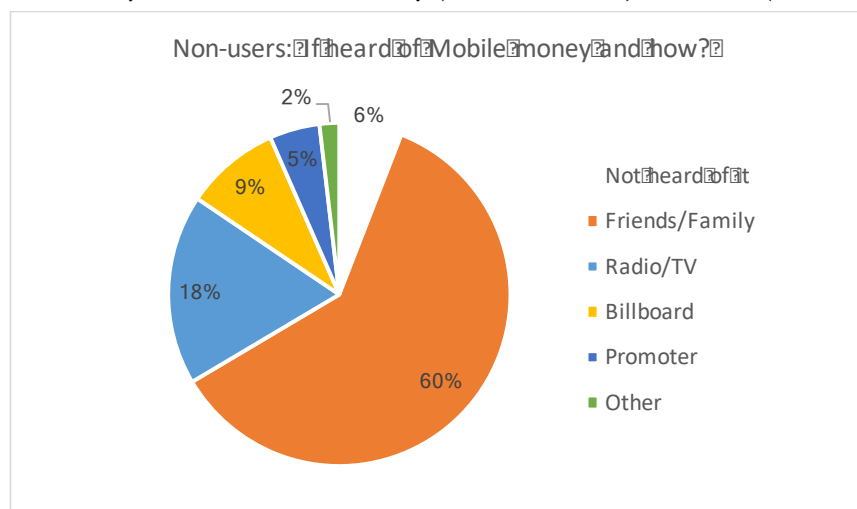
One reason that people are non-users is because they do not own a mobile phone. 17.2% (Round 1, N=1,179) of the respondents reported that they do not own a mobile phone. The main reasons for this are: 34.4% lost their phone (stolen or misplaced their phones) and 24.5% do not have money to buy a cell phone, see also Figure 47.

Figure 47: Main reason why people do not have a mobile phone now (Round 1, N=192)



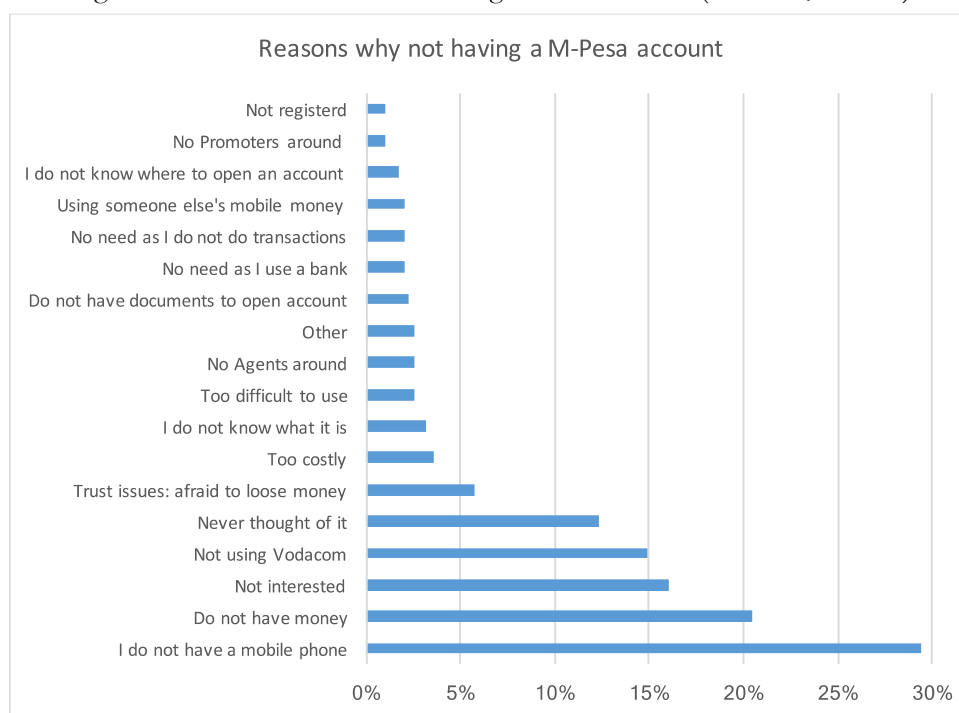
Almost all (94.1% Round 1 N=591) non-users have heard of mobile money. Out of these respondents who have heard of mobile money, the majority (60%) heard it from friends and family (Figure 48). Meaning that the personal networks are important for information spreading of novel services like mobile money.

Figure 48: How did you hear of mobile money (M-Pesa/MKesh) non-users (Round 1, N=591)



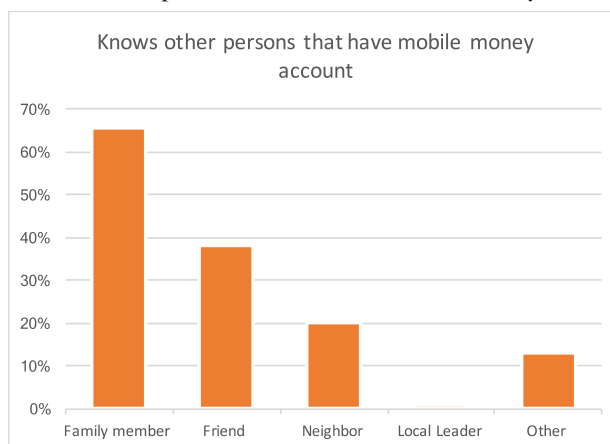
The main reasons that were cited by most of the non-users (N=591) for not having a mobile money account is not having a mobile phone (29.4%), do not have money (20.5%) are not interested in mobile money (16.1%) or do not have a Vodacom SIM (14.9%), see (Figure 49).

Figure 49: Main reason for not having M-Pesa account (Round 1, N=591)



Last but not least, 86.0% of the non-users know of a person who use a mobile account, see also Figure 50 for which persons they know of.

Figure 50: Non-user knows other persons who use a mobile money account (Round 1, N=508)



Conclusions on understanding mobile usage in Mozambique

M-Pesa users

- Mobile money in Mozambique though highly adopted as in Kenya (Ngugi & Komo, 2017), is somehow taking the same trajectory as Kenya's where M-Pesa is dominating the market. Of those respondents who reported to have mobile money accounts, 97.7% (Round 1, N=602) and 94.5% (Round 2, N=474) of all mobile money accounts are M-Pesa accounts.
- There is high M-Pesa penetration rate of more than 50% in most of the urban areas. In Maputo city, most of the districts have surpassed 70% penetration rate. Vila de Messica & Namialo in Nampula though urban areas, are not performing very well relative to others (40% & 37% penetration rates respectively).
- The presence of promoters in the districts has boosted the uptake of M-Pesa mobile money [0.748, $p < 0.05$]. The higher the number of promoters per district the larger the increase of new M-Pesa accounts. This was also corroborated by the M-Pesa & FSDMoç personnel who participated in the KIIs in addition to the records that have documented the new accounts during the two years.
- Despite the success of M-Pesa's uptake in the last two years corroborated by the increase of at least 1,200,000 more users (M-Pesa and FSDMoç data, 2018), the progress is being hampered by (as reported by FGD participants): poorly developed Vodacom network infrastructure in some rural areas; fraud; system failure during peak period (end month, weekends); inefficiency of the customer care line; and lack of prior communication of intended tariff hike to the M-Pesa users prompting negative reactions with regard to this increase.
- Majority of M-Pesa users accounts (89%) are registered in their own names and this gives them the freedom to transact whenever there is a need without any restrictions. Most of M-Pesa users (45.3%) whose accounts are registered in their names did so more than 2 years ago. This might be the reason why 59% of the M-Pesa users reported that they were enrolled with an agent and only 14% reported to have been enrolled with a promoter especially in areas where promoters started recently boosted by the partnership.
- M-Pesa users have limited knowledge regarding the tariff rates of the services provided (71%), yet they expressed dissatisfaction via the FGDs of the recent tariff hike by M-Pesa.
- The three things that M-Pesa users fear most with regard to their accounts include: losing their money through fraud (32%); forgetting or losing their PIN & losing their phone.

- M-Pesa users do not have a loyal agent that they go to in case of need for transactions. Only 7% reported that they would visit the same agent for a transaction.
- Financial services used most of the time via M-Pesa is buying airtime (74,2%), depositing cash (71.1%), withdrawing cash (57.6), sending money (58.7%) and receiving money (50,3%) (Round 2, N=453).

Non-Users

- As a prerequisite to using mobile money account, an individual must have access to mobile phone. 17.2% of all the respondents (N=1,179) reported to not owning a phone mainly due to theft or misplacements (34.4%); and no money to buy a cell phone (24.5%). So long as one does not have a phone, then it is difficult to get interested in services that are provided via a cell phone. This was also one of the main reasons that were reported by non-users of not using mobile money services (29.4%).
- There are various factors that lead to non-usage of mobile money market and the major one is poverty (low purchasing power) despite most (94.1%, N=591) of the non-users having heard of mobile money and 86.0% knowing a person who is using mobile money. Despite the fact that M-Pesa brand is well known, it does not mean targeted marketing campaigns explain the advantages of the M-Pesa services while addressing the negative perceptions of vulnerability and trustworthiness of the M-Pesa service.

3.4 Objective 2: Provide conclusions on opportunities and challenges in mobile money market

Conclusions on opportunities

Potential for increase of Market share: Overall, of all Round 2 respondents (N=831), 54.5% have a mobile money account, see (Figure 32). For the rural areas (Gaza Manjacaze-Chalala/Mussengue and Manica Sussundenga-Nhaurombe) the penetration rate of M-Pesa is lower than for the urban areas.

There is therefore an opportunity for mobile money market to tap the population that does not use mobile money, especially as for many people due to lack of bank branches in their area, mobile money is the only way to have access to formal financial service and hence become financially included. The difference especially in the urban and rural areas is the fact that the population in the urban areas might have choices and ease of accessibility to other financial services as opposed to the population in the rural areas.

Potential for job-creation: M-Pesa provides people with an alternative to become financially included allowing them to save time and money, which are invested elsewhere. Most of the FGD participants were businesspersons who reported to be using M-Pesa as a means to transact. Most of the promoters that are engaged by M-Pesa are young considering their engagement with M-Pesa as an important job for their subsistence. Majority are grateful to be part of M-Pesa. This came out clearly during the KIIs. The same reaction emanated from some of the agents who partook in the study. The mobile money market has contributed to the well being of users, promoters and agents alike most importantly through the reinforcement of their purchasing power via the income they earn through M-Pesa related activities or transactions.

- *“I am a promoter because this is a job that sustains me and my family”* - Promoter in Gaza province.
- *“There no jobs in the country therefore I decided to become an M-Pesa agent instead of stealing”* - An agent in Maputo city.

Potential for additional services or processes: additional services mentioned in KIIs and FGDs that people would like to use are savings with interest (also to saving groups); loans/micro credits, cross MNO transactions, cross border transactions.

When asked in the FGDs what they normally used their M-Pesa accounts for, the participants highlighted the following services: Buying airtime, deposits, cash withdrawal, sending remittances and payment of bills (electricity vouchers, and payment of usage time of cable television). When asked about any other pertinent service which is currently not been offered, the participants were generally happy with the current services which are provided by M-Pesa however they highlighted the following as important:

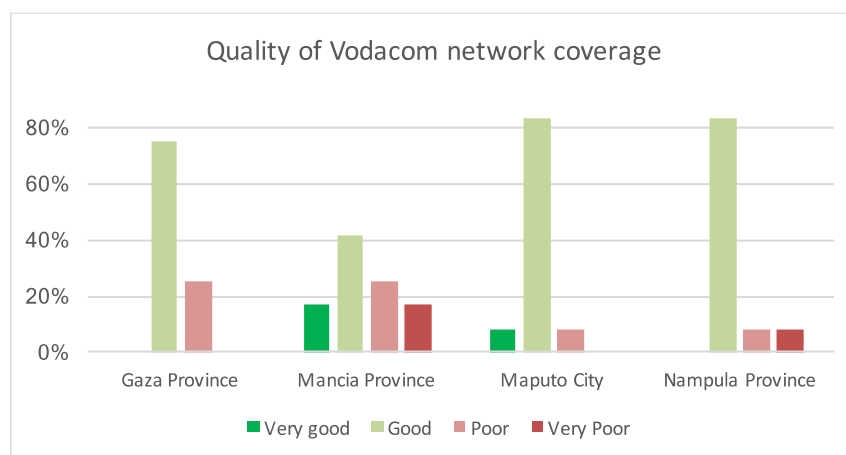
- Provision of a platform for a saving account that earns interest
- Being able to transact across different mobile money providers.

Through the KIIs, the agents appealed to M-Pesa to provide loans to them that could be discounted through commissions on a monthly basis as this would increase their float and ensure that their customers’ needs are satisfied. This is because in some instances, the agents’ float is not sufficient and does not satisfy demand due to limited initial capital invested.

Challenges mobile money providers face

Underdeveloped mobile networks especially in rural areas: Enumerators observed during the data collection the quality of the Vodacom network. Maputo City’s Vodacom network coverage was (very) good, which was the best reported, followed by Nampula, while Manica province had the worst Vodacom network quality of the visited provinces, see Figure 51.

Figure 51: Mobile network coverage (Round 1)



During the FGD with M-Pesa users, and KIIs with the agent, the recurrent issue that was brought up during the discussions in Manica province was that the M-Pesa system was very slow and on some occasions froze

and this seems to be due to poor network coverage as confirmed by the survey data above. There were some places that had no Vodacom network for example Nhaurombe and Mavonde in Manica and Corrane in Nampula. In order for a mobile money account to work, the mobile network of the host MNO has to be accessible without any bottlenecks. This is not the case in most of the rural areas. Movitel has managed to penetrate some of the rural areas, though not all.

Low literacy levels of users:

As expected, Maputo City province has the highest percentage of respondents (N=1,179) who have university degrees; 13% compared to Gaza, Manica and Nampula, which is 3%, 3% and 2% respectively. On the other hand, Gaza province has the highest percentage of respondents who did not go to school of 22% compared to Manica, Maputo City and Nampula, which is 2%, 5% and 9% respectively. More female (12%) compared to male (6%) reported to not have gone to school. As can be seen in the graphs below (Figure 52): Bilene Macia, Manjacaze and Xaixai districts have the highest rates of respondents who reported to not have gone to school. The result is that this affects their comprehension of simple instructions due to language, reading and writing skill barriers (illustrated in Figure 53). As such, if the process, for example the M-Pesa registration process, is perceived to be “challenging” the tendency by low literate people would be to shun it, as reported by the provincial M-Pesa personnel, promoters and agents who participated in the KIIs.

Figure 52: People that did not go to school, disaggregated per district and M-Pesa user/non user, (Round 1, N=1179)

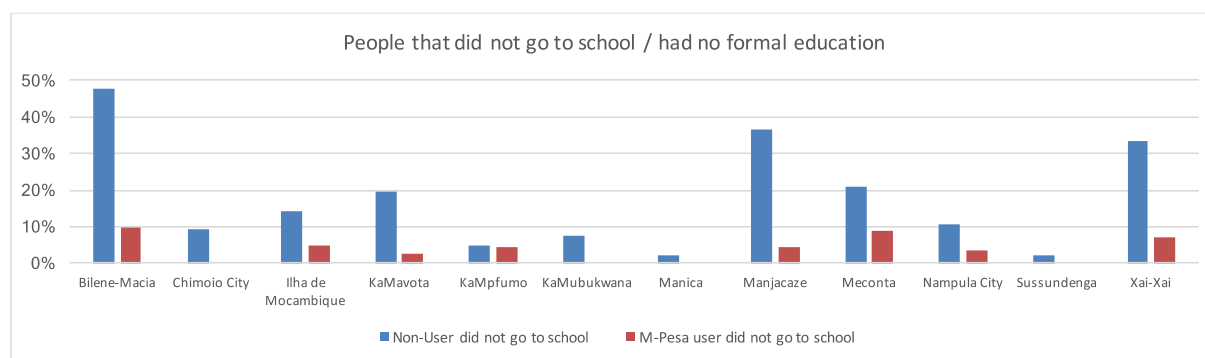
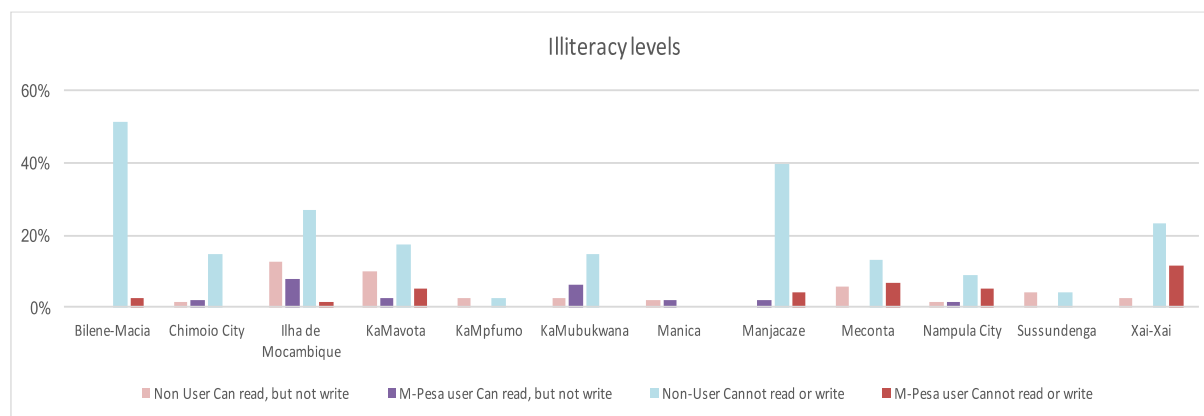


Figure 53: Illiteracy, disaggregated per district and M-Pesa user/non user (Round 1, N=1179)



Erroneous transfers: Due to low literacy levels as described above, the probability of erroneously sending money to a wrong person is, according to KII of agents, higher with low literate people as well as people that are less familiar with using mobile phones (especially elderly). Time investment is needed to explain simple procedures to low literate persons as opposed to time that would be used to explain the same procedures to a literate person. The promoters during the KIIs reported that it takes more time to explain and sign in persons who have not gone to school compared to those who have gone to school. Similarly, promoters mentioned that explaining M-Pesa services to elderly takes much more time. People who do not use the services often also tend to forget how it is used and what their PIN was. To them to reset the PIN becomes a hassle and because of these simple things, the people with low literacy levels give up easily on using the M-Pesa services.

Less purchasing power and limited economic activities: Mozambique is still a poor country with almost half of the population living below the poverty line regardless of the economic progress made in the last years. This thus means that most of the people have low purchasing power and limited economic activities take place, especially in remote parts of Mozambique. The average household income per person (HIP) (= household income divided by the number of people living in the household) according to Round 1 survey is 565 MT (approximately 10 USD) per month. Income affects the purchasing power of individuals according to feedback from M-Pesa (KIIs) and data obtained from M-Pesa. Most of the users transact very small amounts of money (below 50 MT approximately) and if transaction tariffs are high then the tendency is towards “withdrawal” hence avoiding the mobile money system altogether and reverting to “keeping money at home” or using cash for transactions.

Due to limited economic activities in the rural areas, the existing agents invest less capital in their accounts and therefore it is possible that when visiting an agent’s premises that the following response is received, “Apologies, I do not have sufficient balance/float”. 41.8% of the M-Pesa users reported that the problem they had with agents is that they do not have enough money when it is needed.

Agent network: Density of the agent network needs to be sufficient for clients to find agents easily, 21.2 % of the M-Pesa users reported that it is difficult to find agents, they are often closed or have short operating

service times, (see also Figure 46). Some agents have the tendency to take advantage of the clients as reported by the FGD participants by charging extra amounts not stipulated in the M-Pesa's tariff plan. This often occurs when the demand is high and supply is low (few or unique agent). Furthermore, the liquidity of the agents needs to be sufficient to be able to deal with the cash-withdrawal and deposit transactions, especially during peak moments. 41.8% of the M-Pesa users reported that the problem they had with agents is that they do not have enough money when they need it. There is a need for super agents that can assist agents managing their float/liquidity balances.

"It is so frustrating travelling to Meconta city to withdraw money from my M-Pesa account only to be told that there is no balance. At times we are forced by circumstances to travel to Nampula city to withdraw from our M-Pesa accounts" - frustrated FGD participant in Corrane Nampula

Fraudulent activities by unscrupulous persons: M-Pesa has made significant progress with regard to recruiting new users who are active. This momentum is at risk if M-Pesa does not address cases of fraud properly and urgently. Negative publicity spreads fast and theft through fraudulent acts was a concern for users, promoters and agents alike. There are cases where some people did not want to hear the name M-Pesa. Promoters reported being attacked by people that had lost their money through fraud. Common frauds/risks that were underlined during the KIIs and FGDs are:

- Identity theft through SIM swaps (clients' SIM card is disabled and swapped by M-Pesa employee);
- Phone calls or SMSes from conmen or M-Pesa client giving wrong instructions, for example to reverse money as a result of "system failure";
- M-Pesa clients that disclose their PIN (to family members or others that want to "help");
- People that are imposters "faking" that they are M-Pesa agents and accept cash deposits;
- Agents taking advantage of the fact that they are the only one (in the neighbourhood at a given time interval) that offers people assistance with withdrawals and requests clients for additional charges in addition to the automatically deducted transaction fees;
- Agents, that have a business as well, still ask users to do an M-Pesa cash out and then pay for goods or services in cash, when they could ask the user to make a payment for the goods directly, showing the user that they can pay with M-Pesa in shops rather than cash-out only for transactions.

- *"If you are from M-Pesa, I do not want to see you neither talk to you. You stole my money and you do not do anything about it. Please go away"* – Enumerator's experience during the data collection.
- *"A promoter girl was beaten, her clothes were torn, and robbed of her mobile phone by people that lost money due to M-Pesa fraud"* - M-Pesa staff (promoter team leader) in Nampula city.

Despite the major effort of M-Pesa to grow the mobile money market in Mozambique, there is a risk to it as well. The market dominance by M-Pesa, means that they are likely only to introduce (new) services to areas that are or soon will be profitable. This will be to the disadvantage for those that could benefit most

from mobile money, the people that live in rural areas without banking infrastructures. The subsidy from FSDMoç to stimulate the introduction of promoters especially in rural areas is an example of this.

Opportunities for additional services

Services such as savings (by M-Pesa users) are in high demand as well as loans especially by the agents. In addition, the ability to transact between different mobile network providers through mobile money was also highlighted. For example, as mentioned above, there were areas with no Vodacom network access, however Movitel is operational and the e-Mola users were soliciting the possibilities of using e-Mola to transact with M-Pesa users and vice versa.

Barriers for usage

Barriers that most M-Pesa users face when using mobile services include: Lack of money “balance” by the agents, very slow system from M-pesa; non-response from the customer care service especially complaints linked to erroneous transfers and fraud (see Figure 45).

On the other hand, barriers for accessing mobile money for non-users include lack of mobile phones (see (Figure 49) where 69.7% of M-Pesa non-users reported to not own a mobile phone due to “other” reasons that included: less purchasing power (no money to buy the phone, theft or technical problems), some also lack proper information with regard to the services provided and this demotivates them (see also Figure 47. Last but not least, there is fear of loosing money and this demotivates non-users due to trust and fraud issues.

According to KIIs from M-Pesa personnel, the M-Pesa system is designed to handle a certain amount of peak transactions per second. Due to the growth of the number of M-Pesa users, the number of transactions sometimes exceeds this number of peak transactions per second, which leads to a slower response of the system to the users. There are system failures, which need improvement, for example. when the customer makes a deposit and the system freezes and no confirmation is provided (this was a big complaint of users especially in Manica province).

In addition, users, promoters and agents reported challenges with the customer care line. As per KIIs with M-Pesa personnel, the customer care line has been resourced (and budgeted) to support 1.2 to 1.3 million calls per month. However, the current average number of calls is 1.8 million. Most of the extra calls are on issues concerning the electricity vouchers purchase and the code which is generated to be used for the smart meter recharge. There have been recent changes in the way the electricity code is generated because for each type of electricity meter, there is a different way the new code is communicated. According to the M-Pesa personnel who partook in the KIIs, the number of M-Pesa customer care line calls could have been reduced significantly if the electricity entity had educated/sensitized the customers to this change through SMSes.

M-Pesa Customer Care line

Customer Care is centralised in Maputo, with a total of 430 staff. 290 members working daily; 3 shifts a day. There is a dedicated line (separate queue) for agents²⁵ (number “84166”) and a normal customer line for customers and promoters. However, the customer care is a joint effort to support both Vodacom and M-Pesa customers & agents.

The customer care line uses Interactive Voice response (IVR) in three languages (Portuguese, English and Changana), and is organised in such a way that either the customer should wait maximally 20 seconds before connecting through a customer care assistant, or that the person will be called back within 24 hours after the call was initiated. Around 90% of the calls will be able to get connected through within 20 seconds of which 45% of the issues/complaints are resolved/answered during the call. Especially when there is a third party involved, sending the transaction (per accident) to the wrong recipient, been able to contact the third party is needed as well as his/her cooperation of that third party is needed for returning the money. Currently, the customer care line does not keep track of the origin of the call, e.g. rural or urban area.

The customer should be able to select the best-suited channel for his/her request/complaint, either through an agent, a M-Pesa/Vodacom shop or through self-service via the customer care line.

Conclusions on opportunities and challenges in mobile money market

It is therefore possible to deduce the existence of the following opportunities for mobile money in Mozambique:

- There is still work to be done in Mozambique with regard to accessibility and outreach of financial services to both urban and rural areas.
- M-Pesa is contributing to local economic growth by creating jobs for the promoters, agents, super agents and all those personnel involved in the various stages of the M-Pesa services value chain.
- Additional services that are not currently offered and are in demand by the M-Pesa users include: Savings account, which generates interest to the user and the ability to transact across mobile money providers. Agents on the other hand, stressed the importance of loan service via M-Pesa, which could be possibly disbursed via monthly commission discounts. This is in order to secure enough float to meet the demand of the M-Pesa users especially during the peak periods.

The following conclusions can also be underlined with regard to challenges for the mobile network providers:

- Underdeveloped mobile network infrastructure is still a reality especially in the remote areas and this limits the usage of mobile money, which relies heavily on good network coverage. Manica province is the most affected, where most respondents reported the highest percentage (20%) of the Vodacom network coverage as being “very poor” in relation to others (Gaza 2%, Maputo City 2% and Nampula 7%).

²⁵ The agent line makes use of a white list, only registered (agent) numbers that are on the white list are allowed to be connected on the special agent customer care line.

- Low literacy levels affect the ability of people to maximize the benefits of mobile money. Gaza Province has the highest percentage of illiteracy levels (22%) relative to the other provinces (Manica 2%; Maputo city 5% and Nampula 9%) of the respondents who reported that they have not gone to school.
- The average income per person in a household of the surveyed population is 565 MT (approximately 10 USD) and this affects the purchasing power of the population. Not surprisingly, most of the mobile money users transact in very small amounts (50 MT approximately USD 0.86).
- Liquidity affects most of the agents in all the provinces consequently most agents cannot maintain a positive float to serve their customers especially during the peak periods (weekends, end month).
- Non-users barriers to mobile money usage include: Lack of money to buy a phone and lack of proper information with regard to mobile money.
- Fraud is a reality and a continuous headache for everyone involved in the mobile money value chain. Proper measures by M-Pesa in particular are desirable in order not to disrupt the progress that has been taking place especially with regard to recruitment of new clients.
- M-Pesa customer care line is currently not able to handle the influx of the calls to solve the clients' concerns on a timely manner. This is because the line is inundated by calls related to the new coding system that was introduced by the electricity entity in Mozambique. M-Pesa personnel are confident that this problem can be dealt with by educating customers on the new electricity coding system through SMSes.

3.5 Objective 3: Provide details on the efficiency, effectiveness and sustainability of the M-Pesa

Efficiency

The FSDMoç and M-Pesa partnership invested in the promoter model (*Pedro* strategy) to increase the uptake of mobile money in Mozambique in order to boost financial inclusion especially in the rural areas. The following outputs were achieved during the course of the partnership:

- **Partnership target:** The aim of the two-year partnership was to increase the sign-up of new mobile users by one million by the end of the partnership. A total of 1,200,000 more new users had been signed up according to M-Pesa and FSDMoç consequently over achieving the set target.
- **Promoters' model:** The promoters model is now established and the structure set up in Mozambique. Four persons, based at the headquarters level and in conjunction with the team leaders posted at the provincial levels, manage the promoters' model as per the M-Pesa personnel key informants. The perception by M-Pesa is that this team was fundamental to the increased uptake of the mobile money in Mozambique and should be retained given the fact that it takes a while to create a cohesive structure to achieve objectives.
- **Promoters' boost:** Based on the data obtained from M-Pesa with regard to the total new accounts opened since 2016 and the number of promoters posted in the districts, there is a strong positive correlation between the two variables implying that the number of promoters who are active in a district have an influence in numbers of new M-Pesa accounts being opened in that particularly

district [0.748, $p < 0.05$]. This can prompt the conclusion that the promoter model was effective compared to the alternatives (use of the existing agents) because unlike the agents, the promoters are engaged full time (set targets per day) hence have time to dedicate to the initiative; most of the promoters are gratified to be working as promoters (as per promoters KIIs participants) hence this initiative also is perceived to have created jobs for many. The unemployment rate averaged 23.78% from 1991 until 2017 in Mozambique and any job creation especially for the youth is a purchasing power booster for many therefore highly welcomed in Mozambique (Trading Economics, 2018).

The above-mentioned outputs were achieved within the partnership period of two years therefore it would be fair to deduce that the objectives of this partnership were achieved on time. Nevertheless, the following issues are still a challenge despite the partnership success:

- **Financial inclusion:** The partnership was primarily focused on financial inclusion especially in the rural areas. The survey data especially the demographic information indicate that most of the M-Pesa users are young (average age of 32.9 years round 1 survey), educated and living in the urban areas. This clearly shows that though the partnership did increase the uptake, there is still work to be done to reach the rural areas where illiteracy rate is high. According to UNESCO 2015 report, 44.9%²⁶ are illiterate in Mozambique, which is the world's highest. The female level of literacy is still low calculated at 45.37% compared to a 73.26% for males.
- **Financial literacy education:** The aim of the partnership was also to ensure that M-Pesa users got more out of the promoters in addition to signing up for new accounts particularly in terms of financial literacy. However, based on the data obtained from the survey, only 13.1% of the M-Pesa users reported to have gotten explanations on M-Pesa usage and benefits from the promoters. Most got this information from the agents (51.2%) and 20% reported to not have gotten any explanation at all. It is fair to point out that most of the respondents registered their accounts more than 2 years ago, therefore logical they got explanation from the agents. However, this data underline there is still, room for financial literacy for both the M-Pesa users and non-users.

Effectiveness

The market penetration of the M-Pesa especially in the urban areas is impressive (from 50% and above). There are some anomalies however, in some urban areas like Messica city in Manica province and Namialo in Nampula province where the penetration rate is below 40%. However, the penetration rate in some rural areas is also striking for example in Sussundenga – Nhaurombe, despite Vodacom network coverage challenges. Maputo City M-Pesa penetration rate is above 70%, which can lead to the conclusion that the objective of the partnership especially on mobile money uptake in Mozambique was achieved. Some of the factors that influenced in the achievement of the objectives include:

- **Financial Availability:** The partnership between FSDMoç and M-Pesa brought the capital that was needed to implement the promoter model and this was a catalyst that led to the signing up of more than 1 million additional M-Pesa users.

²⁶ 2014-2015 Inquerito do Orcamento Familiar.

- **Benchmarking experiences:** The existence of best practices from countries that are doing well in this regard (Kenya and Tanzania) was essential to setting the foot in the right place with regard to the promoter model. According to M-Pesa personnel who participated in the KIIs, the promoter model is one of its kind and the first pilot in Mozambique and was implemented taking into account various country factors and also lessons learned from areas where M-Pesa is doing well.
- **Enabling macro environment:** The government of Mozambique recognizes the importance of financial inclusion in the country hence developed the National financial inclusion strategy 2016-2016²⁷ that aims to achieve the following targets:
 - 60% of the adult population with physical or electronic access to financial services offered by a formal institution;
 - 100% of the districts with at least one formal access point to the financial services;
 - 75% of the population with one financial service access point within 5km of their place of residence or work.

This has also facilitated the legislation of mobile money providers in the country.

On the other hand, the following are factors that might cast a shadow on achieving the objectives:

- **Fraud,** which is discouraging some of the M-Pesa users from using their accounts.
- **Customer care line:** A lot of complaints from the users, promoters and agents alike of the inability of the customer care line to resolve customer issues on a timely manner, which might discourage some M-Pesa users from using the services.
- **Communication of decisions:** M-Pesa users (FGD participants) feel that the tariff hike was not communicated properly. Some of the promoters feel cheated because according to them they have worked hard to achieve the targets yet at the end of the month, they are not rightfully paid based on their targets. The M-Pesa Personnel during the KIIs informed that due to fraud 19, some of the new accounts are not considered, especially when no transaction had occurred within 30 days after registration.

Profitability of the M-Pesa roll-out strategy

The M-Pesa financial reports (July 2017)²⁸ show that M-Pesa has made a financial loss (before taxes) of 253,239,000 MT. The revenue of transaction fees minus commissions was, however, positive 137,160,000 MT. M-Pesa, being a commercial company, will need to make profits, meaning that the revenue from transactions need to grow faster than the operational cost. Investing in the promoters has led to a substantial growth in M-Pesa clients, but in the meantime the model has not been profitable as yet by itself. Nevertheless, it is worth noting that the model is an investment, which has potential to generate future revenues from the increased number of active M-Pesa clients. It is estimated (based on the obtained data from the survey and the available data from M-Pesa) that on average, it takes a period of 15.6 months to break even and earn back (via revenues) the monthly salary of a promoter (The box below underlines an

²⁷ <http://pubdocs.worldbank.org/en/469371468274738363/mozambique-national-financial-inclusion-strategy-2016-2022.pdf>

²⁸ See <https://www.vm.co.mz/en/M-Pesa2/Financial-Statements>

estimated return on investment). After the period of 15.6 months, the newly obtained clients by a promoter start contributing positively to the net revenue. The break-even point for urban areas is estimated at 10.3 months while the break-even point for rural areas is estimated to be 20.9 months. This might lead to select and targeted investment in urban areas, which is logical for a profit-making company like M-Pesa. This means that the rural areas are less likely to attract investment from private companies because the return on investment takes time. The partnership with institutions like FSDMoC (through donor funding) is crucial to boosting financial inclusion in the rural areas because it might be very challenging for a profit seeking company to start an initiative like this on its own.

Estimated return on investment of promoters

Promoters need to achieve their monthly target of 216 of active users (remain active) based on MPESA data, with average of 9.0 MT transaction fees²⁹ per month per active user (assuming 3 transactions per month) results in 1,944 MT of fees. From which also the agent commission needs to be deducted from for the cash withdrawals (average per active M-Pesa user is 4.32 MT per month [average 11.28 MT per withdrawal and 12.78% of the transactions being cash withdrawals] x 216 users = 933 Mt) and cash deposits (average per active M-Pesa user is 2.55 MT per month [average 10.11 MT per withdrawal and 10.48% of the transactions being cash deposits] x 216 users = 551 MT) resulting in 460 MT per month (1944 – 933 – 551).

The salary of a promoter is around 6,200 MT (source M-Pesa Marketing department Headquarters) [however the IDIs with promoters in the field actually mention a salary around 5,500 MT]. Direct staff cost that deal with promoters (4 at Headquarters and 2 in each province) adds an estimated 500 MT cost per promoter (assuming 300,000 <MT salary cost and 600 promoters) and other dedicated cost (promotion material (250 Mt) and indirect/overhead cost (250 Mt). Total monthly cost per promoter is estimated at 7,200 MT. However, once the person has become an M-Pesa client, the promoter does not need to put a lot of time & effort supporting the new client. Assuming that the user remains active (target of 216 is based on active users), at the same number of transactions and same amounts, it will take around 15.6 months (= 7,200 / 460) before an active user will bring in any profit if any.

There is a difference between rural areas and urban areas. In rural areas the number of transactions are lower than urban areas. Based on the survey data (disaggregated per rural / urban) the M-Pesa users transact on average 2 x more in urban areas (2.02 x, Round 1 data). Meaning that in the rural areas it will take around 20.9 months before any profit is registered at M-Pesa while in urban areas it would only take 10.3 months.

Whether subsidy will still be needed to sustain the rollout strategy of M-Pesa?

The promoters have been able to attract many new M-Pesa customers. However, when the M-Pesa penetrations rates are increasing, finding new potential customers will become harder for promoters. Exacerbating the situation is the fact that both agents and promoters are competing for the remaining

²⁹ Average usage per type of transaction takes into account the frequency distribution (%) of M-Pesa users that conduct transactions and the amount per transaction types for which transaction fees are needed to be paid (send money to non-registered customer, send money to registered customer, transfer money from a M-Pesa account to a Standard Bank or BCI account, money deposit and withdrawal, Credelec (electricity pre-paid) purchase).

potential customers. It might be more attractive for a promoter to move to another area where new clients are easier to enrol.

“It is becoming very difficult for us to work in the city we have to move to the suburbs because the agents, the M-Pesa shops are also signing up customers so we are competing against each other”. Words of a promoter in Maputo city.

As indicated before (see Figure 49), most of the non-users that were interviewed do not have a mobile phone or do not have Vodacom SIM. The other main reasons are lack of money, or simply are not interested or have not thought about it. Converting these “non-users” to M-Pesa users, the expected number of transactions is likely to be lower than the average and hence the revenue by M-Pesa (through less transaction fees) are expected to be lower. The business case for M-Pesa to invest in extra (by incentivising) promoters to convert these “harder to attract M-Pesa clients” is not attractive from a commercial point of view when having a short return on investment in mind. Additional subsidy might be needed for a targeted intervention to reach these people to bridge this longer period before attaining the break-even point.

In addition, in areas with low M-Pesa penetration rates, e.g. rural areas or areas where the Vodacom network is non-existence or poor, there is potential for many new M-Pesa clients. However, the people in these remote areas tend to be poorer; the expected number of transactions is likely to be lower and hence less transaction fees are to be expected by M-Pesa. The business case for M-Pesa to invest in promoters in rural areas is therefore less attractive. Additional subsidy might still be needed for a targeted intervention for these areas. Nevertheless, the prerequisites besides economic activity in an area, are: 1) to have a good mobile network coverage; 2) to have an established agent network that can manage cash liquidity adequately for the expected amount of cash withdrawal/deposit transactions.

Mozambique has the lowest transactions fees for M-Pesa (see Annex C-1) compared to other countries where M-Pesa is active. This is a deliberate “market penetration” strategy to stimulate demand in combination with an active marketing campaign, including the introduction of promoters and has resulted in a significant growth of the M-Pesa client base. According to M-Pesa’s Headquarters’ Head of Sales, currently (July 2018) M-Pesa has around 3.4 million users of which the majority are active users, meaning conducting at least one transaction a month. The average number of M-Pesa transactions per active M-Pesa user in Mozambique in 2018 is 15.35 (source M-Pesa July 2018).

Low transactions fees, or even no transaction fees (like for buying airtime or depositing cash at an agent) allow most people to use and get experience with M-Pesa as a financial product. This is so especially during sign-up where 20 MT is used to activate the account.

However, for a company such as M-Pesa, financial profits are clearly needed to keep the M-Pesa service commercially sustainable. As all revenues are generated through transactions, the revenue is based on the number of transactions (the more the better) and the fees per transaction (the higher the better).

Due to national regulations, Vodacom and M-Pesa are different legal entities, nevertheless M-Pesa’s mobile money operations depends fully on the network of Vodacom. Vodacom does benefit from M-Pesa usage as it attracts and locks customers into their mobile network. However, M-Pesa being the dominant mobile

money service provider in Mozambique, Vodacom limits the permeation of the M-Pesa services in areas where the network coverage of other mobile money providers such as Movitel is strong. Underdeveloped mobile network infrastructure that slows the progress of mobile money uptake and, concrete examples include Mavonde in Manica, Corrane in Nampula where the Vodacom mobile network is underdeveloped or non-existent.

Conclusions on efficiency, effectiveness and sustainable of M-Pesa promoters' model

It is fair to conclude that the partnership was effective because it yielded the following as far as **efficiency** is concerned:

- Achievement of set targets within the stipulated timeframe. Additional 1,200,000 M-pesa users within the 2-year period of the partnerships.
- Development of a promoters' model (one of its kind in Africa) to act as a catalyst in the process of increasing the uptake of mobile money in Mozambique.
- The promoters' model did have the desired effect of increasing customer sign-up in the rural areas, on financial literacy as well as increasing uptake of mobile usage in the rural areas as a way of boosting financial inclusion. .

The following can be deduced with regard to the **effectiveness** of the partnership:

- Due to the availability of the funds of the partnership between FSDMoç and M-Pesa, lessons learned from other countries and a favorable macro enabling environment, the implementation of the *Pedro* strategy has reinforced M-Pesa's penetration rate which is more than 50% in urban areas and more than 30% in rural areas (that were surveyed in round 2) The success however, is being marred by persistent fraud in the mobile money sector, inefficiency of the customer care line that does not resolve users' concerns on a timely manner and the tariffs hike without prior communication to the population.
- As far as **sustainability** is concerned, it is reasonable to highlight that the model could be sustainable in the long run especially in the urban areas where the turn around time before break-even point for the promoter strategy is estimated to be 10.3 months as opposed to the rural areas where the population's purchasing power is less and the time estimate before reaching the break-even point is almost double that of the urban areas. There might be no incentive for M-Pesa (being a profit-making organization) to invest in the rural areas where profits might not be obvious in the near future. The partnership of organizations such as FSDMoç is therefore imperative if financial inclusion is to take place in the rural areas.

4

Conclusions and recommendations

4. Conclusions and recommendations

Conclusions

The following can be concluded based on the findings above:

- M-Pesa users are younger, better educated and wealthier (compared to the non-users) consequently are better informed with regard to the existing formal financial services. They use mobile money services in combination with other formal financial services such as the bank, microfinance. It is therefore evident that the rural population that is poor and with limited education though being reached by mobile money services, this is not happening at the same rate as the urban population.
- The average income per household of the surveyed population is 565 MT (approximately US\$ 10 per month) and this has a direct effect of the purchasing power of the respondents. According to M-Pesa, most of the users transact very small amounts per day of at least 50 MT (approximately US\$ 0.86).
- Households with M-Pesa user have much more income than household of non-users. This suggests that those that have more money have more access to M-Pesa services and that targeted M-Pesa roll out interventions are needed to improve financial inclusion of the poorest and harder to reach.
- Some of the additional services solicited by the M-Pesa users that are not currently being offered include: savings account interest; interoperability between mobile money provided and from the agents network, the possibility of a loan from M-Pesa to ensure that they manage to keep their e-float balance positive to enable them to provide the services to users whenever needed.
- In addition to increasing the uptake of M-Pesa usage, the promoter model is also contributing to the creation of jobs for the youth in Mozambique.
- Fraud is a reality and a continuous headache for everyone involved in the mobile money value chain. Proper measures by M-Pesa are needed in order to reinstate trust among the existing and potential users.
- Liquidity affects most of the agents in all the provinces consequently their inability to satisfy the users' needs especially during the peak periods (weekends, end months).
- Though the partnership between FSDMoç and M-Pesa yielded the desired outputs with regard to the targets and were achieved within the stipulated time frame of the partnership, there is room for improvement with regard to outreaching the rural areas as well as the provision of financial literacy.
- M-Pesa penetration rate is high in urban areas (more than 50%) however work is needed in the rural areas to increase the mobile uptake; Some of the bottlenecks associated with uptake especially with the non-users include: poor or non-existence of Vodacom network coverage; Lack of mobile phones mainly due to lack of money to buy the cell phones.
- The estimated break-even point can be achieved within 10.3 months through the promoters' model in urban areas; however, this can take longer in the rural areas where the estimated break-even period is 20.9 months. Given the fact that M-Pesa is a profit-making organization, there might be no motivation in investing in the rural areas due to the time it takes to generate profits. Consequently, in order to promote financial inclusion in the rural areas, subsidies through donor funding could be one of the options.

- Many new customers can also be found in rural areas however; these areas are less attractive from a commercial point of view for investment by as profit making organization like M-Pesa. Besides requiring sufficient coverage by the Vodacom network, these areas need sufficient formal economic activity via: a) Licenced traders; b) Traders with sufficient cash/liquidity; and c) Nearby banks/super agents for liquidity management.

In order to have success in rural areas, there is a case for rural customer local partnerships, for additional types of services/transactions (bills etc.) and for a well spread agent network.

Recommendations

Recommendations for M-Pesa

There are opportunities to further increase the number of new M-Pesa clients, especially in rural areas. As a “tipping point” for new M-Pesa clients in cities has been attained, focus should be on stimulating the rural areas, for which additional financial support might be required: to guarantee good network coverage (possibly to co-share/interoperability of MNO infrastructure) as well as to guarantee agent and promoter availability. Motivating promoters to explore the “hard to reach people/areas” might be challenging without a proper monitoring mechanisms due to information asymmetry (how to prove that promoters are reaching hard to reach people without using fraudulent initiatives to achieve their targets like the “fraud 19”)

Vodacom currently has around 5.2 million subscribers and given the current 3.4 million M-Pesa clients, there are still potential future M-Pesa clients in areas where there already exists a sufficient Vodacom network coverage. Improved customer education via multiple channels will be key to winning over these clients in addition to marketing campaigns: Promoters could be used as “educators” but need to be (re)trained, which requires a different incentive model and additional investments from M-Pesa.

There is a demand for new M-Pesa services to be introduced to end-users: especially savings with interest (also to saving groups) and loans/micro credits. These new services require collaboration with financial entities, banks, and other service providers.

Current M-Pesa support structure is under-staffed. Additional organizational support needs to be improved by increasing M-Pesa staff. New regional managers and local coordinators are needed in addition to customer support staff to reinforce the monitoring system. The customer service line cannot cope with the rapid growth of the number of new clients and needs to be adequately resourced as well.

Back-end systems should be reliable to deal with the increased number of customers and foreseen transactions as well as with increased growth, so that there is no delay or loss of transaction notifications.

Investing resources and efforts to continuously build customer satisfaction and trust in the M-Pesa organisation and services is crucial. Customer-oriented “no loss of money” guarantees that have been

victims of fraud, continuously informing customers of possible fraud schemes and how to avoid becoming a victim as well as staking strong actions against fraudulent insiders (agents, promoters) as well as outsiders (if known).

Currently, there seems to be limited usage of data analytics on M-Pesa usage/enrolment. M-Pesa can gain new insights analysing their data to make better decisions on how to gain more new customers and ultimately generate more revenues from M-Pesa transactions. By introducing new services to Agents/Promoters, such as location and smart phone applications based on the insights of data analytics could be further improved including the support to the promoters and agents; for example, providing real time feedback to the promoters with regard to targets of newly registered M-Pesa customers achieved and indicating if they are accepted as active customers, or using the location information of agents to promoters to find the nearest available agent.

Building and retaining customer satisfaction and trust in the M-Pesa organisation and services is crucial to grow the usage of M-Pesa. Possible stories/rumours as well as real cases of fraud that are spread mouth to mouth need to be addressed adequately, meaning that fraudulent people (from inside the organisation) need to be replaced, and outsiders acted upon. Customers that are victims of fraud need to be reimbursed adequately and the response times of the customer care line needs to be improved significantly to deal with customer complaints. Most M-Pesa customer care line complaints are related to pending authorisation status of a transaction, and a reversal of a wrong transaction (sent to wrong recipient either by accident or deliberately) by third person (agent) assisting the customer.

Possibilities for growing mobile money

The potential growth for mobile money usage in Mozambique lies in:

- Stimulating the usage of mobile money transactions of current mobile money users (M-Pesa users, M-Kesh, e-Mola, BIC), both in terms of volume of the transactions as well as in amounts per transaction. This can be even strengthened by offering new types of mobile money services: micro credits, savings with interest, cross MNO transactions, cross border transactions. Stimulating new/other entities (or joint ventures) to offer mobile money services, for example as “over the top services” on one of the existing Mozambican MNO networks, especially those entities that have (obtained) licences for financial services such as micro credit and savings with interests.
- Converting the non-users into mobile money users, especially in the rural areas. This applies to both mobile phone users who do not yet have a mobile money account, as well as to non-mobile phone users to enrol them into an MNO first.

As a result of the gained insights on this assignment, the following possible strategies for M-Pesa (which are also relevant for other mobile money service providers) are recommended for growing the volume of transactions and amounts per transaction of the existing user base:

- Improving the agent network:

- Educate agents to better understand the value proposition of M-Pesa. According to M-Pesa Headquarters' Head of Sales, from the 20,000 agents, still 5,000 agents do not grasp the M-Pesa value proposition resulting in them conducting only a few agent transactions per day. Well-educated agents are also able to educate the end user more. Convince agents that they need to invest in their businesses; the more the agent invests in himself/herself the more successful he/she becomes. M-Pesa has increased the commission fees to agents to stimulate them to conduct more transactions. However, 75% of agents conduct low volume of transactions (only a few transactions per day) meaning they earn less than 1,000 MT per month. Successful agents that conduct a lot of transactions can easily earn more than 50,000 MT per month.
- Skills of individual agents, as well as received training should be registered, monitored and analysed with their actual transactions to determine who and what kind of (re) training is needed.
- Improving the availability and response time of the customer care transactions and rollback. Increasing customer-care response time and successful handling of complaints, and allow promoters to call a dedicated line as well to address the complaints that were underlined by the M-Pesa users, promoters and agents.
- Active marketing of relatively new services, such as internationally in-bound mobile money from South Africa, transfers between M-Pesa and bank accounts and ATMs from BCI and Standard bank.
- Allow customers to pay more types of bills (other local utilities, entities and municipalities, other service providers such as “solar panel pay as you go electricity”).
- Stimulate more merchants to use M-Pesa as an alternative way of paying for goods.
- Lobby at NGO/(semi)-Governmental entities/departments to allow transfer of salaries and other benefits to M-Pesa accounts instead of only bank accounts.
- Teaming up with finch-entities and banks, that have the licences to operate financial services in Mozambique, to provide new financial services via M-Pesa, in particular introduce new services such as savings, which earn interests and provide (micro) credits with paying interest.
- Offering services to savings groups to replace their cash by mobile money for the savings groups and its members.
- Educate, (re)-train and incentivise promoters on educating customers: how to conduct particular services in a safe way, to avoid sending to “wrong receivers”.
- Further reducing (agent/promoter) fraud, by providing official M-Pesa nametags for agents and promoters for potential M-Pesa customers to help them to identify whether the agent / promoter is genuine or a fake.
- Active campaign to their M-Pesa customers to warn them about particular fraud schemes that are active in their regions at particular times.
- Improve systems and address systems fraud adequately to encourage more users and minimize theft.

As a result of the gained insights of this assignment, the following possible strategies for growing new M-Pesa customers (and are also relevant for other mobile money service providers) are recommended:

- Increase Vodacom network coverage to areas where there is still limited/no coverage.
- Develop and strengthen the agent network in “uncovered”/new areas. Convert more successful local businesses into super-agents to provide liquidity management in under-banked areas.
- While enrolling for Vodacom subscription, raise awareness/advocate for enrolling M-Pesa service as well.
- Identify and target potential “gateway users”. A gateway user is a person that wants to pay people (staff, or others) via M-Pesa, and triggers/convinces these people that do not have an M-Pesa account yet to get one, so that he/she can do his transfers directly via M-Pesa to the recipients of money. Based on the gateway users’ mobile phone (Vodacom) usage patterns, identify potential gateway users and provide them with an attractive promotion campaign through individual approach, e.g. direct SMS advertisement or direct sales (cold calling).
- Provide extra promotion materials (pamphlets, gazebo, T-shirts) to promoters. Promoters have reported (in the KIIs) that additional promotion material boosts the recruitment of new clients significantly.
- Lower the churn rate of promoters, as this requires a lot of resources used for new recruitment and training. Now promoters will lose their job if they do not meet their monthly target. The working conditions of promoters, as reported by promoters and confirmed by local M-Pesa staff, are hard. Provisioning of a gazebo and transportation, as requested by the field staff, is likely to attract more potential clients as the “catchment area” is increased.
- Allow for dedicated promotions for people that enrol M-Pesa and keep using the M-Pesa during the first months.
- Collaborate with banks directly or via NGOs to co-sponsor banks to stimulate economic activities in identified potential new areas/villages by developing new “settlement” of bank(s) & ATMs as liquidity management for agents is currently a serious bottleneck in areas without a bank branch present.
- Develop compelling use case for rural users, so that besides person-2-person payments, buying airtime, cash-in & cash-out transactions also other transactions are possible in rural areas, especially payments for electricity and water. “Gateway” persons stimulate uptake of M-Pesa in rural areas. In order to have success in rural areas, there must be a use case for rural customer which requires local partnerships for additional types of services/transactions (bills etc.); as well as the agent network needs to be spread more. This however requires sufficient coverage of the Vodacom network as well as establishing formal local economic activity/.

Recommendations for the FSDMoC/Donors

There is still work to be done in both the urban and rural areas with regard to financial inclusion. Though mobile money can be one of the channels to achieving this, it is still focused in most cases in urban areas where there is also a problem of financial inclusion as well, hence a solid strategy and finance is needed to

ensure that the envisioned objectives as delineated in the National Financial Inclusion Strategy 2016-2022 are met.

The promoter model is already developed and could be a vehicle for financial inclusion in the country. It will be therefore good to maximize its existence to provide financial literacy and increase the uptake in the rural areas. However, due to the unattractiveness of investing in the rural areas especially for a profit making company, where returns are perceived to take some time, subsidy shall be the key to ensuring mobile money penetration and eventually financial inclusion in the rural areas is implemented.

There is no need to keep subsidizing the “promoter model as-is”, however if additional investment from FSDMoç into mobile money services is made to further increase the formal financial inclusion, this could focus on:

- Promoting M-Pesa services that are targeting new (rural) areas to reach people that are financially informally included and excluded. However, targeted interventions with incentives for promoters to reach the “hard to reach people” might be challenging as it might be difficult to prove what people are/were difficult to reach or that they do not have a bank account, without introducing a promoter cohesive monitoring and incentive scheme. Additional indicators, like proximity (distance) to nearest bank / ATM need to be looked at but these are likely not to be guaranteed.
- Emphasis on customer education (both existing and new clients) could be achieved through transforming promoters to “educators”. This however, requires a solid incentive model for promoters for it to work.
- Collaborating with other NGOs, local entities to boost the financial ecosystem in order to grow/encourage/invest in economic activities in identified potential new areas/villages suitable for introducing M-Pesa.

Annex

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Annex A-1: Sample frame round 1

Table 10: Selected communities for household survey and Focus Group discussion.

Provinces	Districts	Type	Administrative post	Locality	Neighbourhood	FGD
Maputo city	Ka Mpumoto	Urban			ALTO MAE 'A'	
		Urban			BAIRRO DE SOMMERSHIELD	Yes
		Urban			CENTRAL 'C'	
		Urban			POLANA CIMENTO 'B'	
	Ka Mavota	Urban			ALBASINE	
		Urban			FERROVIARIO	
		Urban			MAHOTAS	
		Urban			MAVALANE 'B'	
	Ka Mubukwana	Urban			BAGAMOIO	Yes
		Urban			INHAGOIA 'B'	
		Urban			MAGOANINE A	
		Urban			MAGOANINE C	
Gaza Province	Xai-Xai	Urban			BAIRRO 1	
		Urban			BAIRRO DE CIMENTO	Yes
		Urban			BAIRRO MACAWINE	
		Urban			UNIDADE	
	Bilene-Macia	Urban	BILENE MACIA	MUNICÍPIO DE BILENE-MACIA	BAIRRO 6	
		Urban	PRAIA DE BILENE	VILA DA PRAIA DE BILENE	CHILENGUE	Yes
		Rural	CHISSANO	INCAIA		
		Rural	MESSANO	MESSANO - SEDE		
	Mandlacaze	Urban	MANDLACAZE	MUNICÍPIO DE MANDLACAZE	B. JOSINA MACHEL	
		Urban	MANDLACAZE	MUNICÍPIO DE MANDLACAZE	B.CIMENTO	
		Rural	CHALALA	MUSSENGUE		
		Rural	MAZUCANE	CHIKAVANE		

Provinces	Districts	Type	Administrative post	Locality	Neighbourhood	FGD
Manica Province	Chimoio City	Urban		LOCALIDADE URBANA Nº1	25 DE JUNHO	
		Urban		LOCALIDADE URBANA Nº1	AGOSTINHO NETO	Yes
		Urban		LOCALIDADE URBANA Nº1	NHAMADJESSA	
		Urban		LOCALIDADE URBANA Nº2	CIRCULO DE MUDZINGADZE	
	Manica	Urban	CIDADE DE MANICA		IV Congresso	
		Urban	MESSICA	VILA DE MESSICA	A. MESSICA	
		Rural	MAVONDE	MAVONDE - SEDE		
		Rural	VANDUZI	PUNGUE SUL		Yes* ³⁰
	Sussundenga	Rural	SUSSUNDENGA	SUSSUNDENGA - SEDE		
		Rural	DOMBE	MATARARA		
		Rural	MUHOA	MUHOA - SEDE		
		Rural	SUSSUNDENGA	NHAUROMBE		
Nampula Province	Nampula City	Urban	MUATALA		BAIRRO MUATALA	
		Urban	MUHALA		MUAHIVIRE	
		Urban	NAMICOPO		NAMICOPO - SEDE	Yes
		Urban	URBANO CENTRAL		MILITAR	
	Meconta	Urban	MECONTA	VILA DE MECONTA	BAIRRO CORORONE	
		Urban	NAMIALO	VILA DE NAMIALO	CHAUNE A	
		Rural	CORRANE	CORRANE - SEDE		Yes
		Rural	NAMIALO	25 DE SETEMBRO		
	Ilha de Mocambique	Urban	LUMBO		LUMBO - SEDE	
		Urban	ILHA DE MOÇAMBIQUE		RAUL	
		Urban	ILHA DE MOÇAMBIQUE		AMISSE	
		Urban	LUMBO	--	AMPAPA	

³⁰ This community is not covered by a promoter.

Annex A-2: Sample frame Round 2

Criteria for selection of communities:

- One community per district
- One district per province
- Communities should cover both rural and urban areas (as per INE definition).
- Proportion with households with TV (data obtained from round 1 survey) should cover both low and high
- Communities with and without presence of M-Pesa promoters should be covered.
- Proportion with households with TV (as a proxy for household wealth), (data obtained from round 1 survey) should cover both low (no TV) and high (80% has TV).
- Average household income per person (living in the household) should cover a range [450 MT – 1,175 MT per person.

This results in the following communities selected for Round 2:

Table 11: Selected communities for round 2.

Provinces	Districts	Type	Administrative post/ Locality/Neighbourhood	HH income per person	M-Pesa promoter present	Proporti on with TV
Maputo city	Ka Mavota	Urban	/ /MAVALANE 'B'	1,157 Mt	Yes	80%
	Ka Mubukwana	Urban	/ /MAGOANINE C	1,133 Mt	Yes	79%
Gaza Province	Xai-Xai	Urban	/ /BAIRRO DE CIMENTO	1,154 Mt	Yes	67%
	Mandlacaze	Rural	CHALALA/MUSSENGUE/	981 Mt	Mixed	21%
Manica Province	Manica	Urban	MESSICA/ VILA DE MESSICA/ A. MESSICA	896 Mt	Yes	63%
	Sussundenga	Rural	SUSSUNDENGA/ NHAUROMBE/	791 Mt	No	37%
Nampula Province	Nampula City	Urban	NAMICOPO/ / NAMICOPO - SEDE	818 Mt	Yes	69%
	Meconta	Rural	NAMIALO/25 DE SETEMBRO /	423 Mt	No	0%

Annex B-1: Additional data from data collection Round 1

Table 12: Level of Education (Round 1, M-Pesa users N=588, Non-users N=591)

Level of education	M-Pesa user	Non-user
Did not go to school	3.1%	15.2%
Lower primary, EP1 = Class 1-5	7.7%	16.8%
Upper primary EP2, Class 6-7	15.0%	20.0%
Lower secondary, ESG1 Class 8-10	31.8%	27.9%
Upper secondary, ESG2, Class 11-12	35.4%	12.7%
University degree or higher education	6.0%	3.6%
Non-formal education but knows how to read and write	0.5%	1.4%
Other	0.7%	2.5%

Table 13: Level of Literacy (Round 1, M-Pesa users N=588, Non-users N=591)

Level of literacy	M-Pesa user	Non-user
Can read and write	94.0%	77.7%
Can read, but not write	2.2%	4.1%
Cannot read or write	3.1%	17.1%
Refuses to answer	0.7%	1.2%

Table 14: Average monthly household income (Round 1, M-Pesa users N=588, Non-users N=591)

Average monthly income	Pesa user	Non-user
< 1,500 MT	4.4%	10.5%
1,500 - 3,000 MT	12.2%	13.7%
3,001 - 6,000 MT	21.9%	15.9%
6,001 - 10,000 MT	11.7%	6.1%
10,001 - 20,000 MT	7.1%	2.0%
> 20,000 MT	1.9%	1.4%
Don't know	30.8%	40.4%
Declined, don't want to tell	9.9%	10.0%

Table 15: Assets in a household (M-Pesa users N=588, Non-users N=591)

Assets in a household	M-Pesa user	Non-user
Radio	59.4%	57.4%
Bicycle	26.7%	27.1%
Mobile phone	92.0%	69.4%
Smartphone	29.9%	18.1%
TV	64.1%	51.9%
Fridge/Freezer	54.9%	39.6%
Motorbike	23.6%	16.8%
Computer	17.3%	11.8%
Car	13.3%	9.8%
Other	3.2%	9.1%

Table 16: Usage of financial services (Round 1-Q217, M-Pesa users N=588, Non-users N=591)

Usage of financial services	M-Pesa user	Non-user
Bank	41.8%	19.8%
Micro Finance Institute (MFI)	1.2%	0%
Xitique	17.3%	11.5%
Savings group	6.8%	3.0%
Mobile money	92.2%	3.2%
Informal lenders	0.2%	0.2%
Insurance	1.7%	0.8%
Use family and/or friends to save or borrow money	0.5%	5.4%
Don't use any, keeps money in a safe place at home	2.9%	63.8%

Table 17: Methods used for saving for those that save money (M-Pesa users N=225, Non-users N=189)

Method used for saving	M-Pesa user	Non-user
Bank account	34.9%	27.5%
Mobile Money	57.3%	3.7%
Xitique	13.3%	8.5%
Savings group	13.3%	7.9%
I leave it with family or friends	2.4%	5.8%
I use a money guard	0.8%	4.8%
Here at home	4.7%	40.7%
Other	3.1%	10.2%

Table 18: Financial services (M-Pesa users N=588, Non-users N=591)

Financial services	M-Pesa user	Non-user
Have a loan	9.2%	3.4%
Receive remittances from others	85.9%	43.7%

Send remittances to others	72.6%	15.3%
----------------------------	-------	-------

Table 19: Frequency of M-Pesa services if ever used (Round 1, N=580)

How often do you use your M-Pesa account	Every day	Every week	Every month
Buying airtime	32.3%	33.9%	9.5%
Payment of bills	2.8%	12.1%	17.7%
Transfer money to someone	4.6%	23.6%	26.2%
Receive money	7.5%	27.9%	31.6%
Payment of goods	0.3%	1.9%	4.7%
Saving money	0.7%	3.3%	6.7%
Get cash from an agent	9.1%	39.8%	29.0%
Deposit cash at an agent	5.0%	33.4%	30.9%

Annex B-2: Additional data from data collection round 2

Figure 54: M-Pesa user representation per gender per province (Round 2: M-Pesa user N=448, Non-user N=383)

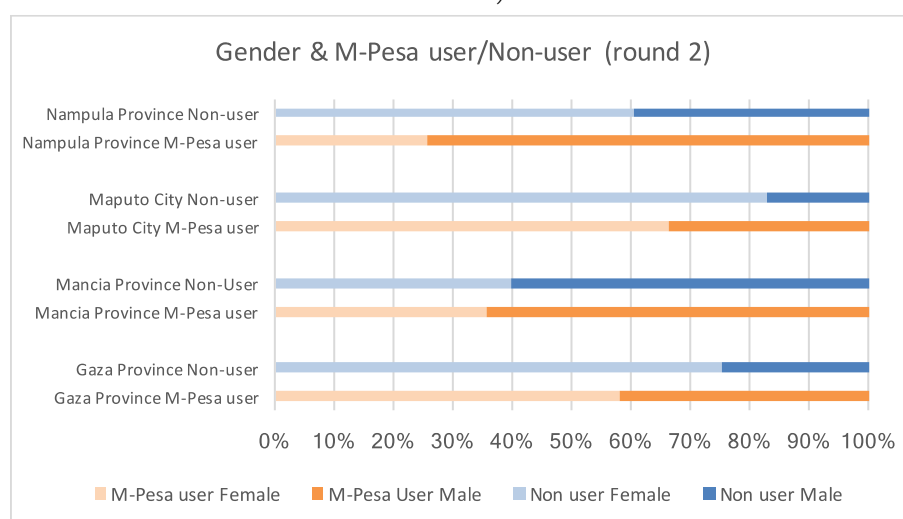


Table 20: Average monthly household income (Round 2: M-Pesa user N=448, Non-user N=383)

Average monthly income	M-Pesa user	Non-user
< 1,500 MT	8.5%	25.8%
1,500 - 3,000 MT	23.4%	23.5%
3,001 - 6,000 MT	23.4%	17.0%
6,001 - 10,000 MT	18.5%	8.1%
10,001 - 20,000 MT	5.1%	0.5%
> 20,000 MT	0.7%	0%
Don't know	15.2%	21.1%
Declined, don't want to tell	5.1%	3.9%

Figure 55: Average monthly household income (Round 2: M-Pesa user N=448, Non-user N=383)

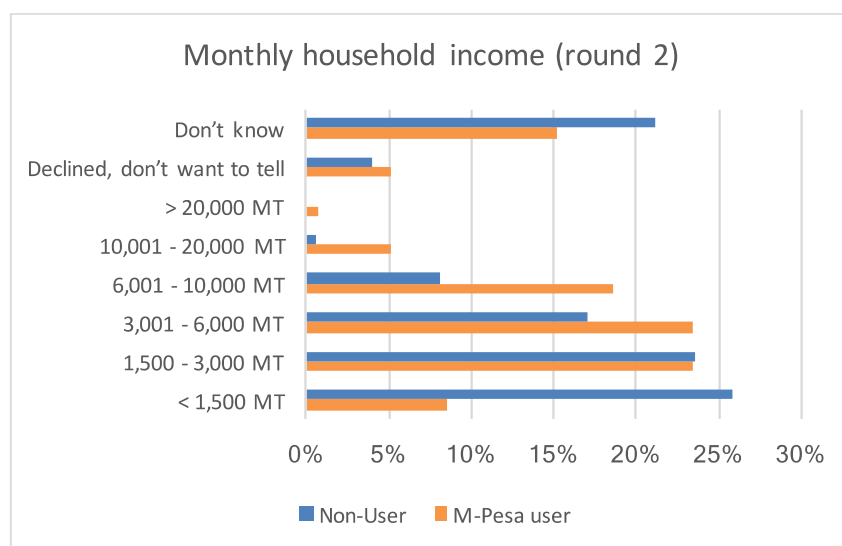


Figure 56: Average monthly household income disaggregated per province (Round 2: M-Pesa user N=448, Non-user N=383)

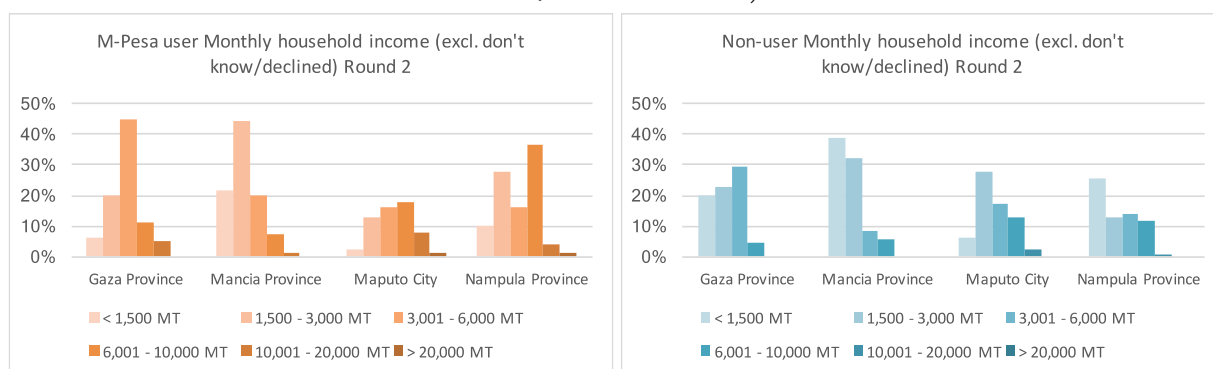
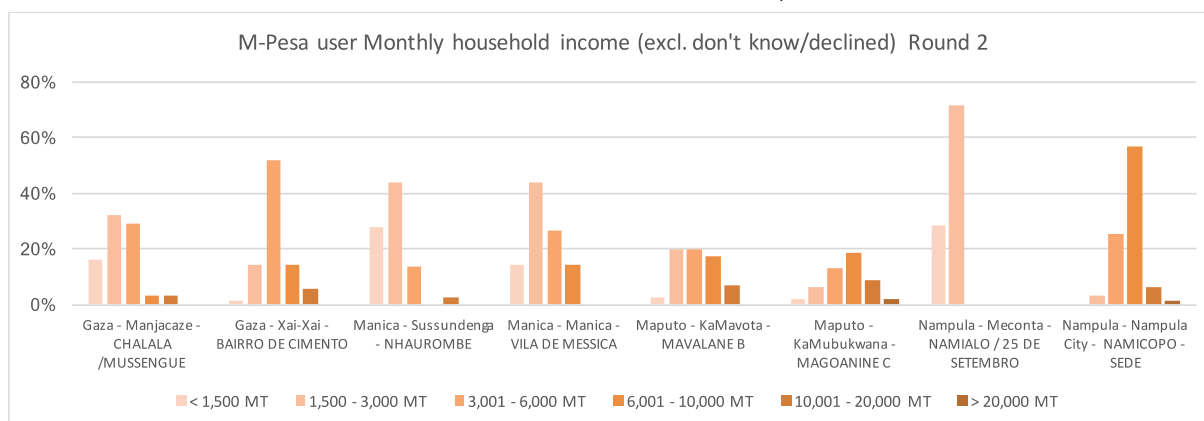


Figure 57: Average monthly household income disaggregated per district/community (Round 2: M-Pesa user N=448, Non-user N=383)



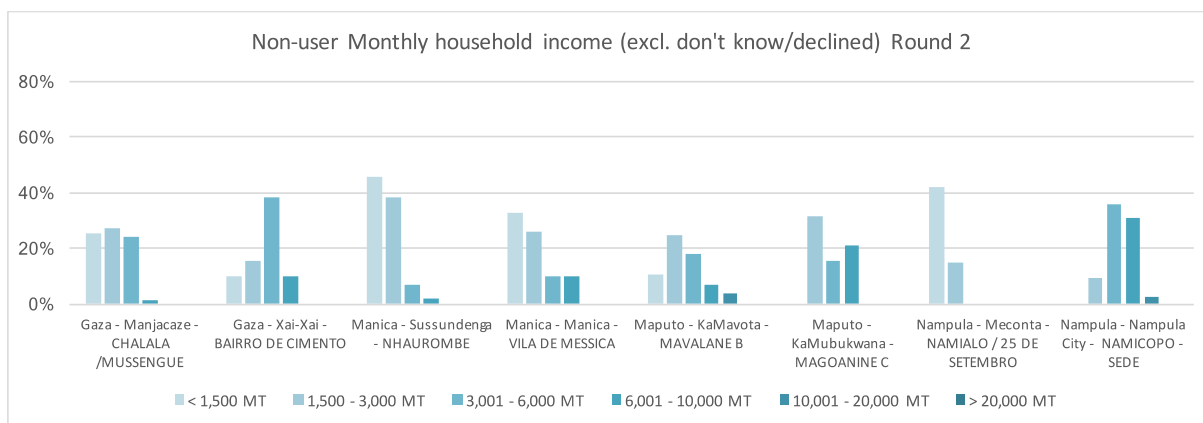


Figure 58: Frequency of using M-Pesa services (Round 2 N=453)

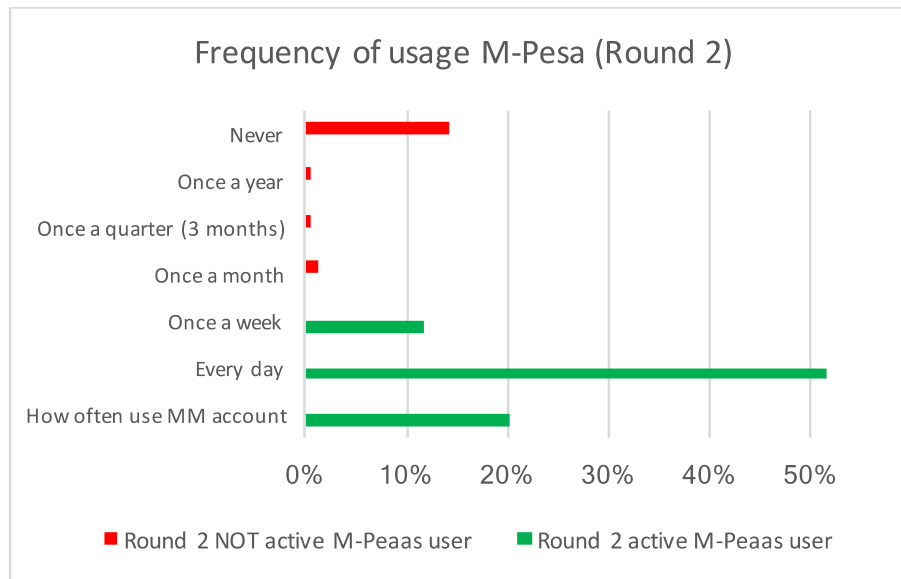
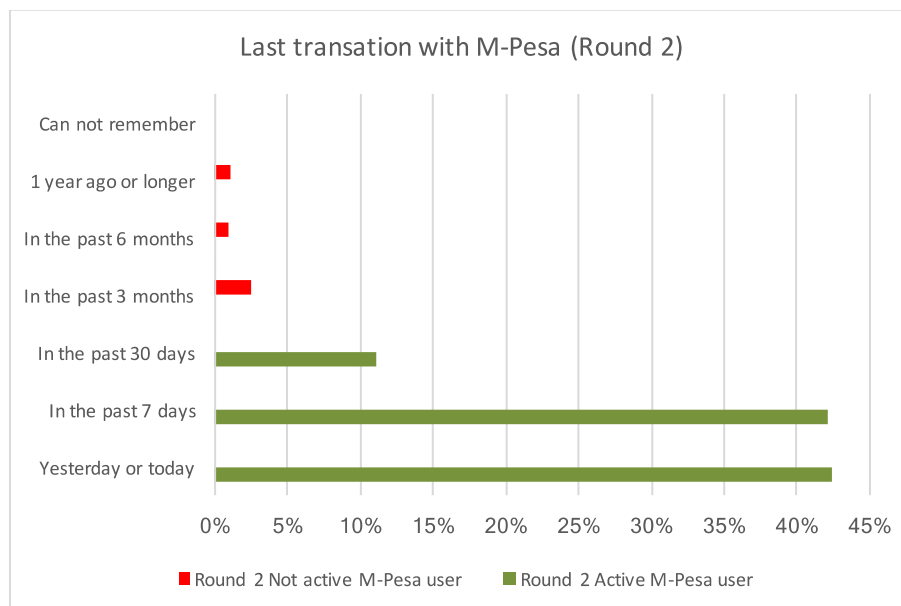


Figure 59: Last time you used mobile money transactions (Round 1 N=540, Round 2 N=453)



Annex C: Secondary data obtained from M-Pesa data

Annex C-1 Tariffs & commissions

Table 21: M-Pesa tariffs from-Pesa users in MT (August 2018)

Tariffs in Mt ³¹	Send money to non-registered customer
5 - 100	8
101 - 500	20
501 - 1.000	20
1.001 - 2.000	30
2.001 - 5.000	60
5.001 - 10.000	120
10.001 - 25.000	180

Tariffs in Mt	Send money to non-registered customer
20 - 500	2
501 - 1.000	4
1.001 - 1.500	6
1.501 - 2.000	8
2.001 - 2.500	10
2.501 - 3.000	12
3.001 - 4.000	14
4.001 - 5.000	16
5.001 - 10.000	20

Tariffs in Mt	Transfer money from a M-Pesa account to a Standard Bank or BCI account
100 - 1.000	10
1.001 - 2.000	20
2.001 - 5.000	40
5.001 - 10.000	80
10.001 - 15.000	100
15.001 - 20.000	120

³¹ Tariffs obtained from M-Pesa website: <https://www.vm.co.mz/en/M-Pesa2/Tariff-Plan>

Tariffs in Mt	Money Withdrawal (Registered customers)
20 - 100	4
101 - 1.000	10
1.001 - 2.000	20
2.001 - 5.000	40
5.001 - 10.000	80
10.001 - 15.000	100
15.001 - 20.000	120

Tariffs in Mt	Other transactions
Credelec purchase 10 a 100 MT	2
Credelec purchase 101 a 200 MT	3
Credelec purchase from 201 MT	5
Money Transfer reversals	50
Balance Enquiry	Free
Changing PIN	Free
Change Language	Free
Call Customer Care line 84111	Free
Buy airtime (10-2.000)	Free
Pay GoTv, DSTV, Zap, Startimes or TVCabo bills	Free

Annex C-2 Promoter growth data

Summarised promoter growth data, obtained from M-Pesa (July 2018)

Provinces	TOTAL new accounts opened (2016-2018)	Number of accounts that are currently defined as 'active'
Maputo City	431,962	366,836
Maputo Province	194,760	141,534
Gaza	199,691	158,268
Inhambane	159,589	126,995
Sofala	196,272	161,618
Manica	162,498	134,308
Tete	215,479	172,151
Cabo Delgado	91,510	64,580
Niassa	54,531	45,539
Zambezia	212,523	163,150
Nampula	410,081	321,272
Total	2,328,895	1,856,251

Annex D: Survey Tools

Annex D-1: M-Pesa users / Non-users Survey (Round 1)

Structure of the survey

(001 - 011) Preparations before entering a Household.

(A1 - A8)- Environmental information (one per community)

(100 - 109) Consent & screening questions: checking the category: M-Pesa user or Non-user

- M-Pesa user (Q107 = Yes)
- Non-user (Q106 = No), person is not a mobile money user
- Non-user (Q106 = Yes AND Q108=Yes) => person is using MKESH

(200 - 241) Demographic and financial behaviour survey for ALL (M-Pesa user and Non-user)

(300 - 338) for M-Pesa users only

(350 - 362) for M-Pesa user that is as also using MKESH (Q107 = Yes + Q108 = Yes)

(400 - 405) Non-User: No phone, or Phone but not any mobile money account

(500 - 510) Non-user: MKESH only

(E1) Closing question

1. Preparations before entering a household

	Code	Options	Instructions
001. Enumerator Name/ID			
002. Date / Time			
003. Province	1	Maputo City	
	2	Gaza Province	
	3	Manica Province	
	4	Nampula Province	
004. District	1	KaMpumo	Corresponding 3 districts will appear only for the selected province
	2	KaMavota	
	3	KaMubukwana	
	4	Xai-Xai	
	5	Bilene-Macia	
	6	Manjacaze	
	7	Sussendenga	
	8	Chimoio City	
	9	Manica	
	10	Nampula City	
	11	Meconta	
	12	Ilha de Mocambique	
005. Community			Corresponding Locations will appear only for the selected districts
006. GPS coordinates			Provided by tablet, make sure you are immediately outside the house
007. Area type (Rural or Urban)	1	Rural	As per INE definition

	2	Urban	
008. Is there a bank in the community?	0	No	Checked via local leader or observed personally by the team (supervisor, enumerators)
	1	Yes	
	2	Unknown	
009. Is there an M-Pesa agent in the community?	1	No	Checked via local leader or observed personally by the team (supervisor, enumerators) or (pre-)obtained from M-Pesa organisation
	0	Yes	
	2	Unknown	
010. Number of already surveyed M-Pesa users in this community (for the whole Maraxis team)			Number between [0 and 10] Enumerator needs to keep track of this (for the whole Maraxis team)
011. Number of already surveyed Non-users in this community (for the whole Maraxis team)			Number between [0 and 10] Enumerator needs to keep track of this (for the whole Maraxis team)

Environmental information (One per community)

	Code	Options	Instructions
A1 Does the community have a: (Yes = 1, No = 0)	1 / 0	Primary school	Checked via local leader, MPesa facilitators, or observed personally by the team (supervisor, enumerators).
	1 / 0	Secondary school	
	1 / 0	Bank	
	1 / 0	ATM	
	1 / 0	Money lenders	
	1 / 0	Vodacom Shop	
A2 What is the travel distance to nearest ATM	1	500m or less	
	2	500m - 2 km	
	3	2-5 km	
	4	5-10 km	
	5	> 10 km	
A3 What is the travel time to nearest ATM	1	15 mins or less	
	2	15 – 30 mins	
	3	30 mins – 1 hour	
	4	1 – 2 hours	
	5	> 2 hours	
A4 What is the travel distance to nearest Bank	1	500 m or less	
	2	500m - 1 km	
	3	2-5 km	
	4	5-10 km	
	5	> 10km	
A5 What is the travel time to nearest Bank	1	15 mins or less	
	2	15 – 30 mins	
	3	30 mins – 1 hour	
	4	1 – 2 hours	
	5	2+ hours	
A6 Mobile network coverage	1	Very good	
	2	Good	

	3	Poor	
	4	Very poor	
A7. How many MPesa agents are active in the community?		<hr/> [99 = Don't know]	Should be approximately within a radius of 2.5KM)
A8. How many MPesa promoters are active in the community?		<hr/> [99 = Don't know]	

2. Screening household (only if number of surveys of M-Pesa users and non-users are both < target of 10 per community)

Introduction

Good Morning/Afternoon. My name is _____, a research staff member hired by Maraxis to collect information for a mobile money research study of FSDMoç. FSDMoç is an organization based in Maputo that promotes financial services in Mozambique.

We are talking to adults (18+) in your community to find out about mobile money services. Mobile money is a way to transfer money through a mobile phone: pay money to others and/or or receive money from others. Your household was randomly selected to participate. This means it was chosen to participate by chance, like flipping a coin or picking any fruit from a basket without looking inside to choose.

Would you like to hear more about the study?

2a Consent phase for screening

I would like you to understand why we are undertaking this research and what you will be asked to do, so you may decide if you want to join, or not. I am going to read and explain the information in this form to you.

Information About the Research

We are talking to adults (18+) in your community to find out about mobile money services. Your household was randomly selected to participate. You were selected as part of a sample of households in Mozambique where mobile money services are provided. There will be approximately 800 other people taking part in the research from many communities in Mozambique. The interview will last about 20 minutes. During the interview, I will ask you questions about yourself, such as your age and education. There are no right or wrong answers to our questions. We just want to learn about you and what you think.

I may ask you to introduce us to other people living in your household who are 18+ so that we may ask them to participate in the study. I will explain the study to everyone I might want to interview, and ask for their permission before asking them questions.

This is a study. To check that we are all doing the study right, a field supervisor may observe your interview for a few minutes either at the beginning or at the end of the interview.

There are no costs for you to participate in this study.

Possible Risks

You can refuse to answer questions that you are uncomfortable with, and skip a question you do not want to answer. You may stop the interview at any time. We will protect what you tell us to the best of our ability, but there is always a chance someone can find out what you told something or us about you.

Possible Benefits

You may get no direct benefit from being in this study. You or others may benefit in the future from information learned in this study.

If You Decide Not to Be in the Research

You are free to decide if you want to be in this research or not.

Confidentiality

We will protect information about you and your taking part in this research to the best of our ability. We will not tell anyone about your participation or what you told us. We will not use your name in your name in the survey records or in any reports of the study. Any information we collect which clearly identifies you (for example, date of birth) will be kept confidential to the best of our ability. Data from this study will be shared with the sponsor, FSDMoç, and may be used for other research – but before it is shared all information, which identifies you will be removed.

Compensation

You will not receive compensation for your participation in the study.

Leaving the Research

If you want, you are free to stop talking to us at any time, without penalty, even after agreeing to be interviewed

If you have any questions about the study, you may contact: Anabela_Mabota of FSDMoç (+258) 827639870, Anabela_Mabota@FSDMoç.com

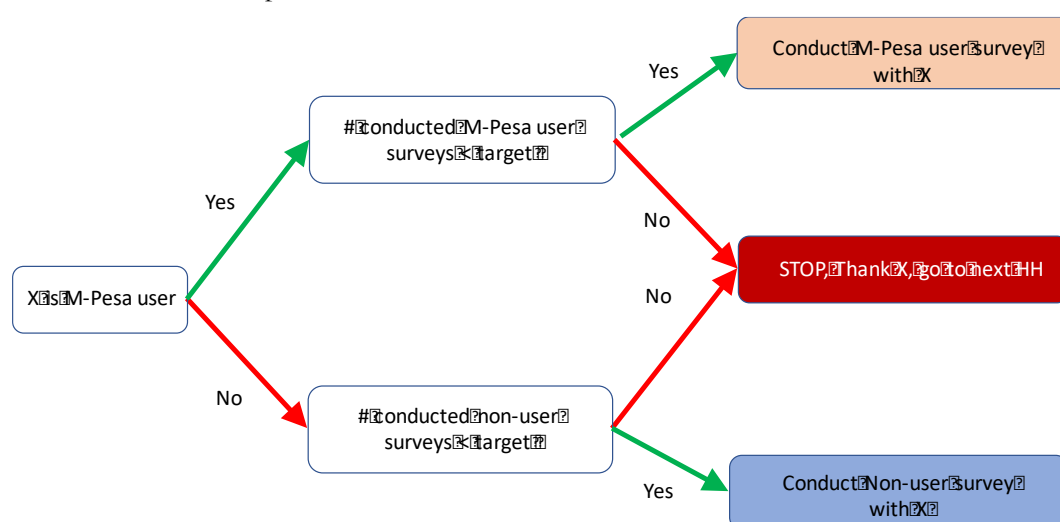
100 Does the participant (18+) give consent	0	No	If no check other adult in the household. If yes let the participant sign on the tablet and proceed with Q101.
	1	Yes	

2b HH screening

	Code	Options	Instructions
101. Age		_____	18+
102. Gender	0	Female	
	1	Male	
102a. Nationality	1	Mozambican	
	2	Other, specify	
103 Do you have a mobile phone	1	Yes	If No, go to 105
	0	No	
104. What network operator(s) do you use? Multiple answers possible!	1	Vodacom	
	2	Mcel	

	3	Movitel	
	4	Other specify_____	
105. Have you heard of mobile money services, such as M-Pesa or MKESH? They are also sometimes called [insert local synonym] and allow to send or receive money from family and friends via your mobile phone.	1	Yes	Make sure that any other local synonyms for mobile money are included.
	0	No	
106. Do you have a mobile money account?	1	Yes	If No, classify as NON-USER and continue with non-user survey (400) if number of non-user surveys < target. If number of non-user surveys at target then discontinue (End)
	0	No	
107. Do you have a mobile money account with M-Pesa? MPesa is also sometimes called [include local synonym].	1	Yes	If yes, classify as USER and continue with user survey, if number of user surveys < target. If number of user surveys is at target then discontinue.
	0	No	
108. Do you have an MKesh mobile money account? MKesh is also sometimes called [include local synonym].	1	Yes	If yes, classify as NON-USER and continue with non-user survey if number of non-user surveys < target. If number of non-user surveys at target then discontinue If no, continue with 109
	0	No	
109. Please specify, with whom you have a mobile money account?	1	Specify: _____	Probe questions 105 and 106 again as likely that there has been a misunderstanding in the process.

The following will be included in the skipping logic of the tool on the tablet to select who to be interviewed and what questions. Given the preparation questions 010 (Number of already surveyed M-Pesa users in this community) and question 011 (Number of already surveyed Non-users in this community). A “**M-Pesa user**” will be defined as a respondent who has answered question 107 with ‘Yes’. A “**Non-user**” will be defined as having answered question 106 with ‘No’, or 106 with ‘Yes’ and 107 with ‘No’. The tablet will define whether the respondent is a M-Pesa user or Non-user.



If “Person X” answered question 107 with YES, s/he is categorised as an M-Pesa user
 AND If number of interviewed M-Pesa users < target
 THEN interview “Person X” as “M-Pesa user” => go to question 200 + 300

Else go to next household

If “Person X” answered question 106 with NO, s/he is categorised as a “Non-user without mobile money account”

AND If number of interviewed Non-User < target

THEN interview “Person X” as “Non-User” => go to question 200 + 400

Else go to next household

If “Person X” answered question 106 with YES and answered question 107 with NO, s/he is categorised as a “Non-User with Mkesha account

AND If number of interviewed Non-users < target

THEN interview “Person X” as “Non-User” => go to question 200 + 500

Else go to next household

3a Demographic information (BOTH M-Pesa-users and non-users)

	Code	Options	Instructions
201. What is the highest level of education you achieved?	1	Did not go to school	
	2	Lower primary, EP1 = Class 1-5	
	3	Upper primary EP2, Class 6-7	
	4	Lower secondary, ESG1 Class 8-10	
	5	Upper secondary, ESG2, Class 11-12	
	6	University degree or higher education	
	7	Non-formal education but knows how to read and write	
	8	Other specify _____	
202. This may sound very basic to you, but this is just a routine question for us and I will appreciate your cooperation. Please can you let us know whether you can read or write in Portuguese? If you are unable to read or write please tell me. If yes then specify	0	Cannot read or write	
	1	Can read, but not write	
	2	Can read and write	
	3	Refuses to answer	
203 What is the first language in the household	1	Portuguese	
	2	Changana	
	3	Rona	
	4	Shona/Chitewe	
	5	Makua	
	6	Other specify _____	
205 What is your occupation?	1	Not employed	
	2	Government employee	
	3	Employee of a private company or NGO	
	4	Business owner	
	5	Trader/service provider	
	6	Farmer	
	7	Casual laborer	
	8	Student	

	9	Other specify _____	
206. What is your marital status?	1	Single (never married)	
	2	Married /living with partner	
	3	Widowed	
	4	Divorced	
	5	Other specify _____	
207. What is the average monthly income (in MT) of the Household?	1	Less than 1,500 MT	
	2	1,500-3,000 MT	
	3	3,001-6,000 MT	
	4	6,001-10,000 MT	
	5	10,001-20,000 MT	
	6	> 20,000 MT	
	7	Don't know	
	8	Declined, don't want to tell	
208. What is the main source of income for the Household?	1	Selling agricultural products	
	2	Selling products collected from nature	
	3	Income from own business	
	4	Casual labor	
	5	Wages / Salary from formal employment	
	6	Pension	
	7	Income from rentals	
	8	Money or goods sent by relatives	
	9	No income	
	10	Other, Specify _____	
209. How many children are living in your Household (below 18 years)? [99 Don't know]		[99 Don't know]	
210. How many adults are living in your Household (above 18 years)?		[99 Don't know]	
211. Do you / your family own the house or are you renting the house?	1	Owning	If own go to 212
	2	Renting	If renting go to 213
212 Did you/ your family build the house / buy it / inherit it?	1	Build the house ourselves	
	2	Bought the house	
	3	Inherited the house	
213. Do you have Electricity in the house?	1	Yes	
	0	No	
214. Do you have piped water in the house?	1	Yes	
	0	No	
215 What type of building is it /roof material?	1	Concrete building with tiles on the roof	
	2	Apartment block	
	3	Bricks building & Iron sheet on the roof	
	4	Wood/mud building with thatch on the roof	
	5	Other Specify _____	

216. What assets do you have? (multiple answers possible)	1	Radio	
	2	Bicycle	
	3	Mobile phone	
	4	Smartphone	
	5	TV	
	6	Fridge/Freezer	
	7	Motorbike	
	8	Computer	
	9	Car	

3b Financial Services Access and Usage

217a Please tell me which of the following financial services you sometimes use? (multi-select)	1	Banks	
	2	Microfinance institutions	
	3	Xitique	
	4	Savings group	
	5	Mobile money	
	6	Informal money lenders	
	7	Insurance	
	8	I use family and/or friends to save or borrow money	
	9	I don't use any of the above, I keep my money in a safe place at home.	
217b How often do you usually use it? [For all selected options 217a]	0	Every day	
	1	Once a week	
	2	Once a month	
	3	Once every 3 months	
	4	Once a year	
	5	Never	
	6	Can't remember	
217c When did you use it last? [For all selected options 217a]	1	Yesterday or today	
	2	In the past 7 days	
	3	In the past 30 days	
	4	In the past 90 days (three months)	
	5	More than 90 days ago but less than 6 months	
	6	6 months ago	
	7	1 year ago or longer	
	8	Can't remember	

Section on bank accounts

218. Do you have a bank account	0	No	If yes go to 219
	1	Yes	If no go to 223
219. What do you use the bank account for [Multiple options]	1	Pay bills	
	2	Save/Deposit money	

	3	Withdraw cash (ATM/Bank)	
	4	Receive money from others	
	5	Send money to People	
	6	Buy Airtime	
	7	Take a loan/credit	
	8	Other, specify _____	
If 219 selected X 219a-h: How often do you do X?	0	Every day	
	1	Once a week	
	2	Once a month	
	3	Once every 3 months	
	4	Once a year	
	5	Never	
	6	Can't remember	
220. For how long have you had a bank account?	1	0-3 Months	
	2	4-6 Months	
	3	7-12 Month	
	4	1-2 Years	
	5	> 2 Years	
221. Do you have a bankcard?	0	No	If no go to 223
	1	Yes	
222. Where do you use the bankcard? [Multiple options]	1	Deposit money	
	2	Withdraw money	
	3	Buy airtime	
	4	Pay bill	
	5	Pay in Store	
	6	Transfer money	
	7	Take a loan/credit	
	8	Other, specify _____	
223. I would now like you to think about putting aside or saving some of your money. Everyone keeps some cash at home for everyday expenses – this is not what I am referring to. I am talking about money that you are putting away over time with the intention to keep doing so to ensure that the amount increases over time and you have it available for future use. In the past 12months – did you save or put money aside for this purpose?	0	No	If no go to 226
	1	Yes	
224. What do you save money for? [Multiple answers possible]	1	Medical expenses	
	2	Living expenses for when you do not have money	
	3	Funeral expenses	
	4	Education expenses or school fees	
	5	Providing something for my family after I die	
	6	Retirement or old age	
	7	Buying or building a house to live in	

	8	Buying farming or fishing equipment	
	9	Start my own business	
	10	Expand my existing business	
	11	For unexpected emergencies	
	12	Other Specify_____	
225. How/where do you save money? [Multiple answers possible]	1	Bank account	
	2	Mobile Money	
	3	Xitique	
	4	Savings group	
	5	I lend it to people for interest	
	6	Here at home	
	7	I leave it with family or friends	
	8	I use a money guard	
	9	Other specify_____	
If multiple answers selected in 225: 225a What is the main method for saving money?	1	Bank account	
	2	Mobile Money	
	3	Xitique	
	4	Savings group	
	5	I lend it to people for interest	
	6	Here at home	
	7	I leave it with family or friends	
	8	I use a money guard	
	9	Other specify_____	
226. How often do you save money?	0	Every day	
	1	Once a week	
	2	Once a month	
	3	Once every quarter (3 months)	
	4	Once a year	
	5	Never	
	6	Can't remember	
227. How much money have you saved in the past month (the previous 30 days)?	1	<50 MT	
	2	51 – 100 MT	
	3	101 – 250 MT	
	4	251 – 500 MT	
	5	501 – 1000 MT	
	6	1001 – 2500 MT	
	7	2501 – 5000 MT	
	8	5001 – 10,000 MT	
	9	10,001 – 25,000 MT	
	10	> 25,000 MT	
	88	Do not want to tell	
	99	Don't know	
228. Do you presently have a loan/credit	0	No	If no go to 232

	1	Yes	
229. From where did you get the loan from (multiple answers possible)	1	Bank account	
	2	Mobile Money	
	3	Savings group	
	4	Friends/Family	
	5	Money lender	
	6	Other specify_____	
If multiple answers selected in 229: 229a Where did you borrow most money from?	1	Bank account	
	2	Mobile Money	
	3	Savings group	
	4	Friends/Family	
	5	Money lender	
	6	Other specify_____	
230. How often do you borrow money?	0	Every day	
	1	Once a week	
	2	Once a month	
	3	Once every 3 months	
	4	Once a year	
	5	Never	
	6	Can't remember	
231. How much money have you borrowed in the past month (the previous 30 days)?	1	< 50 MT	
	2	51 – 100 MT	
	3	101 – 250 MT	
	4	251 – 500 MT	
	5	501 – 1000 MT	
	6	1001 – 2500 MT	
	7	2501 – 5000 MT	
	8	5001 – 10,000 MT	
	9	10,001 – 25,000 MT	
	10	> 25,000 MT	
	88	Do not want to tell	
	99	Don't know	

Section on remittances

232. Do you receive money (remittances) from others?	0	No	If no go to 237
	1	Yes	
233. How do you receive money / remittances from others (multiple answers possible)	1	Bus/taxi driver/moto brings your cash	
	2	Friends or family brings cash	
	3	Bank transfer / paid into a bank account	
	4	Through mobile money	
	5	Cheque	
	6	Through an agent that represents an organization such as Western Union or Zoona	

	7	Other Specify _____	
If multiple answers selected in 233: 233a What is the main method for receiving money / remittances from others?	1	Bus/taxi driver/moto brings your cash	
	2	Friends or family brings cash	
	3	Bank transfer / paid into a bank account	
	4	Through mobile money	
	5	Cheque	
	6	Through an agent that represents an organization such as Western Union or Zoono	
	7	Other Specify _____	
234. When you receive money, how far away are the people who send it to you? [Multiple select]	1	From people within my community	
	2	From people in other communities in same district	
		From people in other districts in same Province	
	3	From people in other province	
	4	From people in other countries (outside Mozambique)	
235. How often do you receive money?	0	Every day	
	1	Once a week	
	2	Once a month	
	3	Once every 3 months	
	4	Once a year	
	5	Never	
	6	Can't remember	
236. How much money have you received in the past month (the previous 30 days)?	1	< 50 MT	
	2	51 – 100 MT	
	3	101 – 250 MT	
	4	251 – 500 MT	
	5	501 – 1000 MT	
	6	1001 – 2500 MT	
	7	2501 – 5000 MT	
	8	5001 – 10,000 MT	
	9	10,001 – 25,000 MT	
	10	> 25,000 MT	
	88	Do not want to tell	
	99	Don't know	
237. Do you send money (remittance) to others?	0	No	If no go to 300/400/500
	1	Yes	
238. How do you send money / remittances to others (multiple answers possible)	1	Bus/taxi driver/moto brings your cash	
	2	Friends or family brings cash	
	3	Bank transfer / paid into a bank account	
	4	Through mobile money	
	5	Cheque	

	6	Through an agent that represents an organization such as Western Union or Zoon	
	7	Other Specify _____	
If multiple answers selected in 238: 238a What is the main method to send money / remittances to others	1	Bus/taxi driver/moto brings your cash	
	2	Friends or family brings cash	
	3	Bank transfer / paid into a bank account	
	4	Through mobile money	
	5	Cheque	
	6	Through an agent that represents an organization such as Western Union or Zoon	
	7	Other Specify _____	
239. When you send money, how far away are the people who you send it to? [Multiple select]	1	To people within my community	
	2	To people in other communities in same district	
	3	To people in other districts in same Province	
	4	To people in other province	
	5	To people in other countries (outside Mozambique)	
240. How often do you send money?	0	Every day	
	1	Once a week	
	2	Once a month	
	3	Once every 3 months	
	4	Once a year	
	5	Never	
	6	Can't remember	
241. How much money have you sent in the past month (the previous 30 days)?	1	<50 MT	
	2	51 – 100 MT	
	3	101 – 250 MT	
	4	251 – 500 MT	
	5	501 – 1000 MT	
	6	1001 – 2500 MT	
	7	2501 – 5000 MT	
	8	5001 – 10,000 MT	
	9	10,001 – 25,000 MT	
	10	> 25,000 MT	
	88	Do not want to tell	
	99	Don't know	

4a M-Pesa users only

301 Is your MPESA account registered in your name or someone else's?	1	Registered in my name	
	2	Registered in spouses' name	

	3	Other (specify)	
302 Why did you/your spouse select M-Pesa as your mobile money service? [Multiple options]	1	Already have a Vodacom SIM	You/ your spouse will appear based on answer of Q301
	2	Cheapest	
	3	Best network coverage	
	4	Others house/community have M-Pesa	
	5	Only one available here	
	6	Promoter convinced me it was a good idea	
	7	Have the most Agents	
	8	Person I know recommended it to me	
	9	I had to receive money from someone else	
	10	I had to send money to someone else	
	11	I saw people using it and wanted to try it myself	
	12	I got a discount on my airtime	
	13	Most my friends/family members are already using it	
	14	I wanted to start saving money with an m-money account	
	15	Don't know	
	16	Other_____	
303. How long ago did you/your spouse register for your M-Pesa mobile account?	1	0-3 Months	You/ your spouse will appear based on answer of Q301
	2	4-6 Months	
	3	7-12 Month	
	4	1-2 Years	
	5	2+ Years	
	6	Can not remember	
304. Where did you/your spouse Enrol for M-Pesa?	1	With a promoter	You/ your spouse will appear based on answer of Q301
	2	With an agent	
	3	At a M-Pesa/Vodacom Shop	
	4	Friend/Family did it for me	
	5	Other_____	
	6	Can not remember	
305. Did anyone explain / show how to use the M-Pesa account?	0	No	If yes go to 306, else go to 307
	1	Yes	
	2	Can not remember	
306. Who explained it to you?	1	Promoter	
	2	Agent	
	3	Merchant	
	4	Family member	
	5	Friend	
	6	Other_____	
307. How frequently do you usually use M-Pesa?	1	Every Day	If never go to 308 Else go to 309
	2	Once a week	
	3	Once a month	

	4	Once a quarter (3 months)	
	5	Once a year	
	6	Cannot remember	
	7	Never	
308. Why not/never?	1	No money	Go to 324
	2	Do not know how to use it	
	3	Lost my phone	
	4	Forgot my pin code	
	5	Fees are too high	
	6	No one among my friends is using it	
	7	Do not trust it, heard of fraud on mobile money	
	8	My spouse does not allow me to	
	9	No particular reason	
	10	Other_____	
309. Have you used your M-Pesa account for any of the following? Multi select	1	Payment of bills	
	2	Transfer remittance send money to a person	
	3	Buying airtime	
	4	Receive money	
	5	Payment of goods	
	6	Saving money for future expenses	
	7	Get cash at an agent	
	8	Deposit cash at an agent	
	9	Other specify_____	
309a If payment of bills is selected: What kind of bills? [Multi select]	1	Energy / electricity	
	2	Water	
	3	Tax / Municipality	
	4	Other specify_____	
309b If transfer remittance send money to a person is selected: To whom? [Multi select]	1	Family members	
	2	Friends	
	3	Saving group	
	4	Other specify_____	
309c If Receive money selected: From who? [Multi select]	1	Family members	
	2	Friends	
	3	Saving group	
	4	Other specify_____	
309d If payment of goods selected: What goods? [Multi select]	1	Consumption e.g. Food	
	2	Tools/assets e.g. for farm	
	3	Gifts/Presents	
	4	Other specify_____	
310. => for 309 questions that are ticked How often on average do you use mobile money for? a) Payment of bills?	1	Every day	If never: why not? Specify -----
	2	Once a week	
	3	Once a month	
	4	Once a quarter (3 months)	

b) Transfer remittance send money to a person c) Buying airtime d) Receive money e) Payment of goods f) Saving money for future expenses g) Get cash at an agent h) Deposit cash at an agent i) Other specify_____	5	Once a year	
	6	Never	
	7	Don't know	
311 [for 309 questions that are ticked] How much money did you transact when you did this last? a) Payment of bills? b) Transfer remittance send money to a person c) Buying airtime d) Receive money e) Payment of goods f) Saving money for future expenses g) Get cash at an agent h) Deposit cash at an agent i) Other specify_____	1	< 50 MT	
	2	51 – 100 MT	
	3	101 – 250 MT	
	4	251 – 500 MT	
	5	501 – 1,000 MT	
	6	1,001 – 2,500 MT	
	7	2,501 – 5,000 MT	
	8	5,001 – 10,000 MT	
	9	10,001 – 25,000 MT	
	10	> 25,000 MT	
	88	Do not want to tell	
	99	Don't know	
312. How far away are the receivers of the money you send money to via M-Pesa? Multi-select	1	To people within my community	
	2	To people in other communities in same district	
	3	To people in other districts in same province	
	4	To people in other province	
	5	To people in other countries (outside Mozambique)	
	6	Don't know	
313. How far away are the senders of the money where you receive money via via M-Pesa? Multi-select	1	From people within my community	
	2	From people in other communities in same district	
	3	From people in other districts in same province	
	4	From people in other province	
	5	From people in other countries (outside Mozambique)	
	6	Don't know	
314. How much money do you have in your M-Pesa account now? If you withdraw all the money you have in the M-Pesa account how much money would you have?	1	< 50 MT	
	2	51 – 100 MT	
	3	101 – 250 MT	
	4	251 – 500 MT	
	5	501 – 1,000 MT	
	6	1,001 – 2,500 MT	
	7	2,501 – 5,000 MT	
	8	5,001 – 10,000 MT	
	9	10,001 – 25,000 MT	

	10	> 25,000 MT	
	88	Do not want to tell	
	99	Don't know	
315. What was the maximum amount you have ever had in your M-Pesa account?	1	< 50 MT	
	2	51 – 100 MT	
	3	101 – 250 MT	
	4	251 – 500 MT	
	5	501 – 1,000 MT	
	6	1,001 – 2,500 MT	
	7	2,501 – 5,000 MT	
	8	5,001 – 10,000 MT	
	9	10,001 – 25,000 MT	
	10	> 25,000 MT	
	88	Do not want to tell	
	99	Don't know	
316. Have you ever reached your daily limit (sending/receiving) on your M-Pesa account?	0	No	
	1	Yes	
	2	Don't know	
317. Have you ever reached your yearly limit (sending/receiving) on your M-Pesa account?	0	No	
	1	Yes	
	2	Don't know	
318 Do you know your M-Pesa daily transaction limit?	0	No	
	1	Yes, please indicate amount _____	
319. What benefits do you see using M-Pesa for financial services? [Multi-select]	1	Save time	
	2	Save transport cost	
	3	More secure transaction	
	4	Faster transactions	
	5	Ability to save & earn interest	
	6	More private	
	7	Fewer risks than carrying money	
	8	Lower cost	
	9	Other specify_____	
	10	I don't know	
320. What risk / dis-advantages do you see using M-Pesa for financial services? [Multi-select]	1	Loose phone	
	2	Loose pin-code/password	
	3	Might loose money	
	4	Enrolment process: no formal papers	
	5	Do not trust the provider/M-Pesa	
	6	Too expensive	
	9	Other specify_____	
	10	I don't know	
321. Do you know what is the M-Pesa fee per transaction is, if yes specify amount in MT?	0	No	
a) Deposit cash?	1	Yes, specify amount _____	
	2	Somehow but not exactly	

b) Withdraw cash at agent? c) Withdraw cash at ATM? d) Transfer cash to other M-Pesa user? e) Transfer money to M-kesh user? f) Payment of bills?	3	Depends on the amount of the transaction	
	4	Cannot remember	
322. At what place do you undertake your M-Pesa transactions? [Multi select]	1.	Local airtime dealer	Only if used M-Pesa [Q310]
	2	Local official agent	
	3	ATM	
	4	At trader	
	5	At home	
	6	Any where	
	7	Other Specify_____	
323. How do you get money into your M-Pesa account [Multi select]	1	Deposit cash myself at agent	Only if used M-Pesa [Q310]
	2	Receive from other persons via mobile money	
	3	Other Specify_____	
	4	Don't know	
324. Do you know how to operate your M-Pesa or you normally ask help from others	1	Yes, I know	
	2	No, I don't know but ask help from others	
	3	I don't, know and hence are not using my M-Pesa account	
325. Do you know what the role of M-pesa agents is?	0	No	If no explain!
	1	Yes	
326. How many M-Pesa agents are in the community		Number [99= Don't know]	
327. How many M-Pesa agents you use for services?		Number [99 = Don't know]	
328. Do you know how close away the nearest M-pesa agent is?	1	Up to 10 min walk	
	2	Between 10 and 30 min walk	
	3	Between 30 and 60 min walk	
	4	Between 1 and 2 hours walk	
	5	More than 2 hours walk	
	6	Don't know	
329. Do you go to the same M-pesa agent when you need assistance?	0	No, any agent that I can find	
	1	Yes, most of the time	
	2	Yes, always	
330. What problems have you encountered with M-Pesa agents (Multi select)	1	Difficult to find (too few / move around all the time)	
	2	Don't have enough cash when you want money	
	3	Insist to pay for goods they selling stead of cash	
	4	Short service times (not 24-7)	
	5	Often closed	
	6	Had no problems	
	7	Other, Specify_____	

331. Do you know what the role of promoters is?	0	No	If no explain
	1	Yes	
332. Have you seen any M-Pesa promoters in the community	0	No	
	1	Yes	
	2	Do not know	
333. Are you saving more money now you have a M-Pesa account?	0	No	
	1	Yes	
	2	Don't know	
334. Are you using other financial alternative services differently since you have M-Pesa?	0	No, the same	If no go to 336
	1	Yes, less	
	2	Yes More	
If 334 = yes, 335 a Why less 335 b why more		_____	
336. For what type of transactions you prefer using other financial services over M-Pesa? [Multi select]	0	Payment of bills	
	1	Transfer remittance send money to a person	
	2	Buying airtime	
	3	Receive money	
	4	Payment of goods	
	5	Get cash	
337. Why is that for each of the selected Get cash items Q336? [Multi select]	1	When large amount of money is involved?	
	2	When small amount of money is involved?	
	3	When I need paper proof of payment	
	4	Required by the receiver	
	5	As the receiver has no mobile money account	
	6	The alternatives are easier	
	7	The alternatives are safer	
	8	The alternatives are cheaper	
	9	Other _____	
338. Would you recommend M-Pesa to others?	0	No, why not? ----	
	1	Yes, why? ----	

4b MPESA user + MKESH user (if YES to question 107 + 108)

351 Is your MKESH account registered in your name or someone else's?	1	Registered in my name	
	2	Registered in spouses' name	
	3	Other _____	
352 Why did you select Mkesk as your mobile money service? [Multiple options]	1	Already have a MCEL SIM	
	2	Cheapest	
	3	Best network coverage	
	4	Others house/community have Mkesk	
	5	Only one available here	
	6	Have the most Agents	
	7	Person I know recommended it to me	

	8	I had to receive money from someone else	
	9	I had to send money to someone else	
	10	I saw people using it and wanted to try it myself	
	11	I got a discount on my airtime	
	12	Most my friends/family members are already using it	
	13	I wanted to start saving money with an m-money account	
	14	A promoter convinced me it was a good idea	
	15	Don't know	
	16	Other_____	
353. How long ago did you enrol for your Mkesh mobile account?	1	0-3 Months	
	2	4-6 Months	
	3	7-12 Month	
	4	1-2 Years	
	5	2+ Years	
	6	Can not remember	
354. Where did you Enrol for Mkesh?	1	With a promoter	
	2	With an agent	
	3	At a Mkesh /Mcel Shop	
	4	Friend/Family did it for me	
	5	Other_____	
	6	Can not remember	
355 How frequent do you usually use Mkesh?	1	Every Day	If never go to 357 Else go to 356
	2	Once a week	
	3	Once a month	
	4	Once a quarter (3 months)	
	5	Once a year	
	6	Never	
	7	Can not remember	
356 Why not/never?	1	No money	Go to 358
	2	Do not know how to use it	
	3	Lost my phone	
	4	Forgot my pin code	
	5	Fees are too high	
	6	No one among my friends is using it	
	7	Do not trust it, heard of fraud on mobile money	
	8	My spouse does not allow me to	
	9	No particular reason	
	10	Other_____	
357 What do you use your Mkesh account for? Multi select	1	Payment of bills	
	2	Transfer remittance send money to a person	
	3	Buying airtime	

	4	Receive money	
	5	Payment of goods	
	6	Saving money for future expenses	
	7	Other specify_____	
358 How much money do you have in your Mkesh account now?	1	< 50 MT	
	2	51 – 100 MT	
	3	101 – 250 MT	
	4	501 – 1,000 MT	
	5	1,001 – 2,500 MT	
	6	2,501 – 5,000 MT	
	7	5,001 – 10,000 MT	
	8	10,001 – 25,000 MT	
	9	> 25,000 MT	
	88	Dot want to tell	
	99	Don't know	
359. What benefits do you see using Mkesh for financial services? [Multi-select]	1	Save time	
	2	Save transport cost	
	3	More secure transaction	
	4	Faster transactions	
	5	Ability to save & earn interest	
	6	More private	
	7	Fewer risks than carrying money	
	8	Lower cost	
	9	Other specify_____	
	10	I don't know	
360. What risk / dis-advantages do you see using Mkesh for financial services? [Multi-select]	1	Loose phone	
	2	Loose pin-code/password	
	3	Might loose money	
	4	Enrolment process: no formal papers	
	5	Do not trust the provider/MKesh	
	6	Too expensive	
	7	Other specify_____	
	8	I don't know	
	9	Can not remember	
361. Overall do you use M-Pesa more than MKESH or MKESH more than M-Pesa?	1	Use MPESA more	
	2	Use MKesh more	
	3	Use both the same amount	
	4	Don't know / Can't recall	
If Q361 other than don't know: 362. What is the main reason for your answer		

5 Non-users

5a) Not a mobile phone-owner + mobile phone-owner but not any mobile money account

401. Why don't you have a mobile phone (Main reason) [If Q103 = NO]	1	I do not have money to buy a phone	
	2	I do not have money to buy airtime	
	3	I do not know how to use a mobile phone	
	4	Network problems in our area	
	5	It was stolen/lost	
	6	It is time consuming	
	7	I can not charge a phone, no electricity	
	8	Not allowed by my spouse	
	9	No need, I can use one of my family members when needed	
	10	No specific reason	
		11	
402. Have you heard of Mobile Money: M-Pesa/M-Kesh?	0	No	If yes Go to 404 If no Go to 403
	1	Yes	
403. How did you hear about M-Pesa/MKESH / mobile money?	1	Promoter	
	2	Friends/Family	
	3	Billboard	
	4	Radio/TV	
	5	Community leader	
		6	
404. Why don't you have a mobile money account? [Multi-select]	1	Too young when I wanted it	
	2	I don't have money	
	3	Too costly	
	4	I don't have documents needed to open account	
	5	To difficult to use	
	6	I do not need, I use a bank	
	7	I do not need, I do not do ant transactions	
	8	Never thought of it	
	9	Not approved by my religion	
	10	I do not know what it is	
	11	No promoters around	
	12	No agents around	
	13	I don't know where/how to open an account	
	14	Not safe (loose money/stolen)	
	15	I don't know anybody that has a mobile money account.	
	16	I don't have a mobile phone	
	17	I am using some one else's mobile money account	
		18	

405. Do you know anybody that has a mobile money account?	0	No	
	1	Yes	
405a If yes who? [multi select]	1	Family member	
	2	Friend	
	3	Neighbor	
	4	Local leader	
	5	Other _____	

5b) Mobile phone owner + MKESH user but not MPESA user

501 Is your MKESH account registered in your name or someone else's?	1	Registered in my name	
	2	Registered in spouses' name	
	3	Other _____	
502 Why did you/your spouse select Mkesk as your mobile money service? [Multiple options]	1	Already have a MCEL SIM	You/ your spouse will appear based on answer of Q501
	2	Cheapest	
	3	Best network coverage	
	4	Others house/community have MKESH	
	5	Only one available here	
	6	Have the most Agents	
	7	Person I know recommended it to me	
	8	I had to receive money from someone else	
	9	I had to send money to someone else	
	10	I saw people using it and wanted to try it myself	
	11	I got a discount on my airtime	
	12	Most my friends/family members are already using it	
	13	I wanted to start saving money with an m-money account	
	14	A promoter convinced me it was a good idea	
	15	Don't know	
	16	Other _____	
503. How long ago did you/your spouse enrol for your Mkesk mobile account?	1	0-3 Months	You/ your spouse will appear based on answer of Q501
	2	4-6 Months	
	3	7-12 Month	
	4	1-2 Years	
	5	2+ Years	
	6	Can not remember	
504. Where did you/your spouse Enrol for Mkesk?	1	With a promoter	You/ your spouse will appear based on answer of Q501
	2	With an agent	
	3	At a Mkesk /Mcel Shop	
	4	Friend/Family did it for me	
	5	Other _____	
	6	Can not remember	
	1	Every Day	

505 How frequent do you usually use Mkesh?	2	Once a week	If never go to 507 Else go to 506
	3	Once a month	
	4	Once a quarter (3 months)	
	5	Once a year	
	6	Never	
	7	Can not remember	
506 Why not/never?	1	No money	Go to 508
	2	Do not know how to use it	
	3	Lost my phone	
	4	Forgot my pin code	
	5	Fees are too high	
	6	No one among my friends is using it	
	7	Do not trust it, heard of fraud on mobile money	
	8	My spouse does not allow me to	
	9	No particular reason	
	10	Other_____	
507 What do you use your Mkesh account for? Multi select	1	Payment of bills	
	2	Transfer remittance send money to a person	
	3	Buying airtime	
	4	Receive money	
	5	Payment of goods	
	6	Saving money for future expenses	
	7	Other specify_____	
508 How much money do you have in your Mkesh account now?	1	< 50 MT	
	2	51 – 100 MT	
	3	101 – 250 MT	
	4	501 – 1,000 MT	
	5	1,001 – 2,500 MT	
	6	2,501 – 5,000 MT	
	7	5,001 – 10,000 MT	
	8	10,001 – 25,000 MT	
	9	> 25,000 MT	
	88	Dot want to tell	
509. What benefits do you see using Mkesh for financial services? [Multi-select]	99	Don't know	
	1	Save time	
	2	Save transport cost	
	3	More secure transaction	
	4	Faster transactions	
	5	Ability to save & earn interest	
	6	More private	
	7	Fewer risks than carrying money	
	8	Lower cost	
	9	Other specify_____	

	10	I don't know	
510. What risk / dis-advantages do you see using Mkesh for financial services? [Multi-select]	1	Loose phone	
	2	Loose pin-code/password	
	3	Might loose money	
	4	Enrolment process: no formal papers	
	5	Do not trust the provider/MKesh	
	6	Too expensive	
	7	Other specify_____	
	8	I don't know	
	9	Can not remember	

Ending the Questionnaire:

Many thanks for your participation

E001. Comments: any problems encountered during the survey? Specify

Annex D-2: KII-Agents Guide

Informed Consent

Introduction

Good Morning/Afternoon. My name is _____, a research staff member hired by Maraxis to collect information for a mobile money research study of FSDMoç. FSDMoç is an organization based in Maputo that promotes financial inclusion in Mozambique.

I would like you to understand why we are undertaking this study and what you will be asked to do, so you may decide if you want to join, or not. I am going to read and explain the information in this form to you.

Purpose of Research

We are talking to adults, users in your community to find out about mobile money services. Mobile money is a way to transfer money through a mobile phone: pay money to others and/or or receive money from others. There will be approximately 800 other people taking part in the research from many communities in Mozambique, as well as agents, promoters and M-Pesa staff. The interview will last about 45-60 minutes.

Your Involvement

If you choose to take part in this research, you will be interviewed at length with regard to M-Pesa and your role as an agent. We will not ask you sensitive or personal questions during the interview. There are no right or wrong answers to our questions. We just want to learn from you and what you think about mobile services. We shall be recording our conversation to facilitate with our transcription. If you do not wish to be audio-recorded, you may choose not to take part.

Voluntary Participation

Your participation in this research is voluntary. You are free to stop taking part at any time. There will be no penalty to you or your organization/group if you choose not to take part.

Confidentiality

We will keep the information you tell us confidential. We will not write your name in our notes or in any report about this research, but we will keep track of your participation with an assigned Participant ID #. Your name will only be connected to your Participant ID # in this consent form and in study records used to track participants. Your name will not be connected to any data. We will protect information about you and your taking part in this research to the best of our ability. We will not tell anyone about your participation or what you told us. We will not use your name in your interview record and will not be used in any reports of the study. Any information we collect which clearly identifies you (for example, date of birth) will be kept confidential to the best of our ability. Data from this study will be shared with the sponsor, FSDMoç, and may be used for other research – but before it is shared all information, which identifies you will be removed.

Risks and/or Discomforts

We do not think there are any serious risks from participating in this study. There is a risk you may feel uncomfortable with some of the questions we ask. You may refuse to answer any question. You may choose to stop taking part at any time. Although we will keep the information you tell as safe as we can, there is always the chance someone may find out something about you.

Questions

If you have any questions about the study, you may contact: Anabela_Mabota of FSDMoç (+258) 827639870, Anabela_Mabota@FSDMoç.com

Do you wish to participate in this Interview?

Individual Participant signature:

Introductions 5 minutes

Interviewer: Ask the questions and turn the recorder on.

Turn audio recorder on.

Introduction of the Agent

- Tell me about your business. What are your business activities?

Probing questions if not addressed yet:

How did you become an M-Pesa agent and what you do as an agent?

When did you become an agent and what are requirements of becoming M-Pesa agent?

Was training needed a prerequisite of becoming an agent?, Can you describe the environment you work in in terms of competition?

- Why are you still an M-Pesa agent?

Probing questions if not addressed:

Advantages and challenges as an M-Pesa agent, relationship between the agent and M-Pesa staff and modus operandi (defined targets between M-Pesa and yourself, frequency of contact with M-Pesa staff).

Objective 1: Improve the understanding of the use of mobile money in Mozambique

- Can you describe to me the type of clients you serve?

Probing question if not mentioned already:

If he/she keeps track of the clients and if yes how, women, men, youth? How many M-Pesa clients do you serve on average per day? Are most of them literate or you have to also train the M-Pesa users sometimes on how to use their account? How often do clients come to you because they have forgotten their pin code and what do you do?

- What changes with regard to clientele have you observed ever since you started working as an M-Pesa agent?

Probing question if not mentioned already:

Whether clients have decreased or increased, what type of clientele has increased or decreased, reasons?

- Are your clients individuals or sometimes savings groups or associations do seek M-Pesa services?

If yes for savings groups and associations:

What services do they seek and does M-Pesa provide these services? In your opinion what should be done to respond to the needs of this type of clients

- On average how much do you earn per day providing M-Pesa services?

Probing question if not mentioned already:

What in your opinion should be done by M-Pesa and yourself to ensure that the business is boosted to help you earn more profits?

- Do you also work as Mesh agent? How does M-Pesa compare with M-Kesh?

Probing question if not mentioned already:

Services that bring you most clients, withdraw rates/fees for both? Challenges and advantages?)

- In your opinion what limits your M-Pesa clients to using their accounts and what should be done to rectify the situation

Probing question if not mentioned already:

Your clients commonly seek what M-Pesa services? What services do they seek that are not offered by M-Pesa?

Objective 2: Opportunities and challenges in mobile money market

- What do you think M-Pesa should do to boost the M-Pesa uptake?

Probing questions if not answered:

Does M-Pesa provide promotional materials? How often do you contact M-Pesa staff and for what issues?

- Are there limits to cash deposits and withdrawals? What is your opinion towards this?

Probing question

How often do you have to decline a client's request because it is above or below limit?

- What main challenges have you faced as a mobile money agent in this community?

Probing questions if not responded:

Whether people had tried to steal from him/her, if she/he has insurance and whether this is provided by M-Pesa? Who do you go to if faced by technical problems? What complaints do you receive from clients about M-Pesa?

- Can you please explain to me how you replenish cash?

Probing questions if not responded: Have you ever ran out of cash? What causes or caused you to run out of cash? How often do you run out of cash? In such circumstances what do you do?

- Do you work with the M-Pesa promoters? What is your opinion with regard to the M-Pesa promoters?

Probing question if not asked:
What should be improved with regard to the promoters network?

Many thanks for your participation, we have now come to the end of our discussions, do you have anything you would like to highlight that we did not address already?

Turn audio recorder off.

Annex D-3: KII-Promoters Guide

Informed Consent

Introduction

Good Morning/Afternoon. My name is _____, a research staff member hired by Maraxis to collect information for a mobile money research study of FSDMoç.

I would like you to understand why we are doing this research study and what you will be asked to do, so you may decide if you want to join, or not. I am going to read and explain the information in this form to you.

Purpose of Research

We are talking to adults, users in your community to find out about mobile money services. Mobile money is a way to transfer money through a mobile phone: pay money to others and/or or receive money from others. There will be approximately 800 other people taking part in the research from many communities in Mozambique, as well as agents, promoters and M-Pesa staff. The interview will last about 45-60 minutes.

Your Involvement

If you choose to take part in this research, you will be interviewed at length with regard to M-Pesa and your role as a promoter. We will not ask you sensitive or personal questions during the interview. There are no right or wrong answers to our questions. We just want to learn about you and what you think. We shall be recording our conversation as highlighted earlier on to facilitate with our transcription. If you do not wish to be audio-recorded, you may choose not to take part.

Voluntary Participation

Your participation in this research is voluntary. You are free to stop taking part at any time. There will be no penalty to you or your organization/group if you choose not to take part.

Confidentiality

We will keep the information you tell us confidential. We will not write your name in our notes or in any report about this research, but we will keep track of your participation with an assigned Participant ID #. Your name will only be connected to your Participant ID # in this consent form and in study records used to track participants. Your name will not be connected to any data. We will protect information about you and your taking part in this research to the best of our ability. We will not tell anyone about your participation or what you told us. We will not use your name in your interview record and will not be used in any reports of the study. Any information we collect which clearly identifies you (for example, date of birth) will be kept confidential to the best of our ability. Data from this study will be shared with the sponsor, FSDMoç, and may be used for other research – but before it is shared all information, which identifies you will be removed.

Risks and/or Discomforts

We do not think there are any serious risks from participating in this study. There is a risk you may feel uncomfortable with some of the questions we ask. You may refuse to answer any question. You may choose to stop taking part at any time. Although we will keep the information you tell as safe as we can, there is always the chance someone may find out something about you.

Questions

If you have any questions about the study, you may contact: Anabela_Mabota of FSDMoç (+258) 827639870, Anabela_Mabota@FSDMoç.com

Do you wish to participate in this Interview?

Individual Participant signature:

Introductions 5 minutes

Interviewer: Do not read the Research questions (Q or objectives), they are guiding directions to ensure all the research questions are covered!

Turn audio recorder on.

Introduction of the Promoter

- Tell me about your work, how you became an M-Pesa promoter?

Probing questions if not addressed yet:

When did you become M-Pesa promoter? What were requirements of becoming M-Pesa promoter? Was training part of the prerequisite of becoming M-Pesa promoter? How is your work as a promoter in terms of competition? Do you work as promoter full or part time?

- Why are you still an M-Pesa promoter?

Probing questions if not addressed:

Advantages and challenges as M-Pesa promoter, Describe how you work with the agents and M-Pesa staff (defined targets between M-Pesa, agents and yourself)?

Objective 1: Improve the understanding of the use of mobile money in Mozambique

- Can you describe to me the type of clients you serve?

Probing question if not mentioned already:

If he/she keeps track of the clients and if yes how, women, men, youth? How many M-Pesa clients do you serve on average per day? Are most of them literate or you have to also train the M-Pesa users sometimes on how to use their account?

- What changes with regard to clientele have you observed ever since you started working as M-Pesa promoter?

Probing question if not mentioned already:

Whether clients have decreased or increased, what type of clientele has increased or decreased, reasons?

- Are your clients' individuals or groups? Are there associations or savings groups that come to you to request for some services? If yes what kind of services? Does M-Pesa provide these services to the groups? In your opinion what should be done in this regard?

- On average how much do you earn per day providing M-Pesa services?

Probing questions if not answered:

- How does M-Pesa compare with M-Kesh?

Probing questions:

Services that bring you most clients, withdraw rates/fees for both? Challenges and advantages?

- In your opinion what limits your M-Pesa clients from using their accounts and what should be done to rectify the situation?

Probing question if not answered:

Your M-Pesa clients commonly seek what M-Pesa services from you? What services do they seek that are not offered by M-Pesa?

Objective 2: Opportunities and challenges in mobile money market

- Tell me more about your job: do you have a permanent location?
- How many clients do you sign up per day?
- How do you encourage people to sign up for M-Pesa?

Probing questions if not answered:

Does M-Pesa provide promotional materials to you? How often do you contact M-Pesa staff or the agents and for what issues?

- As a promoter do you receive deposits and accept withdrawals?

Probing question:

If yes, how often do you have to decline a client's request because it is above or below limit?

- What are main challenges have you faced as a mobile money promoter in this community?

Probing questions if not responded:

What in your opinion should be done to improve this situation?

- What complaints do you clients give you and how do you think these can be resolved?

Probing questions:

Do you charge fees your clients and how much is this or what sort of services do you charge your clients for?

Many thanks for your participation, we have now come to the end of our discussions, do you have anything you would like to highlight that we did not address already?
Turn audio recorder off.

Annex D-4: KII-M-Pesa Staff Guide

Informed Consent

Introduction

Good Morning/Afternoon. My name is _____, a research staff member hired by Maraxis to collect information for a mobile money research study of FSDMoç.

I would like to understand why we are undertaking this study and what you will be asked to do, so you may decide if you want to join, or not. I am going to read and explain the information in this form to you.

Purpose of Research

We are talking to adults, users in your community to find out about mobile money services. Mobile money is a way to transfer money through a mobile phone: pay money to others and/or or receive money from others. There will be approximately 800 other people taking part in the research from many communities in Mozambique, as well as agents, promoters and M-Pesa staff. The interview will last about 45-60 minutes.

Your Involvement

If you choose to take part in this research, you will be interviewed at length with regard to M-Pesa and your role as agent. We will not ask you sensitive or personal questions during the interview. There are no right or wrong answers to our questions. We just want to learn about you and what you think. We shall be recording our conversation as highlighted earlier on to facilitate with our transcription. If you do not wish to be audio-recorded, you may choose not to take part.

Voluntary Participation

Your participation in this research is voluntary. You are free to stop taking part at any time. There will be no penalty to you or your organization/group if you choose not to take part.

Confidentiality

We will keep the information you tell us confidential. We will not write your name in our notes or in any report about this research, but we will keep track of your participation with an assigned Participant ID #. Your name will only be connected to your Participant ID # in this consent form and in study records used to track participants. Your name will not be connected to any data. We will protect information about you and your taking part in this research to the best of our ability. We will not tell anyone about your participation or what you told us. We will not use your name in your interview record and will not be used in any reports of the study. Any information we collect which clearly identifies you (for example, date of birth) will be kept confidential to the best of our ability. Data from this study will be shared with the sponsor, FSDMoç, and may be used for other research – but before it is shared all information, which identifies you, will be removed.

Risks and/or Discomforts

We do not think there are any serious risks from participating in this study. There is a risk you may feel uncomfortable with some of the questions we ask. You may refuse to answer any question. You may choose to stop taking part at any time. Although we will keep the information you tell as safe as we can, there is always the chance someone may find out something about you.

Questions

If you have any questions about the study, you may contact: Anabela Mabota of FSDMoç (+258) 827639870, Anabela_Mabota@FSDMoç.com

Do you wish to participate in this Interview?

Individual Participant signature:

Introductions 5 minutes

Interviewer:

Turn audio recorder on when ready.

Introduction of the Staff member

- Thanks you so much for your time, can you please tell me more about M-Pesa in Mozambique, and about the Promoter Model and the Pedro campaign? (numbers, user characteristics and the coordination/structure of the model) is prevailing to date?

For HQ staff:

- Request for any materials/reports or statistics they are willing to share at this point on the model – users (gender disaggregated data). We have received information about the FSDMoç and M-Pesa partnership quarterly reports. Do you have any other reports that you are willing to share particularly on M-Pesa in Mozambique?

For senior management staff in Maputo:

- The collaboration between FSDMoç and M-Pesa is at its final months. What would you consider was most significant achievement that this collaboration managed and how does M-Pesa envisage sustaining this?
- What in your opinion how many clients do you need to justify moving to a new district? Probing question if not responded: How active accounts do they need be?
- Can you please detail the challenges you had with the promoter model and how you plan addressing this going forward?
- What should be done in Mozambique to achieve a greater outreach the likes of Kenya and Tanzania?

Objective 1: Improve the understanding of the use of mobile money in Mozambique

- Can you please tell me about how the agent model works in Mozambique? What value addition did this promoter model bring into the Mozambique market to compliment the work that the agents are doing?
- What challenges are still there to enhance market penetration for M-Pesa in Mozambique in both the urban and rural areas?
- According to your records, what services do the M-Pesa clients favour or use on a frequent basis? Are these services necessarily profitable or they are there to promote outreach as the first step?

- What challenges do you think your M-Pesa agents and promoter face on a day-to-day basis with regard to the characteristics of the clientele?

Objective 2: Opportunities and challenges in mobile money market

- What opportunities are there for mobile money agents and promoters in the country/province/district, given your experience as M-Pesa?
- What main challenges mobile money agents face in Mozambique and what is M-Pesa doing to address these challenges? In your opinion does the collaboration between the agents and promoters work?
- Given you have worked with the users, what are their perceptions towards the type of services provided by M-Pesa? What are some of the reasons non-users do not use M-Pesa in your opinion? What lessons has M-Pesa learned going forward that needs to be improved through the promoter model?
- What new services do users expect from the mobile money services that are not currently being provided rather, what are you hearing from your agents and promoters with regard to new services in demand that are currently not been provided via M-Pesa?

Objective 3: Efficiency, effectiveness and sustainability

- In the business world, competition is key and competitors copy any novel ideas: Was this the case with the promoters' model? Did the rivals such as Mkesh copy the model and how did M-Pesa counter react in order to sustain the model?
- We know the promoter model is one of the strategies, what other strategies are foreseen in order to increase the usage and uptake of mobile money for rural and urban areas in Mozambique?
- What are minimum conditions for sustainable viable business model for mobile money in rural and urban environments (density of and liquidity within agent network, offered services, fees, availability of alternatives, literacy levels)?
- Is the regulatory environment supportive with regard to mobile money and in your opinion what should happen in Mozambique to facilitate greater outreach of mobile money?
- On average, how much does a promoter earn on a daily basis? (Urban and rural promoters) and do you think that this will keep them motivated long enough? What other strategies are being explored?

For senior HQ staff:

- What new services is M-Pesa planning to launch in Mozambique as a consequence of lessons learned from the collaboration between FSDMoç?

- How is M-Pesa planning to sustain the promoter model from the lessons learned from collaboration between FSDMoç?

For M-Pesa HQ and FSDMoç staff:

- Did the partnership between FSDMoç and M-Pesa Mozambique on promoter stimulation deliver on outputs as planned (efficiency and effectiveness)? What are the lessons learned?
- Could you describe to me how the collaboration was designed and how this was effected? (Process effectiveness)?
- Was the initiative being delivered on budget (efficiency)?
- What could have been done differently to achieve greater impact if M-Pesa is given a second chance to start all over again?

Many thanks for your participation, we have now come to the end of our discussions, do you have anything you would like to highlight that we did not address already?

Turn audio recorder off.

Annex D-5: FGD-M-Pesa users Guide

Informed Consent

Introduction

Good Morning/Afternoon. My name is _____, and my colleague here is _____ we are research staff members hired by Maraxis (a small research firm) to collect information for a mobile money research study of FSDMoç. FSDMoç is organization that facilitates financial inclusion in Mozambique situated in Maputo.

I would like you to understand why we are doing this research study and what you will be asked to do, so you may decide if you want to join, or not. I am going to read and explain the information in this form to all of you.

Purpose of Research

We are talking to adults, users in your community to find out about mobile money services. There will be approximately 800 other people taking part in the research from many communities in Mozambique, as well as agents, promoters and M-Pesa staff. The interview will last about 90 minutes.

Your Involvement

If you choose to take part in this focus group discussion, you will be asked information about the M-Pesa account, challenges and opportunities that the mobile money has brought to your community. Please do not divulge any personal information including the passwords or PINs of your mobile accounts because we do not need this information. We will not ask you sensitive or personal questions during the interview. There are no right or wrong answers to our questions therefore you are all encouraged to participate and to share your opinions. We will be audio recording our conversation to aid us with transcription so if you do not wish to be audio-recorded, you may choose not to take part.

Voluntary Participation

Your participation in this research is voluntary. You are free to stop taking part at any time. There will be no penalty to you or your organization/group if you choose not to take part.

Confidentiality

We will keep the information you tell us confidential. We will not write your names in our notes or in any report about this research, but we will keep track of your participation with an assigned Participant ID #. Your name will only be connected to your Participant ID # in this consent form and in study records used to track participants. Your name will not be connected to any data. Please do not use your names but the card numbers that you will be allocated. This will be to protect your identity.

Risks and/or Discomforts

We do not think there are any serious risks from participating in this study. There is a risk you may feel uncomfortable with some of the questions we ask. You may refuse to answer any question. You may choose to stop taking part at any time. Although we will keep the information you tell as safe as we can, there is always that some within the Focus group might go talk about our discussions today hence please do not talk about your personal matters but do provide answers aligned to the questions we will be asking.

Questions

If you have any questions about the study, you may contact: Anabela_Mabota of FSDMoç (+258) 827639870, Anabela_Mabota@FSDMoç.com

Do you wish to participate in this Interview?

Individual Participant signature:

Enumerators go round the circle collecting demographic information and requesting signature of the informed consent.

Introductions 5 minutes

Interviewer: Do not read the Research questions (Q or objectives), they are guiding directions to ensure all the research questions are covered!

Turn audio recorder on.

Introduction of the focus group participants

1. Tell us more about why you an M-Pesa account?

Each participant should be given an opportunity to air their views and experiences

Probing questions If not answered or mentioned by the majority in the focus group do ask the following

- How often do you use your account? (Per week, month, three months).. probe to get reasons.
- What is the maximum amount you can deposit and withdraw per day via your M-Pesa account?
- What challenges do you face while using M-Pesa account? (Is it difficult to become an M-Pesa user, if so why?)

2. What do you use the M-Pesa account for?

Probe if savings was not mentioned:

- Do you use the accounts for savings? How and why?

Withdrawals:

3. How often do you withdraw? Do you have instances when the agent runs out of cash?

4. What other services would you like to be provided in addition to what M-Pesa is offering that you think will help you in your day-to-day activities?

5. What would you like to be improved, so that your M-Pesa account can be useful to you as a client?

6. Are you concerned with regard to M-Pesa account safety and the fees? Why?

Probing question if not answered:

- Where do you go for services if you need to send money or to save money in your account?

7. Do you use your account often? If no why not, if yes what do you use the M-Pesa account for?

Probing questions if not answered

- What should be done to facilitate and encourage constant usage?
- What are your opinions with regard to the fees charged for the services by M-Pesa and what should be done to improve the situation?

Objective 1: Improve the understanding of the use of mobile money in Mozambique

1. What other financial services do you use? For example banks, savings groups (xitique) and how do you link these services with M-Pesa?

Probing questions if not answered

- Where do you withdraw or deposit M-Pesa money?
- Is it difficult to withdraw and depositing money-using M-Pesa?
- What should be done to improve the situation?
- Which services do you prefer for savings?

2. Who do you think use M-Pesa here in your community, Men, women or youth? Why?

3. Are there many people in your family or friends within your community using M-Pesa? Why?

4. Do you normally seek information about M-Pesa? From where? How should this be improved?

5. When during the month you normally use the M-Pesa account frequently? Why?

Objective 2: Opportunities and challenges in mobile money market

1. What other services do you think would help you in your M-Pesa accounts?

2. How do you normally know about new services provided via M-Pesa?

3. Do the agents or promoters assist you if you seek help?

Probing questions:

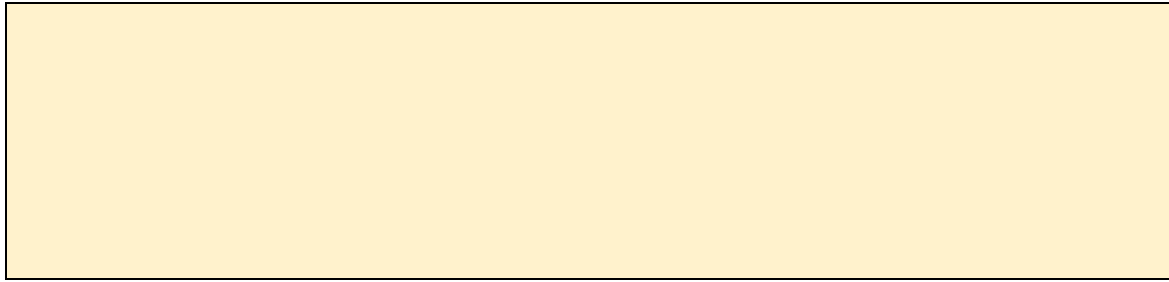
- How do they provide information? What would you like improved?

4. How would you like to know about new services provided by M-Pesa in the future?

5. What challenges do you face as an M-Pesa user?

Probing question:

- What in your opinion should be done to address the challenges?



Many thanks for your participation, we have now come to the end of our discussions, do you have anything you would like to highlight that we did not address already?
Turn audio recorder off.

Annex D-6: Screening / Penetration survey (Round 2)

1. Preparations before entering a household

	Code	Options	Instructions
001. Enumerator Name/ID			
002. Date / Time			
003. Province	1	Maputo City	
	2	Gaza Province	
	3	Manica Province	
	4	Nampula Province	
004. District –Community	1	Nampula - Meconta - NAMIALO / 25 DE SETEMBRO	Corresponding 3 districts- locations will appear only for the selected province
	2	Nampula - Nampula City - NAMICOPO - SEDE	
	3	Manica - Sussundenga - NHAUROMBE	
	4	Manica - Manica - VILA DE MESSICA	
	5	Gaza - Manjacaze - CHALALA /MUSSENGUE	
	6	Gaza - Xai-Xai - BAIRRO DE CIMENTO	
	7	Maputo - KaMavota - MAVALANE B	
	8	Maputo - KaMubukwana - MAGOANINE C	
006. GPS coordinates			Provided by tablet, make sure you are immediately outside the house

Introduction

Good Morning/Afternoon. My name is _____, a research staff member hired by Maraxis to collect information for a mobile money research study of FSDMoç. FSDMoç is an organization based in Maputo that promotes financial services in Mozambique.

We are talking to adults (18+) in your community to find out about mobile money services. Mobile money is a way to transfer money through a mobile phone: pay money to others and/or or receive money from others. Your household was randomly selected to participate. This means it was chosen to participate by chance, like flipping a coin or picking any fruit from a basket without looking inside to choose.

Would you like to hear more about the study?

2 Consent phase for screening

I would like you to understand why we are undertaking this research and what you will be asked to do, so you may decide if you want to join, or not. I am going to read and explain the information in this form to you.

Information About the Research

We are talking to adults (18+) in your community to find out about mobile money services. Your household was randomly selected to participate. You were selected as part of a sample of households in Mozambique where mobile money services are provided. There will be approximately 800 other people taking part in the research from many communities in Mozambique. The interview will last

about 5 minutes. During the interview, I will ask you questions about yourself, such as your age and education. There are no right or wrong answers to our questions. We just want to learn about you and what you think.

I may ask you to introduce us to other people living in your household who are 18+ so that we may ask them to participate in the study. I will explain the study to everyone I might want to interview, and ask for their permission before asking them questions.

This is a study. To check that we are all doing the study right, a field supervisor may observe your interview for a few minutes either at the beginning or at the end of the interview.

There are no costs for you to participate in this study.

Possible Risks

You can refuse to answer questions that you are uncomfortable with, and skip a question you do not want to answer. You may stop the interview at any time. We will protect what you tell us to the best of our ability, but there is always a chance someone can find out what you told something or us about you.

Possible Benefits

You may get no direct benefit from being in this study. You or others may benefit in the future from information learned in this study.

If You Decide Not to Be in the Research

You are free to decide if you want to be in this research or not.

Confidentiality

We will protect information about you and your taking part in this research to the best of our ability. We will not tell anyone about your participation or what you told us. We will not use your name in your name in the survey records or in any reports of the study. Any information we collect which clearly identifies you (for example, date of birth) will be kept confidential to the best of our ability. Data from this study will be shared with the sponsor, FSDMoç, and may be used for other research – but before it is shared all information, which identifies you will be removed.

Compensation

You will not receive compensation for your participation in the study.

Leaving the Research

If you want, you are free to stop talking to us at any time, without penalty, even after agreeing to be interviewed

If you have any questions about the study, you may contact: Anabela_Mabota of FSDMoç (+258) 827639870, Anabela_Mabota@FSDMoç.com

100 Does the participant (18+) give consent	0	No	If no check other adult in the household. If yes let the participant sign on the tablet and proceed with Q101.
	1	Yes	

3 Short

	Code	Options	Instructions
101. How old are you?		[insert age]	18+
102. Gender	0	Female	
	1	Male	
103. How many children are living in your Household (below 18 years)?		[insert number]	
104. How many adults are living in your Household (above 18 years)?		[insert number]	
105. Do you have a mobile phone	1	Yes	
	0	No	
106. What network operator(s) do you use? Multiple answers possible!	1	Vodacom	
	2	Mcel	
	3	Movitel	
	4	Other specify_____	
107. Have you heard of mobile money services, such as M-Pesa or MKESH? They are also sometimes called [insert local synonym] and allow to send or receive money from family and friends via your mobile phone.	1	Yes	Make sure that any other local synonyms for mobile money are included. If no, continue with 115
	0	No	
108. Do you have a mobile money account?	1	Yes	If no, continue with 115
	0	No	
109. Do you have a mobile money account with MPesa? MPesa is also sometimes called [include local synonym].	1	Yes	
	0	No	
110. Do you have an MKesh mobile money account? MKesh is also sometimes called [include local synonym].	1	Yes	If 110 is no and 109 is no and 108 is yes goto 110a
	0	No	If no, continue with 110
110a. Please specify, with whom you have a mobile money account?	1	Specify: _____	Probe questions 105 and 106 again as likely that there has been a misunderstanding in the process.
111. Is your mobile money account registered in your name or someone else's?	1	Registered in my name	If 108 = Yes
	2	Registered in spouses' name	
	3	Other (specify)	
112. When was the last time that you have used your mobile money account?	0	Yesterday or today	If 108 = Yes
	1	In the past 7 days	
	2	In the past 30 days	
	3	In the past 90 days (three months)	
	4	months)	
	5	6 months ago	

	6	1 year ago or longer	
	7	Can't remember	
113. How often do you usually use your mobile money account?	0	Every day	If 108 = Yes
	1	Once a week	
	2	Once a month	
	3	Once every 3 months	
	4	Once a year	
	5	Never	
	6	Can't remember	
114. What do you use your mobile money account for <u>most of the time</u> ? [Multiple select]	1	Payment of bills	If 108 = Yes Emphasis on ' <u>most of the time</u> '. Not whether a specific transaction has ever been made, but which functions are used <u>most often</u> .
	2	Send money to another person	
	3	Receive money from another person	
	4	Buy airtime	
	5	Pay for goods	
	6	Save money for future expenses	
	7	Other (specify)_____	
115. What is the average monthly income of the household?	1	Less than 3000 MT	Ask everyone
	2	3,001-6,000 MT	
	3	6,001-10,000 MT	
	4	10,001-20,000 MT	
	5	> 20,000 MT	
	6	Don't know	
	7	Declined, don't want to tell	

Annex E: Terms of Reference



FSDMoç
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REQUEST FOR PROPOSALS (RFP): CONSULTANCY SERVICES FOR EVALUATION OF MOBILE MONEY UPTAKE PROJECT FOR FSDMOÇ

Ref: P005/RFP–FSDMoc/01-2018

Title of the RFP: EVALUATION OF MOBILE MONEY UPTAKE PROJECT

Date of this RFP: 11 January 2018

Closing Date for Receipt of Proposals: 29 January 2018

Individual / Organisation: Consulting firm

Language required: English / Portuguese

1. About the Financial Sector Deepening-Mozambique (FSDMoç) program

Financial Sector Deepening-Mozambique (FSDMoç) is a five-year (2014-2019) program funded by the UK Government's Department for International Development (DFID) and Sweden. The vision of FSDMoç is a dynamic financial sector offering quality services that enable resilience and economic empowerment for all Mozambicans. The mission is to identify and partner with key market stakeholders, offering targeted investments and insights to promote the financial sector to improve financial inclusion.

FSDMoç seeks to enter into appropriate partnerships that can drive changes in the market system for financial services in Mozambique based around one or more of its five strategic objectives:

1. Improve understanding of the business case for better product design and delivery for micro, small, and medium enterprises (MSMEs), individuals and smallholder farmers.
2. Catalyse financial services innovation and expansion through supply-side investments.
3. Ensure success of business models by improved financial education and literacy of MSMEs, individuals and smallholder users and suppliers.
4. Alignment of the regulatory environment to ensure success of business models and market take-up.
5. Build knowledge and implementation capacity of key financial inclusion stakeholders.

As a core program intervention for strategic objectives 1 and 2, in early 2016 FSDMoç partnered with Vodafone M-Pesa ('mobile money') to help expand its "Pedro" market development strategy, aiming to accelerate mobile money uptake countrywide. The intervention targets mobile money usage of microenterprises (such as informal traders) as well as low-income rural and urban households.

Support was provided through a partnership grant with match funding to expand the scope and reach of the Pedro strategy, including into new geographical areas in which M-Pesa was not yet operating. It does so through supporting *promoters*, who are contracted by M-Pesa to sign-up new customers.

M-Pesa provides the ability for customers to send money for a small fee to fellow customers. Evidence internationally suggests the primary usage of mobile money is for remittances, though customers also can use accounts for saving. A network of *agents* enables customers to 'withdraw' and 'deposit' cash when needed, therefore managing the liquidity of the M-Pesa network locally.

2. Aims and objectives

FSDMoç is seeking to contract a Service Provider to undertake an evaluation of the M-Pesa mobile money uptake intervention. This evaluation is timed at just after two years since the intervention started, so will seek to provide a range of information on the intervention performance to-date. There will be three central aims and objectives of the evaluation:

1. **Improve understanding on the use of mobile money in Mozambique.** This includes on patterns of usage, users' experiences of mobile money in the context of their wider financial services use (frequency of usage of the service, number and proportion that are classified as 'active users'; value of transfers; type of use including remittances, distance of transfer, and savings behaviour; links to other financial services).
2. **Provide conclusions on the opportunities and challenges in the mobile money market system.** This will include looking at the demand- and supply-side, including on the capability and liquidity of the agent network, fee rates and willingness to pay for mobile money services. This does not have to be limited to M-Pesa, but should consider other mobile money provision.
3. **Provide details on the efficiency, effectiveness and sustainability of the M-Pesa intervention.** This includes on the commercial viability of mobile money in urban and rural areas, and the continuation of the roll-out strategy. This should include a view on the 'additionality' of the M-Pesa intervention, and inform future thinking about potential interventions in the mobile money market in Mozambique.

3. Methodologies

It is expected that the contracted Service Provider will undertake a mixture of methodologies for the assignment to achieve the aims and objectives set out above. The methodologies that will be required include but are not limited to:

- **Review of existing data-sets.** FSDMoç collects regular data on the mobile money uptake intervention, which should prove useful for some preliminary analysis. In addition, it is expected that further data will be available from Vodacom that will provide the basis for understanding the M-Pesa roll-out, customer base and existing usage patterns.
- **Quantitative household survey.** The contracted Service Provider will need to develop a survey to be delivered at household level. The survey will include provisional scoping questions to identify whether or not the adult interviewed is a mobile money / M-Pesa user. Based on these opening questions, a proportion of users and non-users will be selected for the full survey. The survey will cover the usage of mobile money and other financial services and their change over time, as well as capturing household socio-economic characteristics. The survey design should be informed by research conducted on mobile money across Africa, including the FINSCOPE surveys conducted in Mozambique and elsewhere. The survey should not be excessive in length, with a priority of depth over breadth in the design.
- **Focus group discussions (FGDs)** with users and with non-users. More in-depth discussion with users will probe understanding and attitudes towards mobile money, within the local socio-economic and cultural context, as well as the broader context of financial services use and access. Non-users will also be used to explore reasons for not signing up.
- **Key informant interviews (KIs) with Vodacom staff and management** will seek to focus on the commercial viability of M-Pesa and the Pedro roll-out strategy. In particular, this will look at the selection of districts, the selection, training and management of Promoters; and the management of the agent network and overall profitability.
- **KIs with M-Pesa agents** will probe questions around the existing liquidity of the agent network, experiences of use and access, and views and perceptions of the customer base (frequency of use, ease of use, types of usage). These interviews will also explore the role of 'super-agents', who will form part of the agent sample.
- **KIs with M-Pesa promoters** will look into their experience with customer sign-up, on

locations for maximizing up-take, and on the information they provide to prospective customers. Ideally some observation of current practices will be possible.

4. Sampling and geographical scope

M-Pesa is operating across Mozambique, in Maputo City, and the provinces of Nampula, Zambezia, Tete, Cabo Delgado, Niassa, Sofala, Manica, Inhambane, Gaza, and Maputo.

For the evaluation, it is anticipated that four of these provinces should be sampled, for both the quantitative and qualitative methodologies outlined above.

A sample size for the quantitative survey will be confirmed and agreed at Inception Report stage, of approximately a total of 400-1,000 households (with a set proportion to be M-Pesa users), as well as for qualitative methods (a minimum of six FGDs, 20 KIs with agents, 30 KIs with promoters). The sample size should be spread evenly across the three (or more) provinces selected for sampling. The selection of the provinces will be based on user numbers provided by M-Pesa's own data and will be agreed between the contracted Service Provider and FSDMoç in the finalisation of the Inception Report. The Service Provider will need to demonstrate a clear methodology for the sampling of households and therefore users and non-users of M-Pesa within the selected sampling areas.

5. Deliverables

The deliverables for the contracted Service Provider will be as follows:

- **Inception report and draft tools for fieldwork** (tools in both English and Portuguese). This should include the list of evaluation questions to guide the research, details of the methodologies to be used, as well as details on sampling, logistics and timeline.
- **Final tools ready for fieldwork** in English and Portuguese (to be signed-off before fieldwork commences). This will include the quantitative survey to be used as well as protocols and interview guides for KIs and FGDs.
- **Pre-fieldwork briefing.** Immediately prior to the commencement of fieldwork, the provider will be expected to fully brief the FSDMoç team, on the planning, logistics, training and preparation for fieldwork.
- **Post-fieldwork briefing.** Immediately following the fieldwork, the provider will be expected to fully brief the FSDMoç team on initial findings and fieldwork challenges.
- **Draft report.** The draft report will be provided following the fieldwork (for FSDMoç internal consumption only) and set out all the key findings on the evaluation questions, including from both quantitative and qualitative methods.
- **Final report.** The final report should be a reader-friendly document including an executive summary (suitable for public consumption), both in English and Portuguese, including responses to any comments from FSDMoç on the draft report. A short (one-page) blog summarizing findings should also be prepared.
- **Presentation of the findings** of the Evaluation to FSDMoç / DFID and Vodacom / M-Pesa.

6. Required skills and qualifications

Interested consulting firms should set out their team with the following range of qualifications:

- Experience in evaluation and both quantitative and qualitative evaluation methodologies;
- Knowledge and practical experience of survey design;
- Knowledge and practical experience of undertaking household surveys;
- Knowledge and practical experience of undertaking focus groups and key informant interviews;
- Excellent report writing skills, including for development institutions such as DFID;

- Strong analytic skills;
- Knowledge and practical experience of the financial services sector, and demonstrable knowledge of mobile money as a concept and service; and
- Fluency in Portuguese and English.

7. Level of Effort

It is expected that the evaluation assignment shall take the contracted Service Provider no more than two months for its completion. The Service Provider will be expected to provide a team with the range of skills required and suitable to complete the set of deliverables set out in this RFP to a high quality. The total Financial Proposal should **not exceed GBP (British Pounds) £70,000**.

8. Deadlines and delivery

The table below sets out the expected timeline for delivery of the assignment.

Stage of delivery	Date
Service Provider selected and contracted	5 th February
Inception report and draft tools	9 th February
Final tools ready for fieldwork	16 th February
Fieldwork	23 th February – 16 th March
Draft report	23 th March
Final report	30 th March
Presentation(s) of findings	Early-April

9. Information Required for Proposals

FSDMoç invites eligible and experienced consulting firms to send their proposals in conducting the evaluation of the M-Pesa mobile money uptake intervention funded by the program. Interested bidders must provide information indicating that they are qualified to perform the task.

The Proposal should contain a maximum of eight pages A4 (excluding CVs and accompanying firm profiles) in .doc, .docx or .pdf format. They should include the following information below:

- Name of individual(s)/firm and place of business;
- Contact information (email, Skype, etc.);
- A short description of the individual/firm expertise in relation to the Project scope, including description of similar assignments undertaken;
- A short description of how the assignment will be performed;
- Proposed methodology and approach and indicative work plan with timeline to undertake the present assignment;
- An outline of the team structure and CVs of key team members proposed (maximum 3 pages each);
- Financial proposal; costs in British Pounds (GBP) must be broken down into professional fees and expenses, which will incorporate travel and accommodation if necessary.

10. Selection criteria

The proposals will be evaluated against the selection criteria listed in the table below. FSDMoç may seek to interview shortlisted firms before finalising the selection decision.

Selection Criteria	Weighting
Technical capabilities and experience	30%
Proposed methodology and approach	30%
Work plan	15%
Budget	25%
TOTAL	100%

11. Submission of Proposals

Your Proposal should be emailed to FSDMoç at anabela_mabota@f sdmoc.com and to f sdmoc@f sdmoc.com with the subject line "RFP: FSDMoç - EVALUATION OF MONEY UPTAKE PROJECT".

It should be received by 17:00 hours (CAT) on Monday **29th January 2018**. A short list will be prepared by FSDMoç within one week of RFP closure date.

Questions or comments in respect to this RFP should be directed to FSDMoç M&E Lead at anabela_mabota@f sdmoc.com no later than Friday **19th January 2018**.

FOR MORE INFORMATION PLEASE CONTACT:



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PREPARED BY:



