



EVALUATION OF BANKING AND NON-BANKING AGENT NETWORKS


MAPUTO CITY AND MAPUTO PROVINCE

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	v
1. Introduction.....	1
2. The Mozambican agent ecosystem: Mapping of bank and non-bank agents	3
3. Methodology.....	7
3.1. Study Area	7
3.1.1. Maputo City	7
3.1.2. Maputo Province.....	8
3.2. Preparation process, data collection and analysis	9
4. Research Outcomes.....	14
4.1. Socio-demographic Information.....	14
4.1.1. Agents Socio-demographic Information.....	14
4.1.2. Geographical Location of the agents	21
4.1.2.1. Banking Agents	22
4.1.2.2. Non-banking Agents (Mobile Money)	23
4.1.3. Socio-demographic information of users of agents services	25
4.2. Perception of the Activity of Banking and Non-Banking Agents in the Maputo City and Maputo Province.....	30
4.2.1. Banking Agents	30
4.2.2. Non-banking agents	33
4.2.3. Banking and non-banking service usage.....	40
5. Final Remarks and Recommendations.....	43
5.1. Final Remarks	43
5.2. Final Recommendations	44
6. Bibliography.....	46
7. Annexes	47
Annex 1: Questionnaire for agents	47
Annex 2: Questionnaire for users of agent services.....	47

TABLES

Table I: Statistical data on housing, households and population in Maputo City (Source: INE, 2019)	8
Table II: Statistical data referring to Housing, households and Population of Maputo Province (INE, 2019).....	9
Table III: Summary of agent characterization	30
Table IV: Final Recommendations	44

FIGURES

Figure 1: Evolution of banking agents (2015-2019) (BM, 2019)	4
Figure 2: Evolution of non-banking agents (2015-2019) (BM, 2019).....	4
Figure 3: Evolution of bank and non-banking agents combined (2015-2019) (BM, 2019)	4
Figure 4: Map distribution of bank branches, banking agents and non-banking agents for 2019	5
Figure 5: Pie distribution of agents per province for 2019 (BM, 2019)	6
Figure 6: Research Methodology	9
Figure 7: Researchers and inquirers on a daily meeting	13
Figure 8: Distribution of surveyed agents by province and district, by gender and location of activity	14
Figure 9: Disposition of non-bank agents (on public roads and in groups, in small commercial establishments and walking agents).....	15
Figure 10: Operators age group	15
Figure 11: Distribution of bank and non-bank agents who own and do not own the business and grouped by gender	16
Figure 12: Banking, non-banking and both agents	16
Figure 13: Agents main economic activities	17
Figure 14: Number of years of activity of non-bank agents.....	17
Figure 15: Years in the activity of bank agents	18
Figure 16: Banking and Non Banking Agents Geo-Location	21
Figure 17: Banking agent's geo-location.....	22
Figure 18: Millenium BIM agent network	23
Figure 19: Non-banking Agents (Mobile Money).....	24
Figure 20: Occupation and level of education of users of the services of bank and non-bank agents	25
Figure 21: Occupation and income of users of the services of bank and non-bank agents	26
Figure 22: Motivations for subscribing to banking and non-banking services	27
Figure 23: Training done and desired training of bank agents	31
Figure 24: Banking services level of request.....	32
Figure 25: Training provided and training needs of non-bank agents.....	34
Figure 26: Mobile Money providers agents	35
Figure 27: Average daily number of customers served by each non-bank agent	35
Figure 28: Average daily transactions.....	36
Figure 29: Average value traded daily by non-bank agents	37
Figure 30: Acceptance of mobile money as a means of payment by non-bank agents	38
Figure 31: Banking agent services usage per academic level and occupation.....	40
Figure 32: Non-banking agent services usage by occupation, age and academic level.	41

ABBREVIATIONS

BIM	Banco Internacional de Moçambique
BM	Banco de Moçambique
CBM	Central Bank of Mozambique
EMI	Electronic Money Institutions
Fintech	Financial Technology
FPLM	Forças Populares de Libertação de Moçambique
FSDMoç	Financial Sector Deepening Mozambique
FSP	Financial Service Providers
GDP	Gross Domestic Product
ICT	Information and Communication Technologies
INE	Instituto Nacional de Estatística
MMI	Mobile Money Issuers
MS Office	Microsoft Office
MT	Metical
UEM	Universidade Eduardo Mondlane
USD	United States Dollar

EXECUTIVE SUMMARY

This report presents the results of the evaluation study on bank and non-bank agents and the users of their services in Maputo City and Province.

The research outcomes shows that bank and non-bank agents operates in urban and rural areas, with a greater incidence in urban centers and in the places with the greatest concentration of people, where mainly informal commercial activities occur. The presence of non-bank agents is predominant when compared to bank agents, which is observed in both urban and rural areas in Maputo City and Province. The agents have been playing their role in the financial inclusion journey of the populations through the extension of the services of bank and non-bank financial service providers.

During their operations, the agents adopt business models according to the dynamics of demand and offer of services, thus causing them to be misaligned with the regulation in force at some extent. The research shows that there is a need to redefine the profile and operation of agents as well as updating of the respective regulations.

Although with significant differences, users of the agent's services make effective use of the services, regardless of age, gender, occupation and education level. The study also highlights that gender gap is a reality when it comes to agents, especially because it contrasts the base of Mozambican population being majorly women.

The study points out the need to define rates and benefits that are attractive to users and agents of banking and non-banking services, respectively. In addition to that, it's important and urgent to create additional incentives to agents operating in rural areas, where the aim of increasing the financial inclusion rates is demanded.

This report of the agent evaluation study raises a set of challenges for the different actors to be highlighted such as: bank agents, non-bank agents, financial services regulators and financial services providers.

1. Introduction

The purpose of this study is to contribute to the ongoing actions in Mozambique and other developing countries, regarding financial inclusion through the creation of mechanisms for the provision of banking and non-bank financial services based on the available technological resources and that meet the national contexts.

The banking network in Mozambique has a very limited level of coverage, characterized by a remarkable concentration in urban centres' and unavailability in rural areas. For this reason and associated with the fact that the majority of the Mozambican population is engaged in agriculture and other informal activities, the figures of bank agent and non-bank agent were introduced respectively in 2015 and 2011, thus creating a window for boosting financial inclusion in Mozambique.

This study was carried out with the aim of contributing to the understanding of the performance of bank and non-bank agents, through the assessment of the level of:

- Penetration and distribution of bank and non-bank agents in urban and rural areas;
- Availability of the services of bank and non-bank agents, in urban and rural areas;
- Joining the services of bank and non-bank agents;
- Compliance with the rules that regulate the operations of bank and non-bank agents;
- The dynamics of the agent's performance, imposed by the local socio-economic and cultural aspects;

Ultimately, the study makes recommendations for the different actors involved in the process such as: agents, operators and regulatory authorities.

The evaluation study of bank and non-bank agents was carried out in the city and province of Maputo with a view to integrating different realities: urban, peri-urban and rural. The study is based on interviews with agents in their respective workplaces and with clients of agents while requesting some service from agents.

The study showed that it is not enough to create the figure of a bank and non-bank agent, but it is essential to create a favourable environment for agents to develop their activities in order to provide services and the customer to make effective use. The Study suggests a set of challenges for the different actors involved, highlighting the need to develop a specific regulation for the

activity of the banking and non-banking agents. It is also suggested, the creation of an incentive package that stimulates the agent's willingness to make themselves present and also act in rural areas.

For the dynamization of the sector, there is a need to accelerate the implementation of interoperability between non-banking and banking services, and this action must be accompanied by the redefinition of the role and duties of the non-banking agent, associated with the proactivity of operators, regulatory bodies and the local community and municipal management structures, in recognizing and enhancing the role of the agent.

This report is divided into 5 chapters. In chapter 1 the introduction is presented, which contextualizes the study, chapter 2 presents the current agent ecosystem and how it is evolving by numbers in the whole country, in chapter 3 the methodology describing the study area is presented (explaining the actions developed and the preparation process for the field work and describes the data collection and analysis process). In chapter 4 the results of the study are discussed, with emphasis on the socio-demographic information of bank and non-bank agents, the perceptions about the activities of bank and non-bank agents in the city and province of Maputo. Lastly, the chapter 5 presents the general conclusions and recommendations.

Therefore, the study refers to the conclusion that agents play a very important role in contributing to ongoing financial inclusion actions in Mozambique, however, there is a need for coordination and union of synergies between the actors involved.

The study was carried out by a team made up of a member of FSDMoç and Professor / researcher at the Eduardo Mondlane University (UEM), a Professor and researcher at the Eduardo Mondlane University and one recently graduated master student from the Eduardo Mondlane University (also Cellular Networks Professional and Digital Financial Services (DFS) researcher).

2. The Mozambican agent ecosystem: Mapping of bank and non-bank agents

Currently, commercial banks and Mobile Money Issuers (MMI) constitute the agent ecosystem in Mozambique. The Journey started in 2011 when the Central Bank of Mozambique licensed the first mobile money issuer (Mkesh), 2 years later, in 2013, the second operator, Vodafone Mpesa and recently, E-Mola in 2016 comprises the 3 players. Each of the MMI has its own agent network and there is no specific regulation for this type of agents. The establishment of the banking agents started in 2015 and each commercial bank creates its own agent network, although the banking agent is not exclusive.

The branchless banking model in Mozambique initiated as part of taking formal financial services to the underserved population, particularly the people living in rural areas. Through the banking agent, the following activities can be performed: (a) Cash deposits and withdrawals; (b) Facilitate cash disbursements and loan repayments; (c) Funds transfer; (d) Provide mini-bank statements (e) Collecting customer documentation relating to account opening, loan and bank card application.

It is important to note that there is no specific regulatory procedure concerning to the non-banking agent, all policies and procedures are left to the mobile money provider itself.

The statistics published by BM shows that in 2019 there were 1697 banking agents and 56 146 non-banking agents. Taking into account that there are 19 commercial banks and 679 branches it is clear that the number of banking agents is by far too low when compared with the agents from MMI. The next 2 graphics below (Fig.1 and Fig.2) show the evolution of the agent network in the last 4 years (2015-2019). It can be stated that the evolution of banking agent is slow compared to the non-banking agent.

From the 3rd graphic below (Fig. 3), it is clear that the agents network in Maputo city is higher than in other provinces. This contrasts with the main objective of the agent network, which it was to have more agents in the rural areas than in urban areas. In mobile money, just under half of the country's agents are in Maputo City and Maputo Province (which contains the country's largest city, Matola, which, while only 15 kilometres from Maputo City, is technically in Maputo Province). However, there are large numbers of such agents in Nampula.

Figure 1: Evolution of banking agents (2015-2019) (BM, 2019)

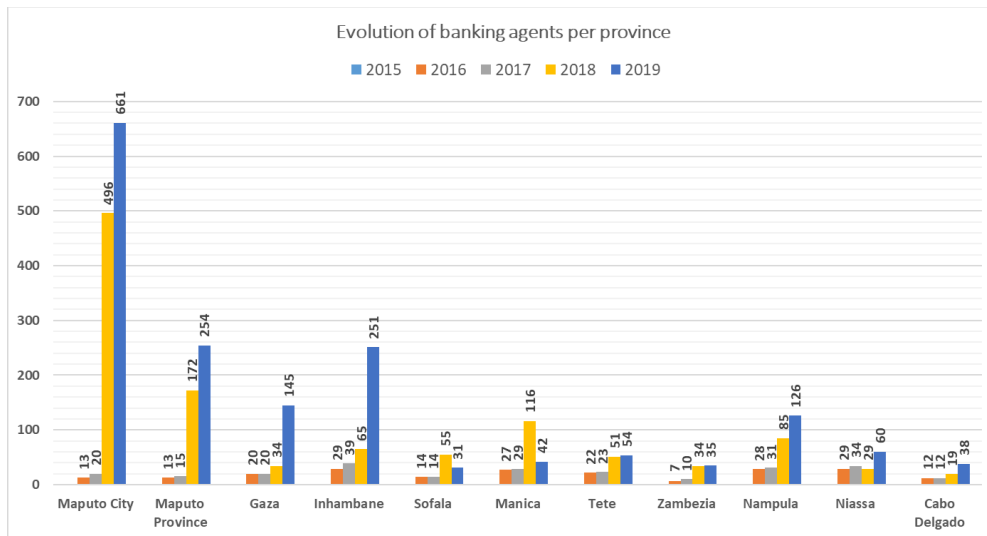


Figure 2: Evolution of non-banking agents (2015-2019) (BM, 2019)

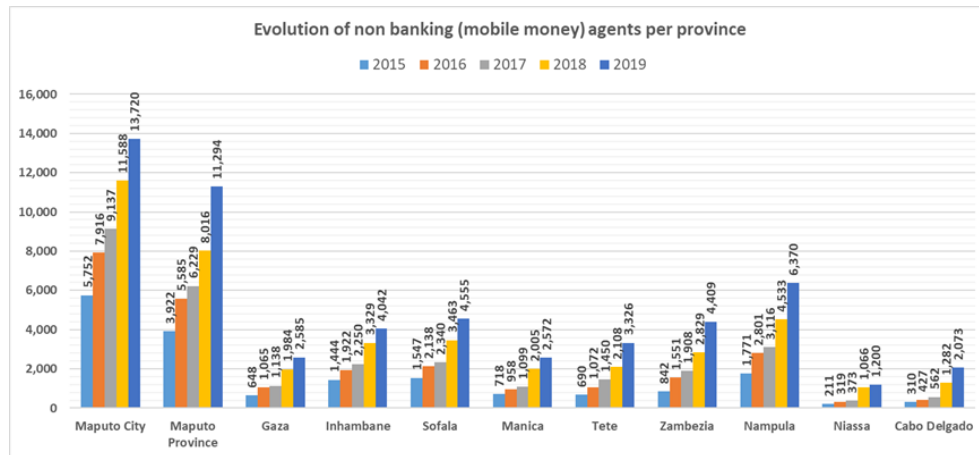
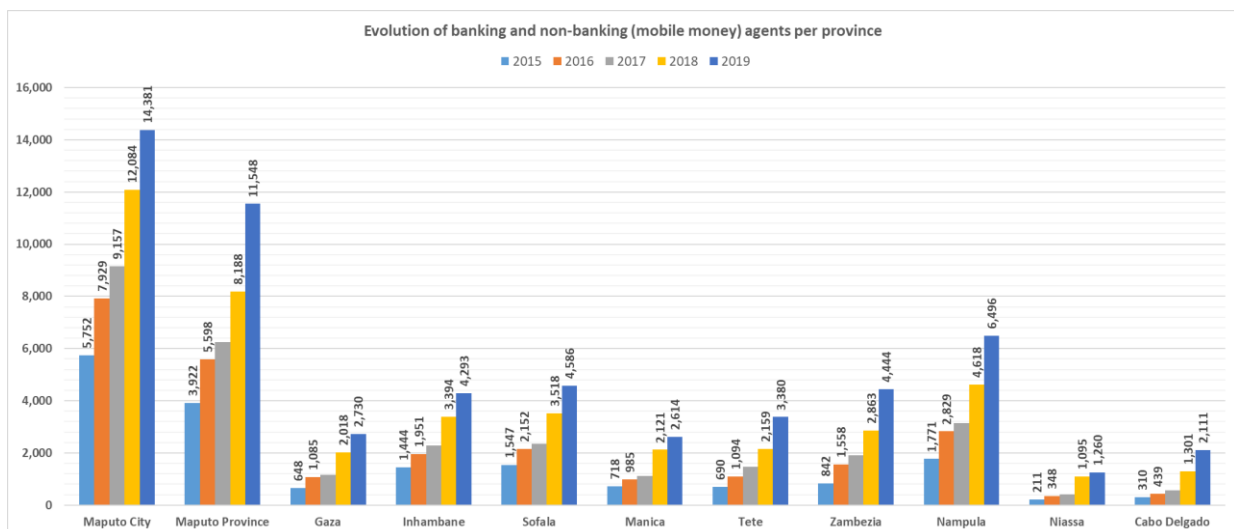
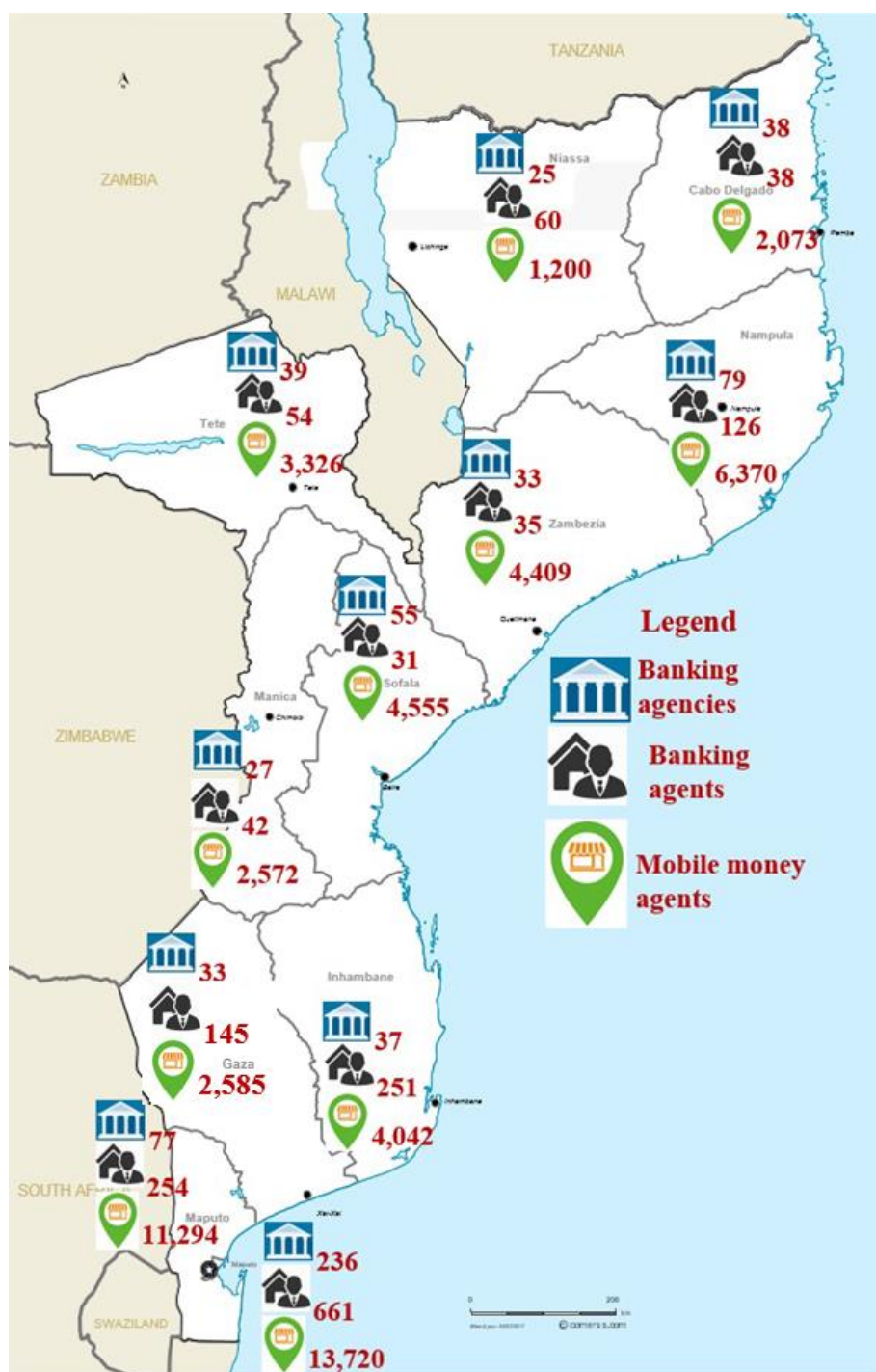


Figure 3: Evolution of bank and non-banking agents combined (2015-2019) (BM, 2019)



In line with previous graphs, in the map below it can be seen the number of bank branches and agents per province in Mozambique, it is clear that the non-banking agent account is in greater number than the banking agent and this is higher than the bank branches in whole provinces. Additionally, both Maputo city and province are the places with more agents and branches than all other provinces.

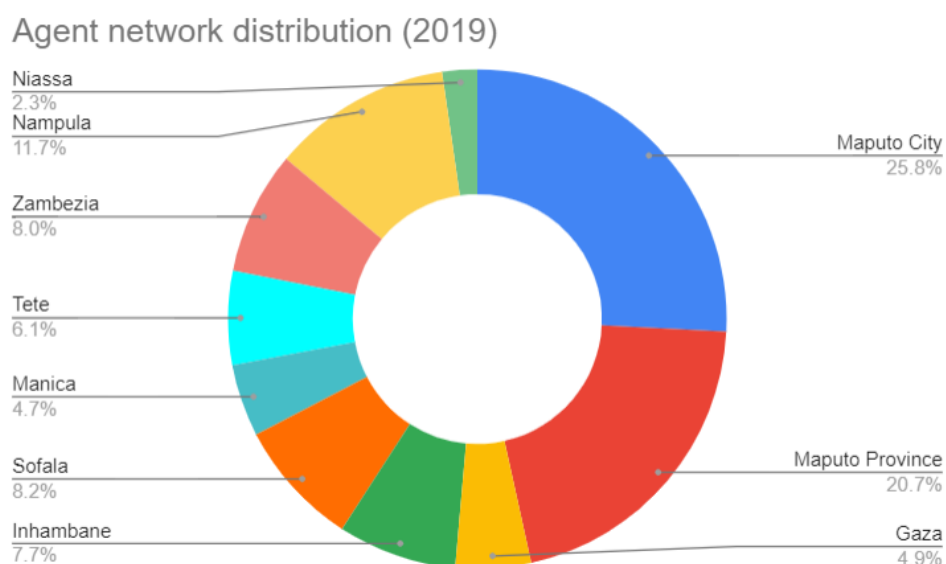
Figure 4: Map distribution of bank branches, banking agents and non-banking agents for 2019



Unsurprisingly, most bank branches are concentrated in the population-dense areas of Maputo City, the province of Maputo, and more broadly along the coast. Maputo City, in particular, has 236 branches compared to 686 overall. The pattern for banking agents elsewhere is low; that being said, it is well below the ratio that may be expected if banks were looking to either use the agent as an alternative channel to support branch operations or as a new channel to acquire more rural customers. Similar provincial variations are seen in mobile money agent density, but here the numbers are significantly larger than the commercial bank agents.

The pie below also presents the status of the agent network for each province by percentage, and it is clear that Maputo city and province have more agent density followed by Nampula.

Figure 5: Pie distribution of agents per province for 2019 (BM, 2019)



In the period from 2015 to 2019, the evolution of the mobile money agents in the country has increased significantly from a total of 17,855 to 57,843 respectively. The growth of mobile money agents in Maputo City and Maputo province, has doubled Maputo City (from 5752 to 14381) and Maputo province (from 3922 to 11548) mobile money agent points. Although it may not seem immediately obvious from the chart above, other provinces have also seen impressive growth: Nampula increased 4 times (from 1771 to 6370). The provinces that had very low number of agents in 2015 have increased substantially the number of agents, namely Gaza by 3 times (from 648 to 2585 agents), Manica by 4 times (718 to 2614), Cabo Delgado by 4 times (from 310 to 2111), and Niassa by over 5 times (210 to 1260).

3. Methodology

This chapter describes the methodology used to conduct the research on agents, covering the study area and the data preparation, collection and processing process.

Due to resource limitations (financially and logistic) in conducting the research in all provinces, the selection of the study area was mean to be representative countrywide so that was made to include areas with different characteristics, such as inner city districts, suburban areas, rural areas, predominantly formal business areas, informal business areas, residential and non-business areas, relevant commercial areas and areas dominated by agricultural activities.

Following above defined criteria's, for each day of data collection, the process took place continuously from 8 am to 5 pm by capturing all potential interviewees from each selected region/spots.

3.1. Study Area

The Republic of Mozambique with an area of 799 380 km², a population density of 36.1 inhabitants per km², independent since 1975, has 11 provinces including the country's capital, Maputo City. The Mozambican population is 28,861,863 inhabitants, the minimum wage is 3,996.00 MT (USD 66¹), and GDP is 13.8% (Portal do Governo, 2019; INE, 2019).

The study took place in the provinces that integrate the two (2) most populous cities in Mozambique, namely, the city of Maputo that is predominantly urban and semi-rural and in the province of Maputo, predominantly rural and semi-urban.

On the other side, the main reason on the Maputo City and Province choice is due to fact of both holding approximately 45% (25,929 out of 57,843) of the total of agent network countrywide, according to the 2019 central bank report.

3.1.1. Maputo City

Maputo City, with the status of a province, whose geographical delimitation covers an area of 466 km² (at the north of Maputo Bay), represents both the economic and political capital and concentrates most of the services and headquarters of the large economic groups and companies in the private sector and public institutions. Despite concentrating only 5.4% of the

¹ Exchange rate of September 10, 2019

country's population, Maputo City is responsible for 20.2% of Mozambique's GDP (Portal do Governo, 2019).

A high urban, suburban and semi-rural population that develops formal and informal activities characterizes the city. In turn, the city of Maputo coincides with the municipality of Maputo, which is subdivided into 7 urban districts and has a population of around 1,101,170 inhabitants, as shown in Table I (INE, 2019).

Table I: Statistical data on housing, households and population in Maputo City (Source: INE, 2019)

Municipal District	No. of Houses	No. of Households	Population		
			Males	Females	Total
KaMphumu	23,449	23,457	37,975	42,575	80,550
Nlhamankulu	23,967	29,031	62,410	66,896	129,306
KaMaxakeni	35,751	41,746	97,464	102,101	199,565
KaMavota	65,820	69,142	159,516	172,452	331,968
KaMubukwana	65,080	69,240	153,675	167,763	321,438
KaTembe	9,231	8,324	15,552	16,696	32,248
KaNyaka	1,498	1,314	2,918	3,177	6,095
Total	224,796	242,254	529,510	571,660	1,101,170

3.1.2. Maputo Province

The province of Maputo is located 10km west of Maputo City, with an area of 22,693km². It borders on the north with the Province of Gaza, on the east with the Indian Ocean, on the south with the South African Province of KwaZulu-Natal and on the north with Eswatine and the South African Province of Mpumalanga. Maputo Province concentrates the largest industrial park in the country and also develops agricultural and tourism activities (Portal do Governo, 2019; INE, 2019). The population of the province of Maputo is characterized by being urban, suburban and rural. Maputo Province with 2,507,098 inhabitants is divided into 8 districts, as shown in Table II (INE, 2019).

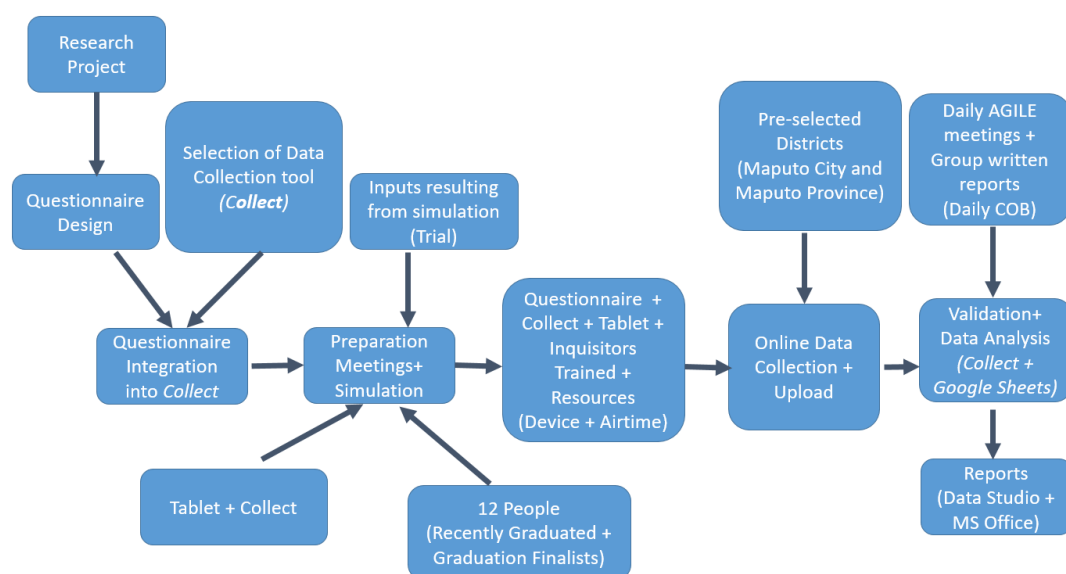
Table II: Statistical data referring to Housing, households and Population of Maputo Province (INE, 2019).

District	No. of Houses	No. of Households	Population		
			Males	Females	Total
Matola	367,772	374,546	752,852	863,415	1,616,267
Boane	60,995	54,953	102,041	108,457	210,498
Magude	14,794	14,583	29,879	33,812	63,691
Manhica	57,197	50,131	97,739	110,727	208,466
Marracuene	62,511	59,366	109,925	120,605	230,530
Matutuine	12,304	12,473	21,924	22,910	44,834
Moamba	24,657	23,243	40,350	43,529	83,879
Total	613,648	602,957	1,178,487	1,328,611	2,507,098

3.2. Preparation process, data collection and analysis

The research of bank and non-bank agents and their customers, took place from 5 to 8 February 2019, in the province and city of Maputo, in 6 districts, 3 of which in Maputo province (Matola, Boane and Matutuine districts) and 3 from Maputo City (urban districts of KaMphumo, Kamavota and Nlhamankulu). Fig. 6 illustrates the diagrammatic summary of the research methodology.

Figure 6: Research Methodology



Research Project

The study was conducted based on the research proposal previously prepared.

Questionnaire Design

Based on the Protocol and taking into account the purpose of the study, the instruments for data collection were elaborated, such as: the questionnaire for non-banking agents and the questionnaire for customers of the services provided by banking agents. The questionnaires were designed to allow the collection of the data necessary for the study.

Selection of Data Collection tool

In order to allow immediate data availability and reduce the error rate, data collection was performed using the Collect tool. This allowed for the collection and submission of data and also the monitoring of the data entry process, in real time.

Among several tools available on the market, Collect was selected because in addition to the reasonable cost, it allows the collection and submission of data online and, in the event that the connection is not available, the tool allows storing locally on the device and after the connection is reestablished the data is transferred to the database.

On the other hand, Collect allows real-time monitoring of the data entry process. The Collect data collection tool allows the data to be stored in a database in the Cloud and later the possibility to integrate with Google Sheets, which in turn feeds the Google Data Studio tool, an Analytics solution for analysis and report production or any other compatible tool as the data set is exportable.

Questionnaire Integration into Collect

The questionnaire was then integrated into the Collect tool and available for activation on the available mobile devices prior to installing the mobile application from the Play Store.

Preparation meetings + Pre-test

Under the supervision of the 3 main researchers, the data collection involved 12 young graduate students and recent graduates of higher education, of whom 4 were female. In order to guarantee data quality, the entire team participated in analysis and perception sessions on the study objectives, structure and objectives of the questions, ethical aspects and in training regarding the use of the Collect application used for data collection.

Through the use of mobile devices and the Collect tool, tests were carried out on the questionnaires designed for data collection and the responsiveness and suitability of the application were assessed.

Contributions resulting from the pre-test (Trial)

As result of the pre-test on the use of mobile devices, the Collect tool in the data collection process carried out by the researchers together with the researchers led to the improvement of the questionnaires in terms of changing the order and reformulating some questions. The pre-test

allowed us to understand that sensitive questions such as income, the volume of money managed, should not be in the first part of the questionnaire to avoid blocking the respondent's willingness to provide information. The reformulation of some questions allowed them to become clear and for the inquirers and researchers to have the same understanding about the questions in the questionnaire and to conduct the expected data collection.

Tablet + Collect

Data collection was done using Tablets with the Collect application previously installed and activated. This option allowed a better receptivity and collaboration of the respondents due to their curiosity in seeing the data being introduced and submitted through the use of mobile devices. Therefore, the use of tablets has made it easier to obtain the consent of respondents to provide requested data.

12 Inquirers (recent graduates + undergraduate finalists)

The data collection process involved 12 young finalists and recent graduates at the undergraduate level, under the supervision of the 3 researchers, making up 15 people, of whom 33% were female and 67% male.

Questionnaire + Collect + Tablet + Trained inquirers + Airtime (Minutes and Data plan)

The team with 15 tablets, all with internet access and the possibility of making telephone calls, proceeded to install and activate the Collect tool on the Tablets, thus allowing access to the published version of the questionnaires (addressed to the agents as well as customers) after the user's registration (containing the inquisitor's name and telephone number). Then, performed the simulation of the data collection process in real time and the testing of the data quality monitoring process and immediately some recommendations, corrective measures and process improvement were addressed.

Pre-selected Districts (Maputo City and Maputo Province)

As mentioned earlier, the selection of districts for the study was made in order to include areas with different characteristics. In Maputo City, the study was carried out in the KaMphumo municipal district which is urban, Nihamankulo (Suburban) and KaMavota as semi-rural. In Maputo Province, it was carried out in the district of Matola, which is urban and suburban, Boane, which is suburban and rural, and Matutuine, which is predominantly rural.

Real time data collection and Upload

The data collection took place mostly in thoroughfares, so that the inquirers were organized in teams of 4 elements, who moved together, as a way of guaranteeing some security. In areas with a high rate of crowding and informal business activities, uncharacterized security agents accompanied the groups.

In addition to having a credential to present to the authorities in the data collection area, the interviewers were identified by shirts of the same color with the following elements: Universidade Eduardo Mondlane, Inquiridor. The fact that the interviewers presented themselves in uniform through the T-shirt and even though they had characterization through elements of a recognized University, the respondents showed sympathy and collaboration.

For data collection, each questioner made use of a tablet, using the Collect data collection tool. This tool allowed the collection and submission of data to the database, online.

During the interviews with the agents arranged in groups, the strategy of conducting a simultaneous interview with four agents was adopted, so that everyone joined the survey because, at the start of the process, the interviewers realized that when approaching a single, there was rejection for fear of, during the answer to the questionnaire would lose customers to the competitors.

In addition to the data collected on agents and on the customers of bank and non-bank service agents, the coordinates of the location of agents and customers of agents were also collected in order to better understand their distribution.

Each team proceeded to collect data in a district for one day, between 8 am and 5 pm. All agents and potential users of banking and non-banking services who were in the perimeter of movement of the interviewers were interviewed. During the survey, the inquirers also observed the disposition, behavior and relevant attitudes of the respondents (agents and clients of the agents) taking into account the aims of the study and writing down the facts observed in a notebook.

Daily Reports + Daily Group written reports

At the end of every data collection work day, the team met in person or via a Zoom teleconference tool aiming to assess the course of activities throughout the day, share experiences and also, each group presented a summary of the written report of the findings that are not part of the questionnaire, which occurred during data collection, as shown in fig 7.

Figure 7: Researchers and inquirers on a daily meeting



Validation + Data Analysis (*Collect + Google Sheets*)

The fieldwork of data collection was done in a coordinated manner among all involved. Therefore, during the data collection process, while one of the researchers supervised, monitored and supported the inquirers in the field, one proceeded with the coordination of all teams and researchers, via telephone and WhatsApp and the other researcher did the monitoring in real time the data entry process and thus validation and, in the event of incomplete or incorrect data, the researcher immediately communicated the author of the error by phone and shared the anomaly in the WhatsApp group as this allowed the correction and the remaining elements could avoid making the same mistake.

The collected data were stored in the Collect database and later integrated into Google Sheets, which served as a bridge between the database and the analysis tool, Data Studio, an Analytics solution from Google. Additionally, a list of output requirements meeting the aim of the research guided the validation process.

Report (*Data Studio + MS Office*)

Data Studio allowed the creation of the report in the form of customizable graphs based on data from the *Google Sheet*. The report allowed the analysis and interpretation of data and writing of the study report in MS Office Word.

4. Research Outcomes

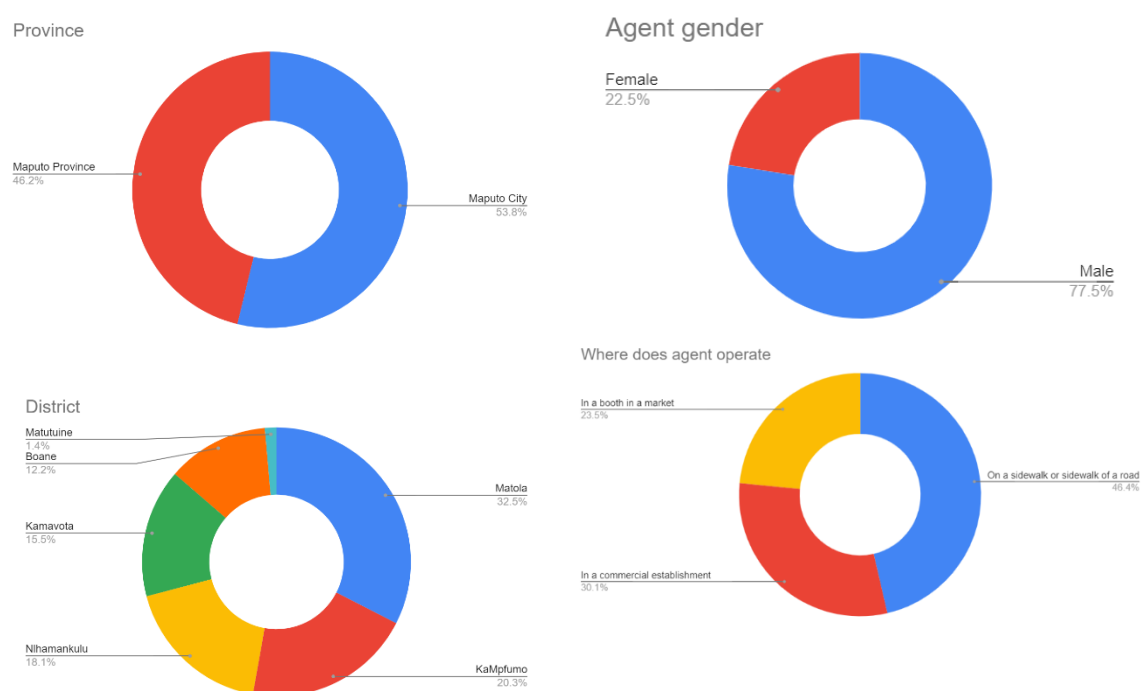
This chapter presents the research outcomes its analysis and discussion.

4.1. Socio-demographic Information

4.1.1. Agents Socio-demographic Information

During the study period, 498 bank and non-bank agents were surveyed, of which 268 (53.8%) in Maputo City and 230 (46.2%) in Maputo Province. The agents are mostly men represented by 77.5%, and the remaining 22.5% are women, see Figure 8.

Figure 8: Distribution of surveyed agents by province and district, by gender and location of activity



The study also shows that agents are concentrated in urban centers, with 53.8% in Maputo City (KaMphumo, Nlhamankuu and Kamavota), 32.5% in Matola City (Matola) and only 13.7% in predominantly rural districts (Boane and Matutuine). The majority of non-bank agents, 46.4%, carry out their activities on the public road, while those who operate in commercial establishments correspond to 30.1% and a considerable percentage, 23.5%, carry out their activities in formal (bazaar) markets. and informal.

“... Mpesa agents have a preference for places with a greater flow of people, such as: markets, transport terminals, lotteries - gambling, road side, among others, because for them they are more likely to be successful.” (Grupo1-KaMpfumo, 02/05/2019)

As per figure 9, non-bank agents who carry out their activities on public roads and in the markets are arranged in line and organized in small groups of 3 to 20 agents. The study recorded the occurrence of walking non-bank agents in both urban and rural areas.

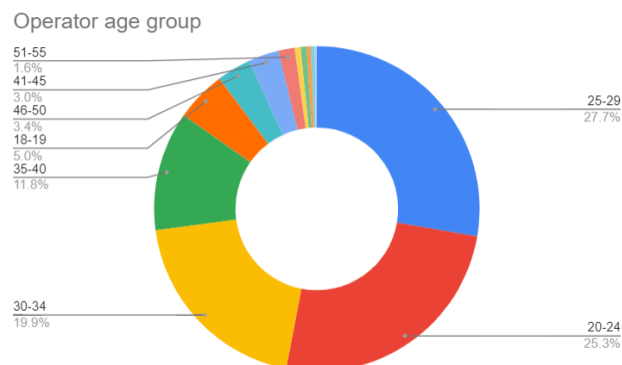
“The agents complain about working conditions, in open spaces, without security, susceptible to robberies. One of the M-pesa agents also said that there are cases in which the client refuses to get out of his vehicle and asks the agent to go there, and that he has already been robbed. ” (Group 3- Albazine, Mahotas and FPLM, 02/06/2019)

Figure 9: Disposition of non-bank agents (on public roads and in groups, in small commercial establishments and walking agents)



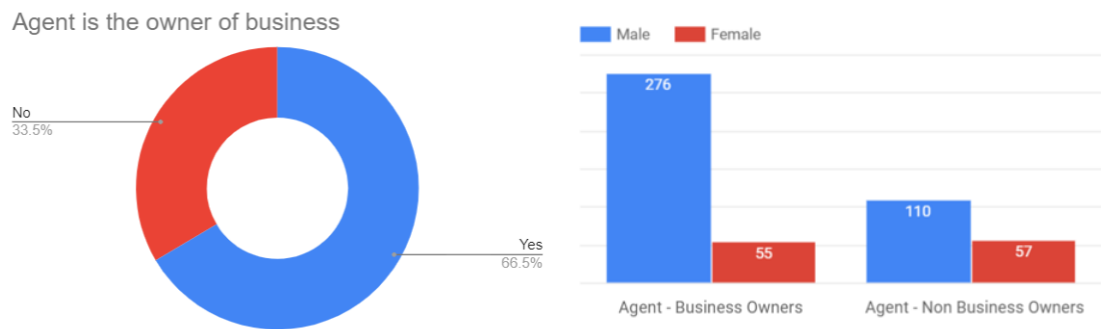
As Figure 10 illustrates that the majority of agents are young people, in the age group of 20 to 29 years old, represented by 53% and others in the age between 30 and 40 years old corresponding to 32%.

Figure 10: Operators age group



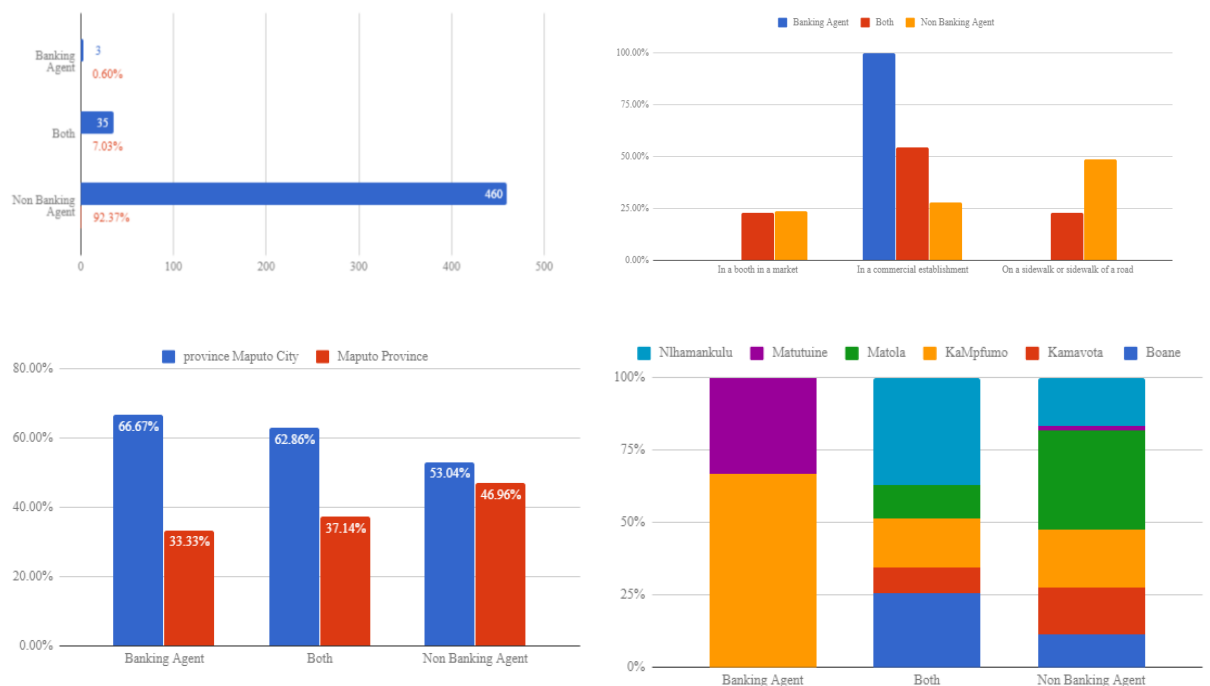
Out of 498 agents, 331 (66.5%) own the business while 164 (33.5%) work for others. On the other side, from those 331 agents who own the business, the majority represented by 83.4% are men and 16.6% are women, see Figure 11.

Figure 11: Distribution of bank and non-bank agents who own and do not own the business and grouped by gender



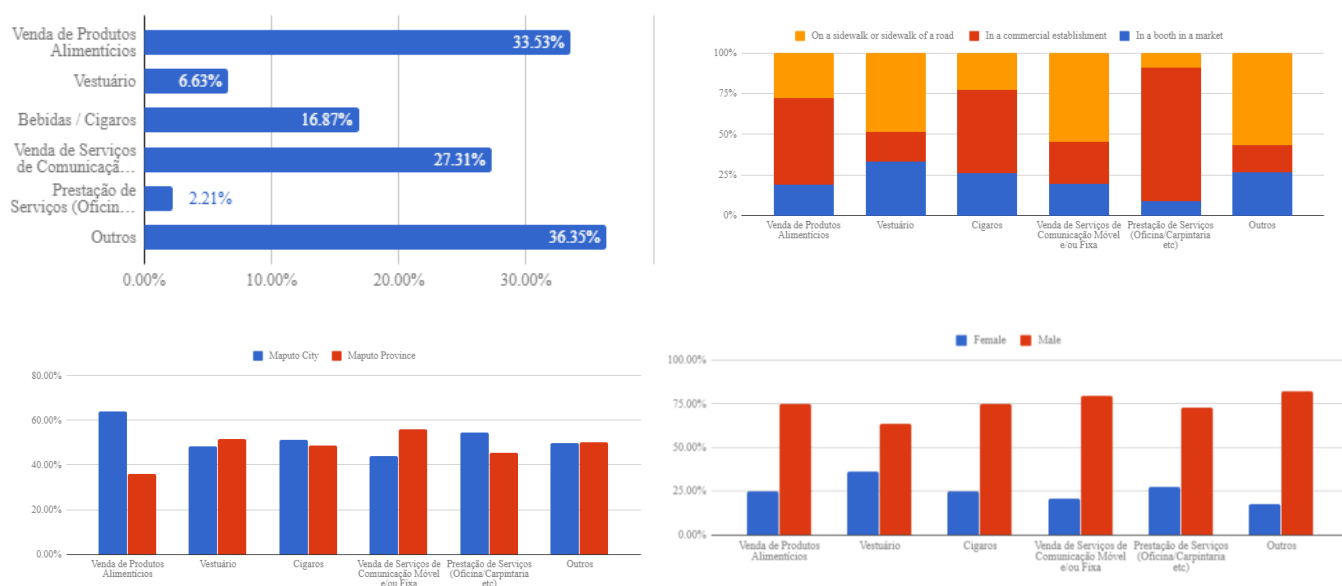
As shown in Figure 12, from 498 agents interviewed, the majority represented by 460 (93.4%) are non-bank agents, 35 (7%) are both bank and non-bank agents and only 3 agents (0.6%) are exclusively bank agents. Non-bank agents and those who are both bank and non-bank carry out their activity both in the markets (formal and informal), as well as in commercial establishments, as well as on public roads. Whereas those who are exclusively bank agents are in commercial establishments.

Figure 12: Banking, non-banking and both agents



According to Figure 13, both bank and non-bank agents, in addition to their activity as an agent, develop others, mainly commercial, related to the sale of products and services.

Figure 13: Agents main economic activities



According to Figure 14, the majority (79.8%) of non-bank agents have been working as an agent for less than 3 years.

Figure 14: Number of years of activity of non-bank agents

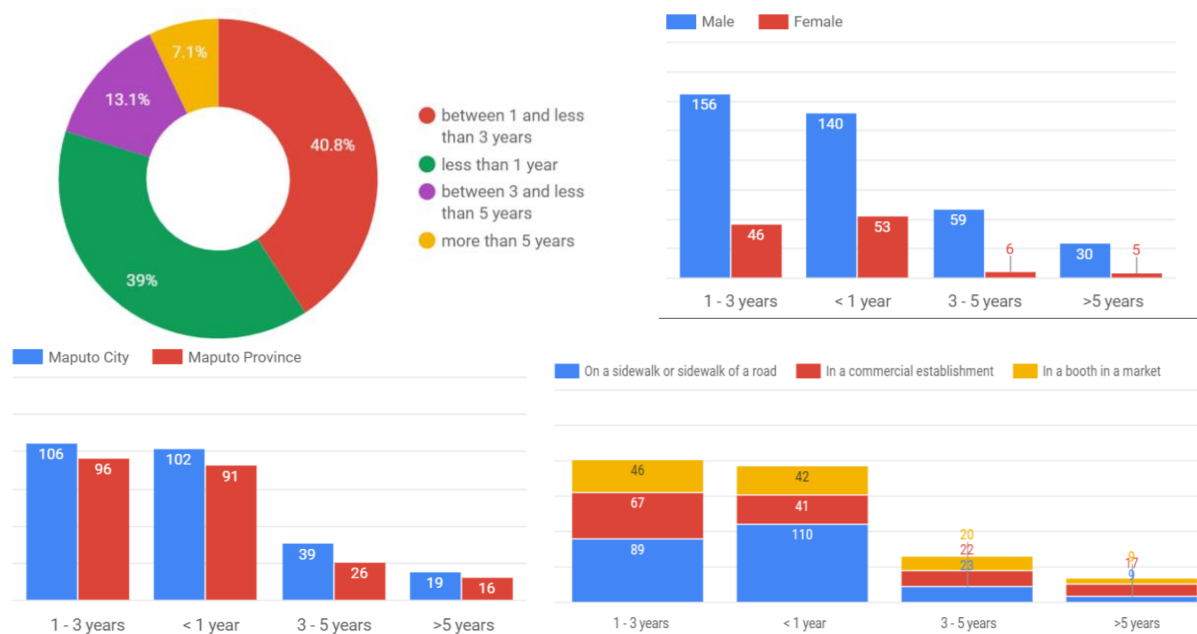
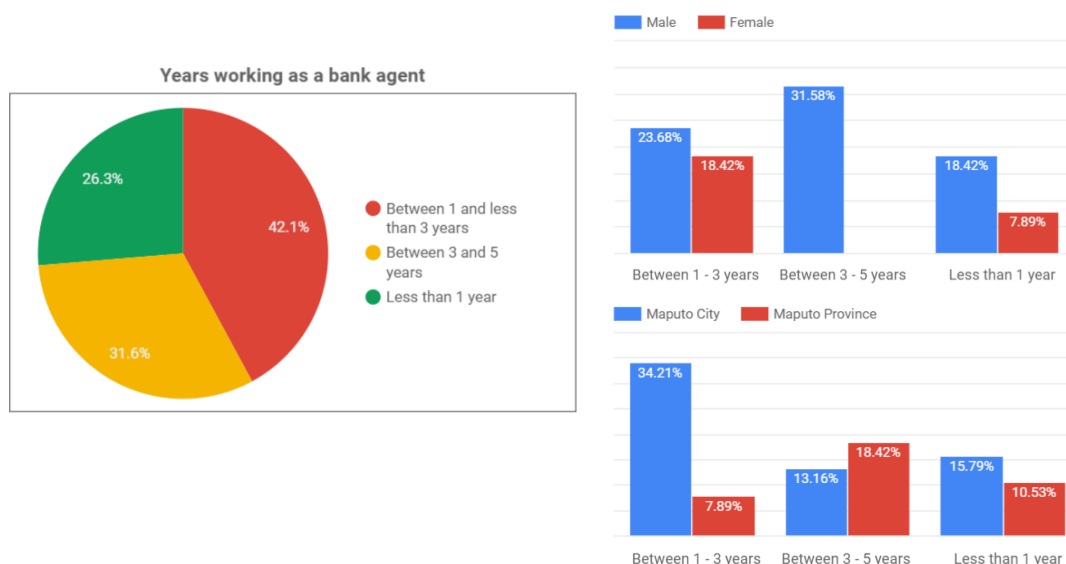


Figure 15 shows that the majority (73.7%) of bank agents exercise their agency activity for less than 3 years.

Figure 15: Years in the activity of bank agents



The data collection process in the province and in the city of Maputo, involved the same resources (inquirers and time). However, the study shows that the city of Maputo has a relatively larger number of agents than in the province, possibly due to the fact that the agents develop their activities preferentially in urban centers and in places with a greater concentration of people and commercial activities.

The same scenario occurs at the district level, with more agents in urban districts and less in mainly rural districts. In Mozambique and particularly in the city and province of Maputo, there is a greater concentration of infrastructure and financial services in urban centers and less in rural areas. On the other hand, the existence of the agent is motivated by the need to contribute to a greater availability of financial services in rural areas, and areas with less coverage.

However, the study shows an opposite tendency characterized by agents going to urban areas with availability of traditional financial services and it can be concluded that the activity of agent is not driven by the need to provide the service, but by the need to generate greater income (on agent side). This might be the reason behind higher availability of agents who provide non-banking services whose return on the activity is immediate and based on cash in cash out.

It was found in this study that the majority of non-bank agents are men and young people, this may be related to the fact that the majority of agents in this category carry

out their activities on public roads and close to informal markets with a high agglomeration of people, characterized by a certain degree of insecurity, so they may be withdrawing women and adults in the practice of activities for safety reasons. However, in order to face the fact that they develop the activity of an agent that involves handling cash in public places and in places with a greater concentration of people, the agents adopted a practice that is available to them in groups that allow mutual protection, with a view to inhibiting assaults.

The research identified mutations in the traditional action of the agents, being found the existence of walking agents that, throughout the day, circulate through the roads of a certain area, placing themselves at the disposal of the potential users of the agents' services, at the stop points public transport, in the vicinity of schools, in and around markets.

There's identified agents who, during peak hours, especially at the end of the day, travel from their fixed point to public transport terminals and to the vicinity of markets to fulfill requests for deposits of securities in the daily activity of carriers and market vendors. This attitude of the agents clearly shows their level of concern and involvement with a view to bringing the services of the agents closer to the users and thereby maximizing their revenues while allowing the collection of values from formal and informal activities and their channeling towards the formal financial system.

Doing so, the customer becomes free from possible robberies once the cash is transferred to the agent. However, the agent becomes a depository of large sums of cash, becoming in danger. Therefore, for the continuation of the financial chain (small trader / carrier - Agent - Bank) there is an urgent need to introduce a mechanism for collecting, at the end of the day, the values held by agents by banks.

The activity of bank and non-bank agent is effectively being a profession given the contribution as a means of occupation and income generation for citizens because there are many agents who own the business.

Although the activity of agent is carried out mainly on the public road and therefore constitutes a high-risk activity, there is a significant participation of women not only as workers of others but also as owners of the business. Such tendency can be associated with the actions and programs of women's empowerment underway in the country as well as the attitude of Mozambican women who tend to be growing in search of financial independence in the family. Therefore, through the study, there is a tendency

for women to become more and more active in the activity of banking and non-banking agents.

According to the regulation of bank agents in force in Mozambique, the agent must develop the activity of an agent in parallel to another main activity. In the case of non-bank agents, although there is no specific regulation, but Electronic Money Institutions (EMI) have demanded in the registration process that agents have another commercial activity or primary service provision. In this context, it is shown that the agents carry out some main activity, in compliance with the regulations and standards. However, it was found that some non-bank agents operating on public roads who consider that over time the activity of agent has become more profitable than their main parallel activity, leading them to abandon completely its main parallel activity and dedicate themselves exclusively on agent activity, becoming to some extent non-compliant with agent rules.

Associated with this phenomenon, individuals who dedicate themselves exclusively to the activity of agent, show indignation towards the municipal entities to which they must pay a fee for exercising the main commercial activity prior to that of agent, allegedly because they no longer exercise it and also because the profit agent activity is negligible. Thus, there is a failure in the inspection and enforcement system from the accountable entities, in order to comply with the terms provided for in the agent regulation and the absence of a fee system for the activity of agent.

"... Agents reported that they must pay a fee of 150MT per month to the municipality... and if someone does not have money from the fee, they are threatened with the removal of the work material... the work was no longer profitable given that "for example, if a customer deposits 100MT, the profit is only 1MT" (Group 4- Boane, 02/08/2019)

"... he let us know that he uses a rented number since business licenses are required to have a Permit to operate. He added that he pays 30% of his profit monthly to the owner of the rented number ..." (Group 4- Boane, 02/08/2019)

Regarding the years of activity as agents in both bank and non-bank, in one hand, the fact that there are more agents operating for less than 3 years, shows that the activity is attracting new entrants and on the other hand, the longevity of agents who have been operating for more than 5 years shows that the activity alone manages to retain them.

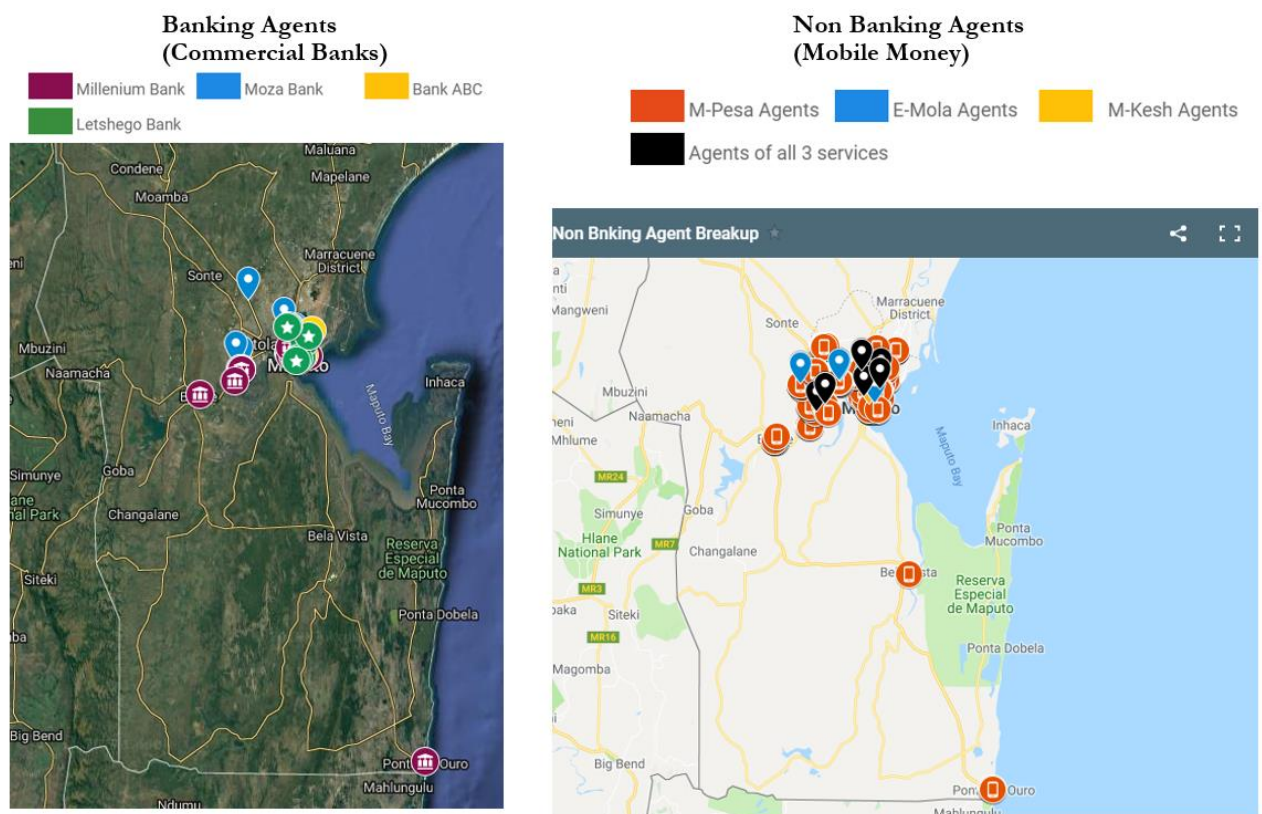
Contrary to the activity of non-bank agent, banking being an activity with less than 5 years old, those who joined remained, being that, in the last year it registered less entrants.

Supposedly, this phenomenon may be due to two factors: being an activity whose return is not immediate since the main transactions are cash in cash out and on the other hand, it may be due to poor disclosure of the role and importance of the banking agent, for the bank, for the agent, for society and for the country.

4.1.2. Geographical Location of the agents

In order to show the geographical distribution of the agents, it's necessary to Zoom in each one (banking vs non-banking) separately so that the banking becomes visible (see figure 16). This is due to the huge difference in number between them.

Figure 16: Banking and Non Banking Agents Geo-Location

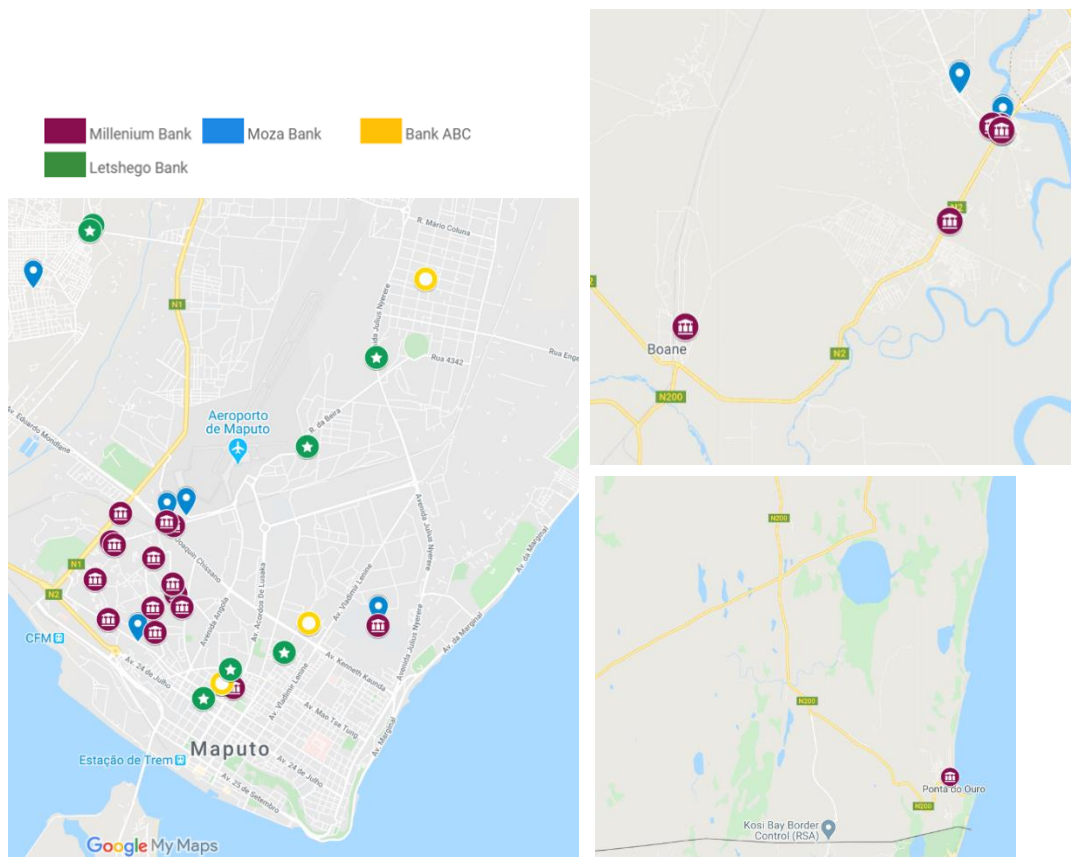


In both categories of agents, its noticeable that the concentration in urban areas is by far more expressive than in rural areas.

4.1.2.1. Banking Agents

According to the geo-location data related to banking agents, we can see that Millenium BIM is leading (see figure 17), even though its concentration still higher in Maputo City (urban area).

Figure 17: Banking agent's geo-location



Zooming in into Millenium BIM Network (as the largest), we can see that the majority of its agents are covering the main roads and are close to each other (<2km radius).

Figure 18: Millenium BIM agent network

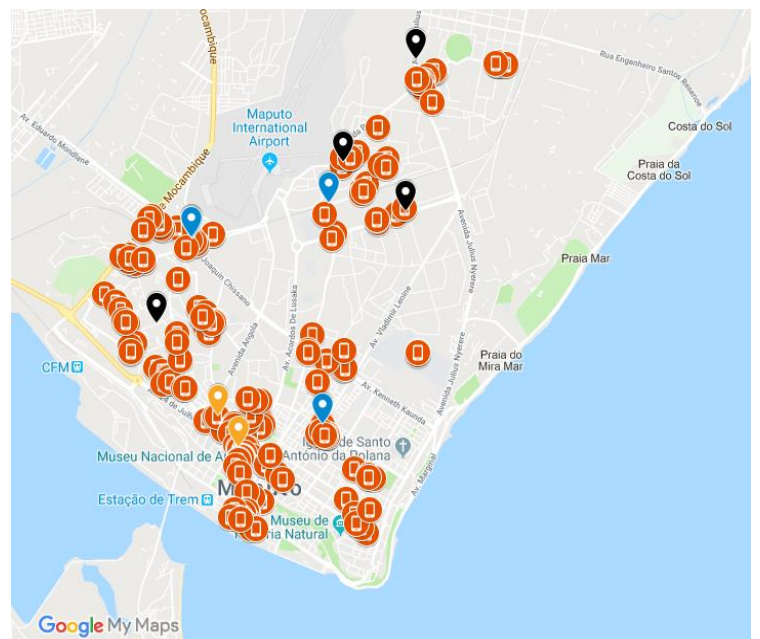
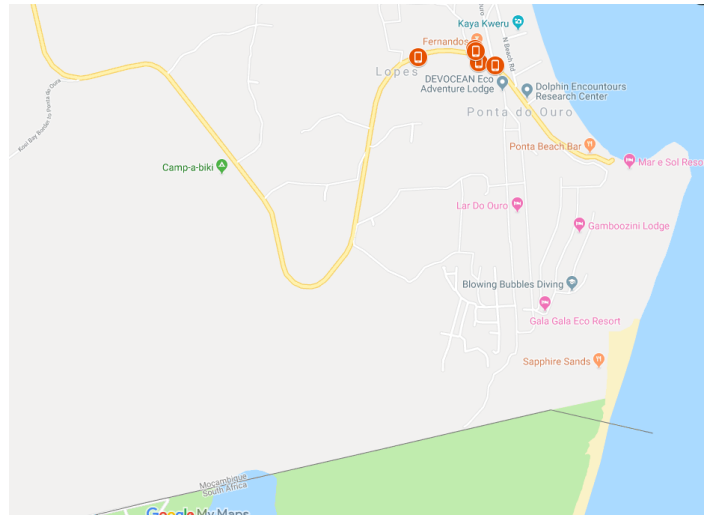
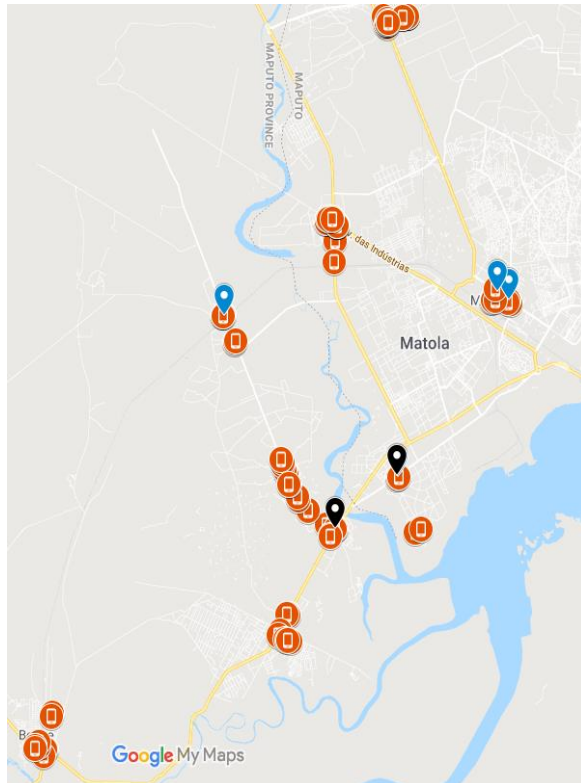
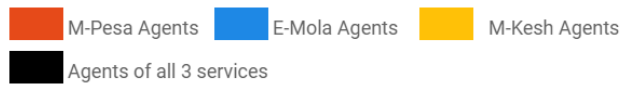


4.1.2.2. Non-banking Agents (Mobile Money)

When it comes to mobile money agents, the distribution of agents highlights how their location is identified by clusters and close to main business areas like markets, bus stations and other formal and informal concentration spots. Another important takeaway is the fact that M-Pesa agent network is by far the largest, when compared to E-mola and M-Kesh.

Once again, Maputo City is the main contributor, while predominantly rural areas (represented by Boane and Matutuine) show lower agents.

Figure 19: Non-banking Agents (Mobile Money)

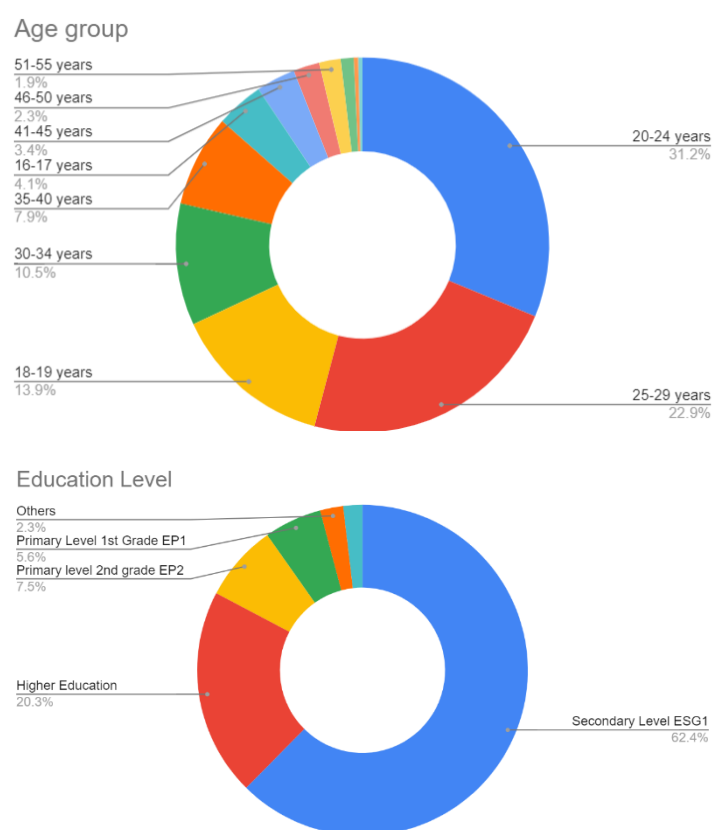


4.1.3. Socio-demographic information of users of agents services

For the evaluation of agents services from the user's perspective, 266 users of banking and non-banking services were surveyed, of which 63.9% men and 36.1% women; 60.2% from the Maputo city and the remaining 39.8% from Maputo Province.

The Figure 20 shows that the users of the agents services are mainly young people aged 20 to 29 and students in secondary and universities (higher education), and those who least use it are adults aged 46 to 55 and adolescents between 16 and 17 years as well as those with no schooling, but who can read and write.

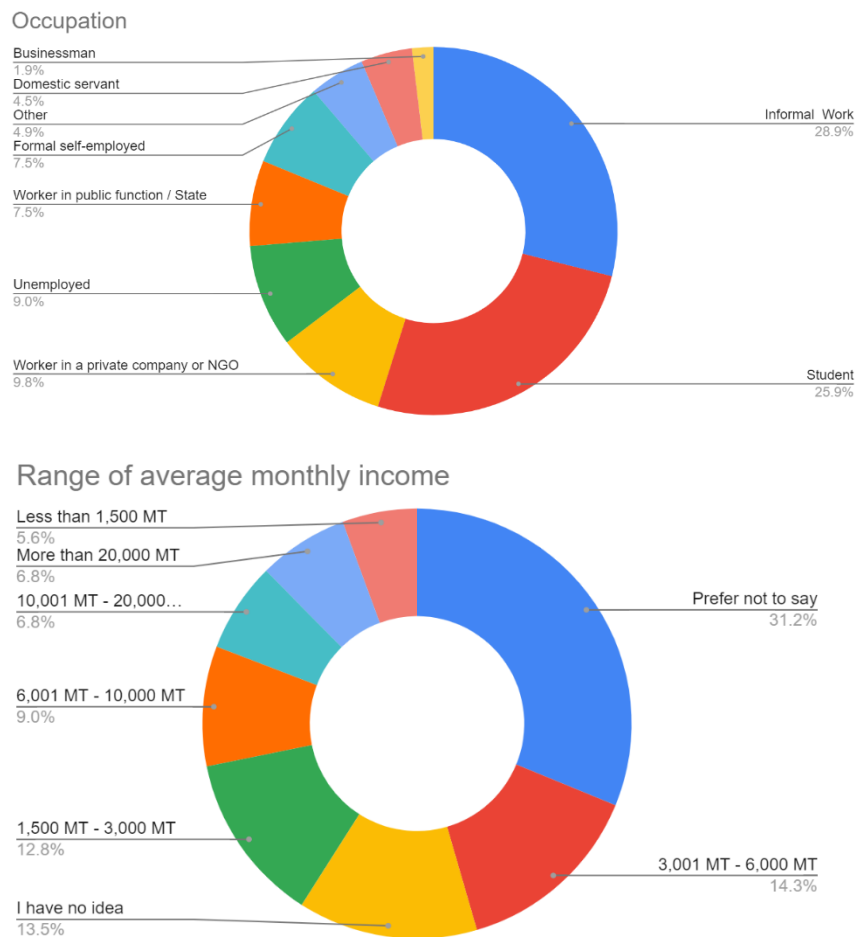
Figure 20: Occupation and level of education of users of the services of bank and non-bank agents



According to figure 21, it turns out that 54.8% of users of the services of bank and non-bank agents from which 28.9% are engaged in informal activity (mainly selling products) and 25.9% are students. About 31.2% of users of agent services did not agree to disclose their income. Of the interviewees who agreed to disclose their income, most users of the agents services have an income ranging between 1,500 MT (USD25) and 6,000 MT (USD 100) representing 27.1%. There is a considerable

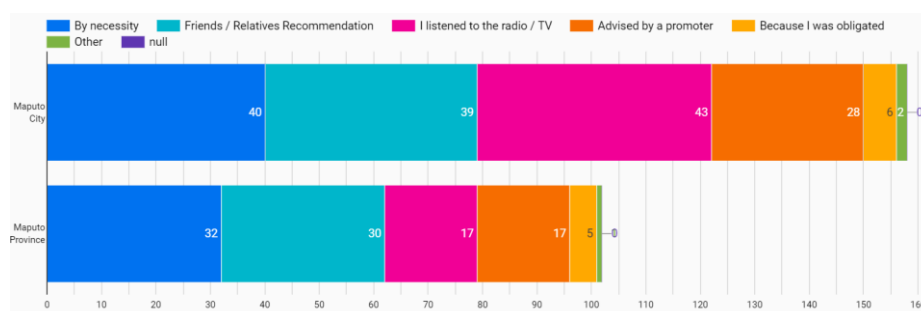
number of users of the agents services (6.8%) who have an income between 10.000,00MT' (USD167) to 20.000,00MT' (USD333) and another 6.8% whose income is above 20.000,00MT' (USD333)

Figure 21: Occupation and income of users of the services of bank and non-bank agents



When asked about the motivations for subscribing to the services of bank and non-bank , users of agent services mentioned as the main motivation the need to use (40%) to carry out transactions such as transfers (payment and receipt of wages and family financial assistance), payment for goods and services (such as: purchase of electricity, airtime, etc), deposit and savings, as shown in figure 22. It should be noted that the transfer included the transfer between electronic money accounts of the same Financial Service Providers (PSF) and transfer to / from bank account.

Figure 22: Motivations for subscribing to banking and non-banking services



According to INE (2019), the Mozambican population made up by 52% women and 48% men and the economically active population is 49% women and 51% men, and this distribution reflects at provincial level. However, the study shows that the percentage of male users of banking and non-banking services is almost double that of women. This contradiction may be due to, among several social and cultural factors, the high illiteracy rate of women (49.5%) compared to men (27.2%).

This fact is also supported by the study because most users of banking and non-banking services are young people with secondary and university education, possibly, on the one hand, because schooling has activated in them the culture and awareness of the use of financial system services and on the other, confidence in ICT. Although the study shows that users of the services of bank and non-bank agents fall into almost all income brackets, most have monthly income of up to USD100 and are engaged in informal activity. This shows that although they have relatively low income, the use of agents' services allows them to keep their income in a formal financial system and also allows them to use it as a savings mechanism and also as a means of paying for goods and services.

The process of joining agents services is mostly due to the need to use the service, which is considered a natural and sustainable process and will gradually meet new entrants over time.

Conclusions and Recommendations on socio-demographic information

- The presence of agents becomes noticeable and tends to grow;
- Agents are more concentrated in urban centers where informal economic activities and a high number of people are registered;
- A greater presence of agents in the rural area was expected, devoid of the traditional banking financial system, which does not happen due to the reduced

volume of transactions in the rural area, making the activity less attractive, unlike the urban area which is characterized by greater concentration of people and informal economic activity;

- The activities of agents focus on cash in/cash out transactions and, in an era of automation through integration and interoperability, in the event of non-innovation and reinvention of the agent in relation to its current performance, the agent may cease to exist. Therefore, regulators, financial service providers and agents should develop debates on the best model of agents in the technological and full integration era, taking into account the profile, business models and incentives, among other aspects;
- For the non-bank agents operating on the road, carrying out their activities in precarious conditions for being in the open and exposed to the danger of assault, the EMI together with the agents, should discuss the feasibility of using collective porches or kiosks, observing the security principles, taking into account the respective main activities parallel to that of the agents;
- It's recommended to establish partnerships to enable coordinated actions with municipal entities, particularly with the areas of economic activities;
- Establish awareness-raising mechanisms for compliance with standards, agent procedures, combined with inspection procedures;
- It's proposed to explore the possibility of organizing agents in small associations.

Taking into account the summary of the socio-demographic “photography” of the agents as well as the findings obtained from the empirical work carried out, it's urgent to recommend the following:

To the regulators and policy makers:

- Evaluation of the rules and regulations of the agent and subsequent review taking into account the current events (itinerant agents, agents who are dedicated exclusively to the activity of agents, agents who move during rush hour, among others).
- There is a need to revise the system of incentives, pricing and commissions in order to be more attractive and correspond to the objective of massification of

digital financial services, thus contributing to the establishment of an increasingly digital society.

- Establishment of incentives and programs for the attraction and maintenance of female gender agents in the system, thus contributing to the economic empowerment of women.
- Establishment of incentives for agents operating in rural areas.
- Promote digital training programs for agents in the field of financial education.
- Promote the creation and maintenance of a database of agents in order to allow the monitoring of the agents action.

For Financial Service Operators:

- Introduction of a collection mechanism of values held by agents at the end of the day, within the scope of the continuation of the financial chain (small trader / carrier - Agent - Bank);
- Improve the channels for solving failures in the use of the system and inherent problems, as well as improving the response time;
- Improve financial education programs for agents and introduce a mechanism to solve specific problems with their clients, using digital channels;
- It's recommended to disclose the role of the agent;
- That the agent be recognized as an economic activity;
- It's recommended to improve the communication mechanism between user-agent-provider;

Table III: Summary of agent characterization

	Banking Agent	Non-banking Agent
Target user segment	Banking	Banking and non-banking, vendors
Location	Own commercial establishment	Mostly on public roads and informal markets
Disposition	-	In small groups, next to each other
Mobility	Fixed	Both Fixed and Moving
Activity	Agent as extra activity	Some are dedicated exclusively to the activity of agent, the main activity used only for registration.

4.2. Perception of the Activity of Banking and Non-Banking Agents in the Maputo City and Maputo Province

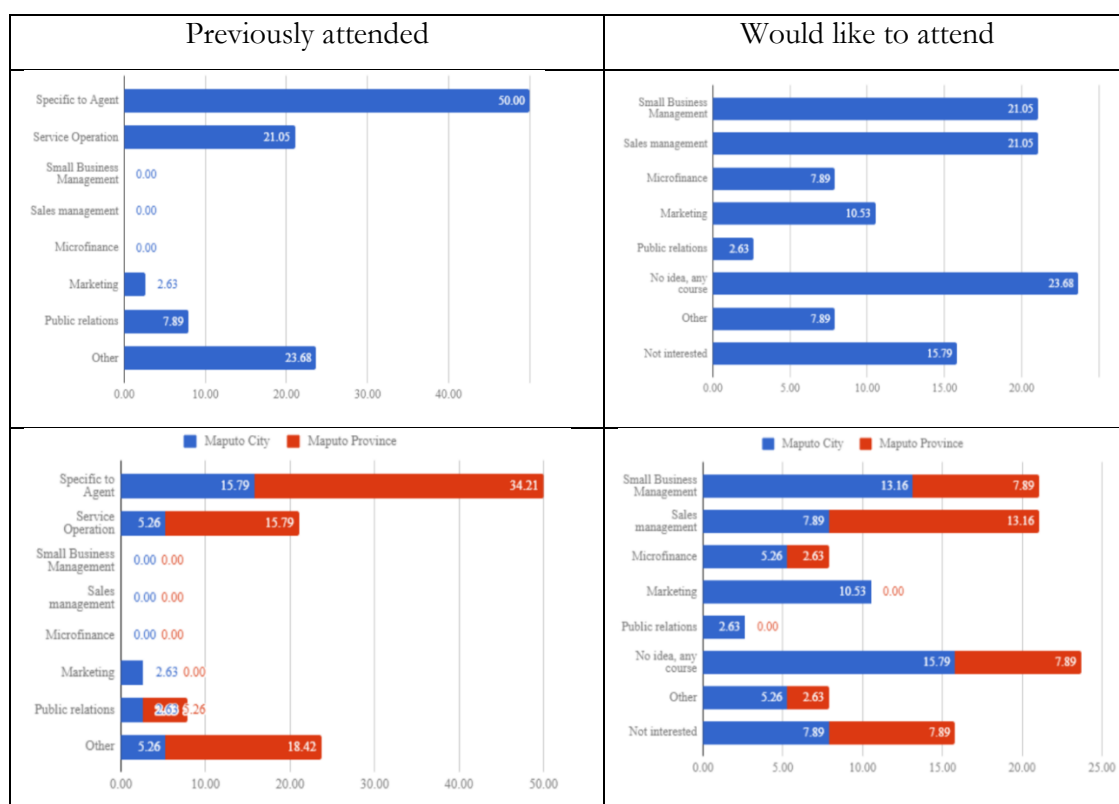
4.2.1. Banking Agents

For the bank agents to exercise the activity, they benefited from some specific training to execute the agents bank services routines and operations. The activities of bank agents, being of an economic and financial nature, are being developed without the agents having training in business management, microfinance management, sales management, among other support areas, as shown in Figure 23.

This fact can lead to poor management of the business as an agent. Still in the same figure, we can see that there is an express desire by bank agents to train themselves in the different matters of small business management, sales management, microfinance management, marketing, public relations, among others. Bank agents recognize the importance of training to better develop their activities.

However, they suggest that training should be done remotely through an online course, and each agent can attend the course outside of business hours or on days and hours of low demand for services. Therefore, the agents were not available to be absent from their work points nor to receive the trainers at their job as this procedure would lead them to interrupt their activities and consequently reduce their income.

Figure 23: Training done and desired training of bank agents



The banking services provided by the agents stands out, the deposit and withdrawal of cash and the transfer of funds, see figure 24. Therefore, the banking services requested from bank agents are directly related to financial resources (money). However, other services that do not directly involve money, such as cash disbursements and loan payments, provision of bank statements, collecting documentation for opening an account and applying for loans and bank card orders, have a request level extremely low, reaching zero in some regions of Maputo province. This fact can probably be due to the lack of information on the part of potential users, about the availability of such services at the level of bank agents.

Figure 24: Banking services level of request



Conclusions and Recommendations:

- The conception and design of periodic updating courses for bank agents on the specific subject of the agent;
- The conception and design of training courses for bank agents in the area of business management, microfinance management, sales management, marketing, among others;
- Provision of training courses for bank agents in the use of ICT tools associated with banking services;

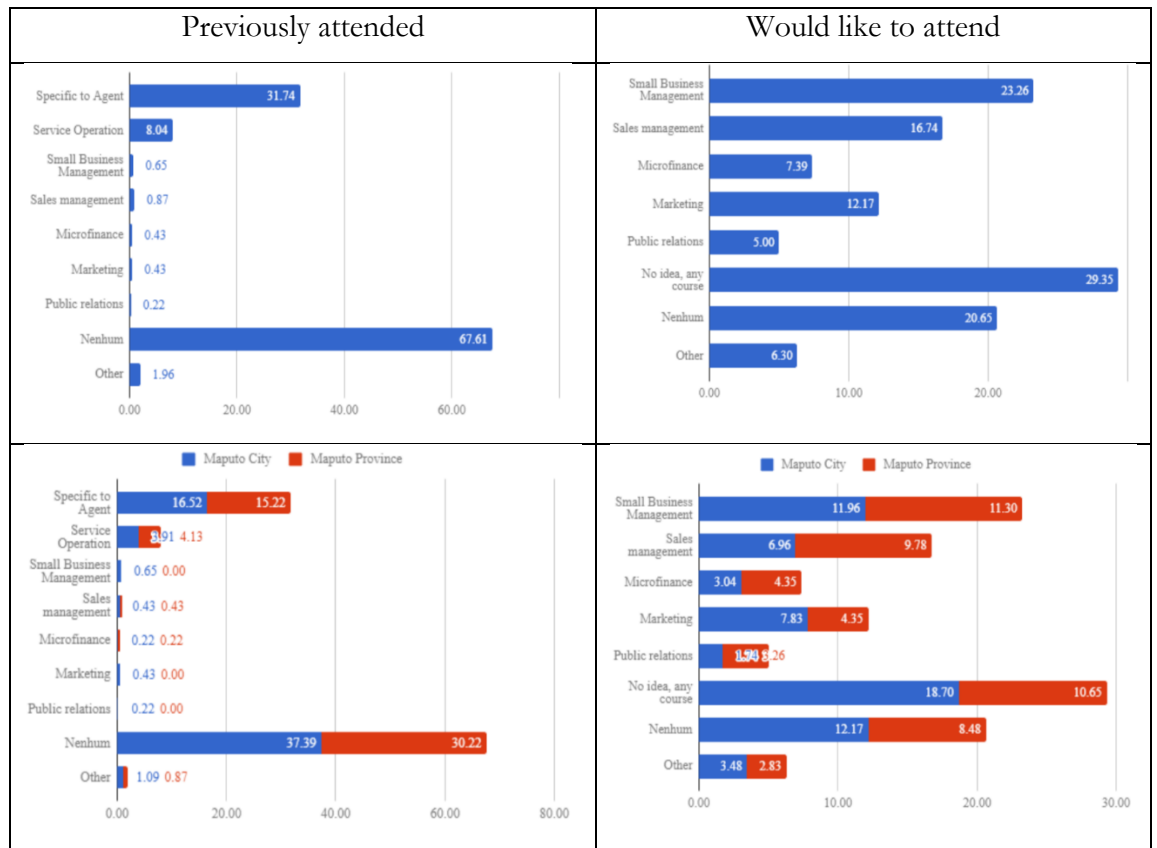
- Publicizing the role of the banking agent in communities and the financial system;
- The disclosure of banking services available from bank agents;

4.2.2. Non-banking agents

Upon entering the activity, only 31.7% of non-banking agents have benefited from specific training as an agent. However, the training package does not include an area which is also important such as small business management, microfinance management, sales management, marketing, among other support areas, as shown in Figure 25. This fact can lead to bad business management and consequent bad results. As shown in Figure 25, it's noted that there is a clear manifestation of the need and availability of non-bank agents to participate in training actions in the areas of small business management, sales management, microfinance management, marketing, public relations, among others.

Non-bank agents recognize the importance of training to better develop their activities. However, they suggest that the training be done remotely through online courses, and each agent can attend the course at their convenience. Therefore, the agents were not available to be absent from their work points, nor to receive the trainers at their work place, as this procedure would be difficult to perform because most of them carry out their activity in public and outdoors and even , would lead them to interrupt their activities and consequently reduce their income.

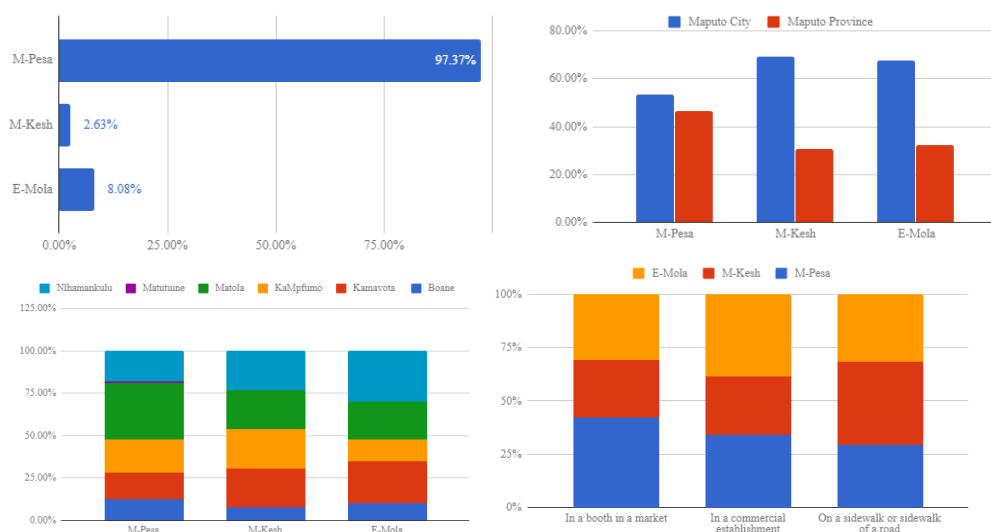
Figure 25: Training provided and training needs of non-bank agents



As per figure 26, at the level of the city and province, there is a predominance of M-Pesa agents represented by 97.37%, followed by E-Mola, which translates to 8.08% and finally M-Kesh represented by 2.63%. However, it is important to note that the distribution is not exclusive, in other words, the distinction between agents that provide services to only one of the electronic money institutions is not considered here as there's some agents that represents more than one brand.

The proportion of agents in the city and in the province of Maputo is close to M-Pesa while M-kesh and E-Mola is higher in Maputo than in the province. Therefore, there is an expansion of the M-Pesa service in both rural and urban areas, almost uniformly. It's also important to highlight that M-pesa is according to the data of the research the only brand in Matutine, a predominantly rural and touristic area comprising one of boarders between Mozambique and South Africa.

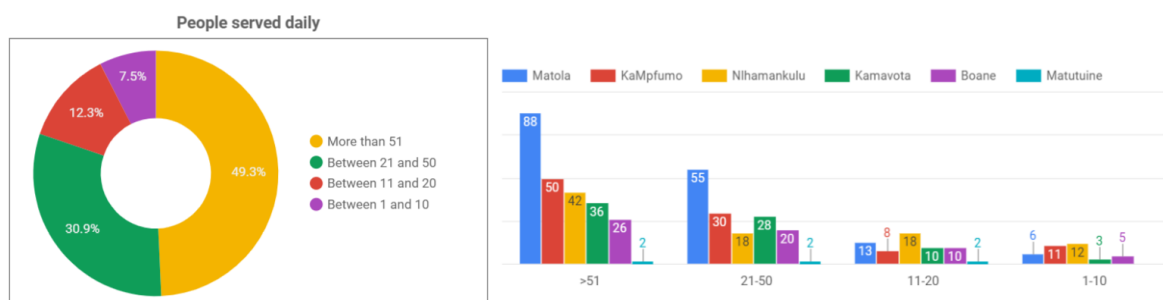
Figure 26: Mobile Money providers agents

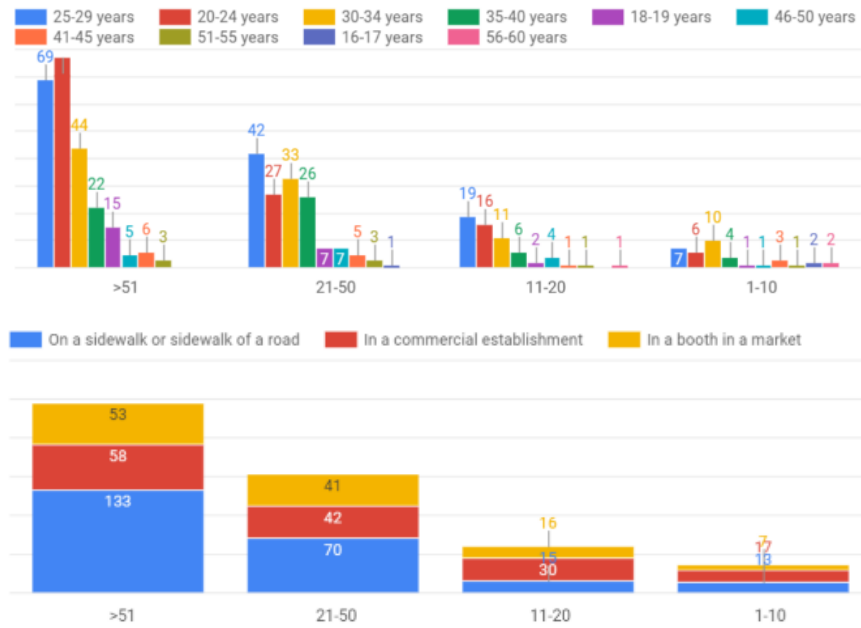


One of the metrics defined on the research is the amount of people served by the agents. According to Figure 27, each non-bank agent serves a significant number of clients on a daily basis, with agents serving more than 51 people corresponding to 49.3%, those serving 21 to 50 people representing 30.9%, those serving 11 to 20 people equivalent to 12.3% and the remaining 7.5% corresponds to agents that serve between 1 and 10 people.

The largest number of people served by non-bank agents occurs in the cities of Matola and Maputo and may be due to the greater concentration of people and also because they are the largest centers of commercial activity and provision of formal and informal services. On the other hand, the study shows that the non-bank agents that serve more people are young people aged 20 to 34 and that carry out their activity in the thoroughfare (sidewalks).

Figure 27: Average daily number of customers served by each non-bank agent

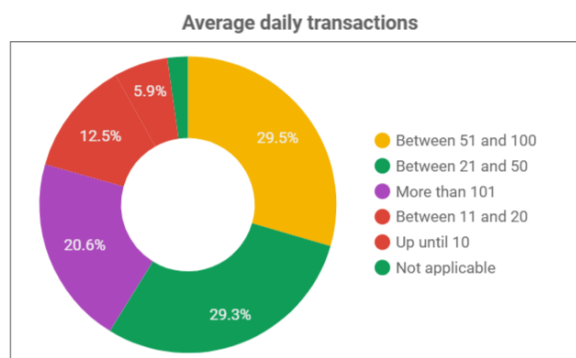


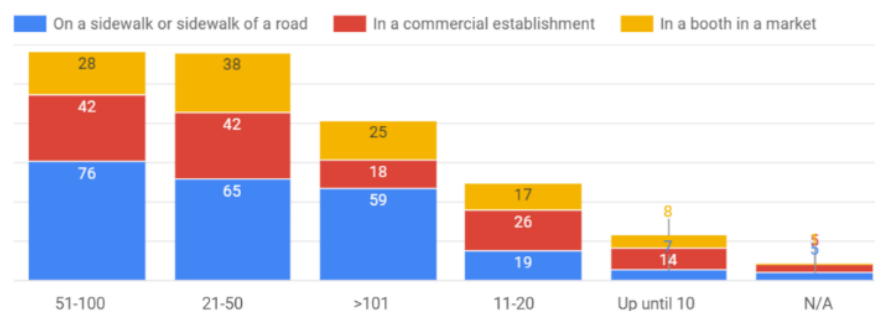


Another important metrics define in the research is the average amount of transactions. As shown in figure 28, most of non-bank agents (29.5%) carry out between 51 and 100 transactions daily, followed by the ones between 21 and 50 transactions (29.3%) while those who carry out 101 or more transactions are represented by 20.6%, 11 to 20 transactions are 12.5% and only 5.9% carry out up to 10 daily transactions. Nevertheless, 29.3% of agents did not want to declare the number of daily transactions.

Most transactions take place with non-bank agents who carry out their activity on the public highway.

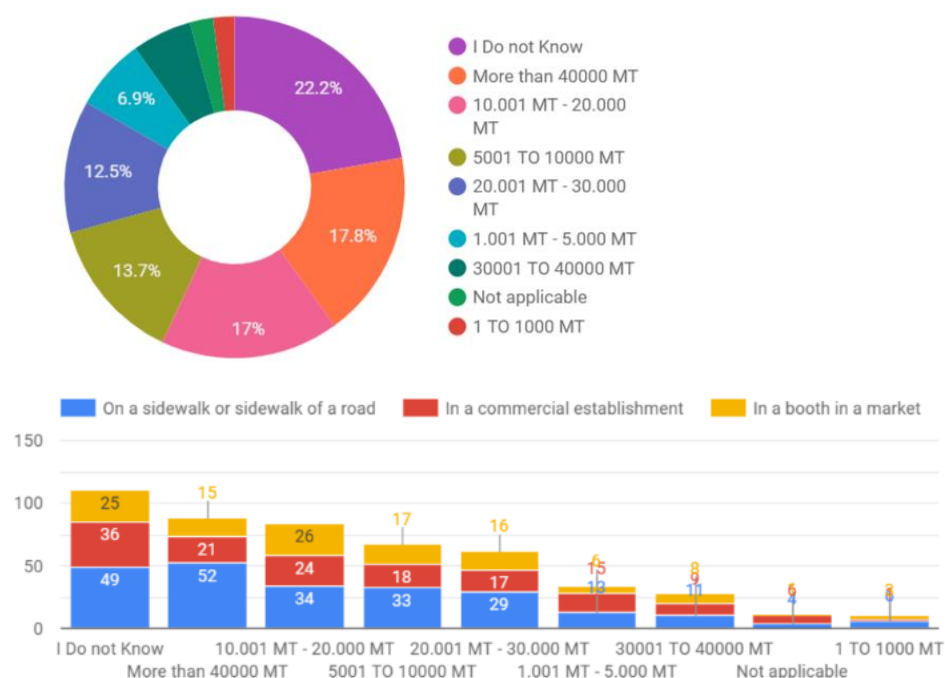
Figure 28: Average daily transactions





The following metric, figure 29 shows that a considerable number of non-bank agents (22.2%) did not want to inform the average value traded daily, having chosen to say that they did not know. 17.8% of non-bank agents handle more than 40.000,00MT² (USD645.00), 17% between 10.001,00MT (USD161.00) and 20.000,00MT (USD323.00), 13.7% between 5.001,00MT (USD81.00) and 10.000,00MT (USD161.00), 12.5% between 20.001,00MT (USD323.00) and 30.000,00MT (USD484.00). Still in Figure 29, it is possible to notice that the greater volume of the value traded is observed in the agents that carry out their activities on the public road.

Figure 29: Average value traded daily by non-bank agents



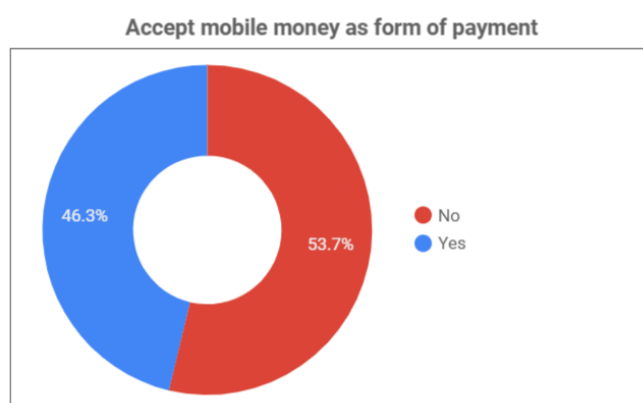
“... I here with my business and M-pesa, I earn more than 40,000Mt (USD645.00) sitting here in my shadow with my sweets.” (Testimony of an agent interviewed by Group1-KaMpfumo District, 02/06/2019)

² Amounts in Metical (MT), the National Currency in Mozambique

Non-bank agents carry out transactions for the sale of goods and services in their main business, however, 53.7% of this category of agents do not accept the use of mobile money to pay for goods and services provided or provided to the customer in the scope of the other activity, see Figure 30. Although this phenomenon is a paradox, it is due to the need for the other business to raise the maximum amount of cash to guarantee liquidity in the agent business.

On the other hand, it is due to the fact that the incentive model is indexed to cash in - cash out. As a result, multiple operations occur where the customer is obliged to withdraw from the agent and pay the good / service to the same agent, who in turn proceeds to deposit in his mobile wallet.

Figure 30: Acceptance of mobile money as a means of payment by non-bank agents



Conclusions and Recommendations

There is a presence of agents in both Maputo City and Province with greater predominance in urban areas than in rural areas.

For the regulators and policy makers:

- Actions to publicize the role of the non-bank agent in communities and financial system.
- Disclosure of services associated with mobile money available from non-bank agents.
- The formulation of the regulation of non-bank agents providing the categorization of agents so that agents who fall into a category with a high number of transactions are required to have reserves to guarantee liquidity.

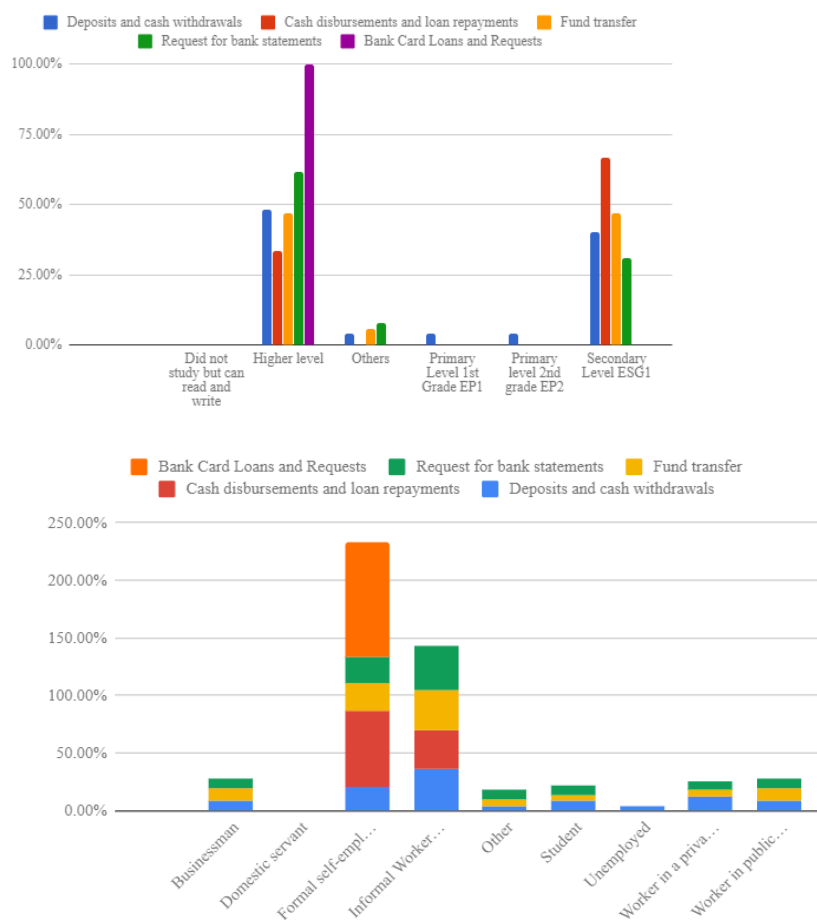
For financial services operators:

- It is recommended to provide periodic update courses for non-bank agents on the subject of agent, business management, microfinance management, sales management, marketing, among others;
- The provision of training courses to improve the use of ICT and particularly the use of mobile devices and applications associated with digital money.
- Digital currency operators in coordination with other actors, who create conditions for non-bank agents who operate informally, on public roads and in the open, to carry out their activities formally, in a dignified and relatively safe place, taking into account the volume of transactions that characterizes them.
- Definition of a differentiated incentive model for agents operating in the urban area and for those operating in the rural area.
- Definition of attractive incentives for rural agents.
- Definition of sustainable and attractive cost for the end user.

4.2.3. Banking and non-banking service usage

From the research outcomes, it's important to highlight that the usage of services varies from bank and non-banking services. When comes to Banking services, the education level plays an important role as per figure 31, in which most educated people (college/university) uses all 5 reported types of services offered by the banking agency model. It seems to be related to the fact that banking services serves mostly this society class. Next to the list are people with secondary level of education. Similarly, the occupation follows the same, this time on self-employed and informal economic agents.

Figure 31: Banking agent services usage per academic level and occupation



On the other side, there's non-banking agent services (mobile money) following different approaches as the service usage is categorized majorly by occupation and age. Figure 32 shows that the users of agents services make use of almost all services, with the exception of the transfer of mobile money and bank account and vice versa by users under the age of 20, which corresponds to the expected by the banking

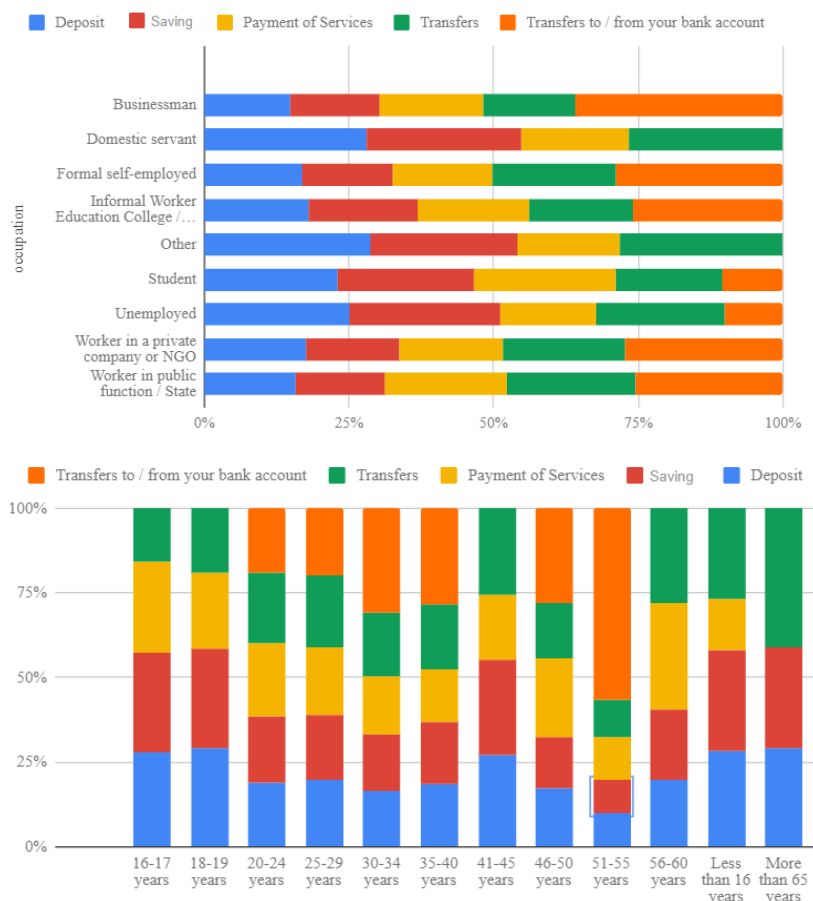
regulation as users have autonomy of individual ownership and operations of an bank account from 21 years old onwards.

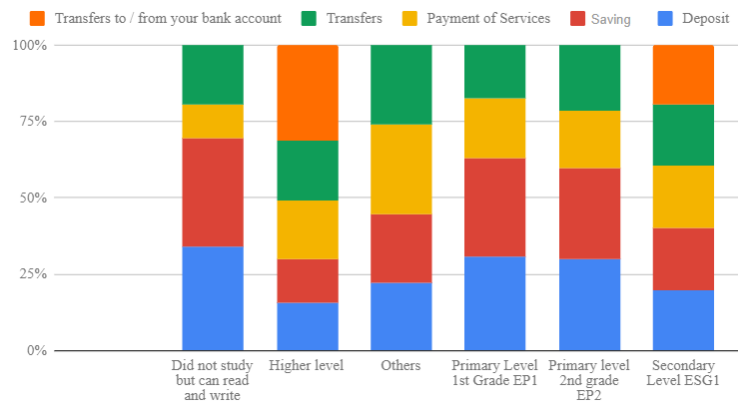
It's also evident that those over 55 also do not use the transfer between a mobile account and a bank account and vice-versa, probably because they do not have a bank account or started to use the mobile account exclusively and abandoned the use of a bank account or weak domain use of ICT or even take into account the cost of the service.

It should be noted that the study consisted of interviewing users of agents services when requesting services. Being that, it is important to note that, according to the regulation, the agent cannot do the transference service so it is not available. However, the same can be done exclusively by the user himself on the basis of the available applications. Evidence also shows that only users with secondary education and higher education are those who use all services.

From academic point of view, the graph shows that those who didn't study but can read and write and those with primary education uses mobile money services mostly to deposit, save and pay services while the other explore all the services.

Figure 32: Non-banking agent services usage by occupation, age and academic level.





“... It was possible to observe some children who brought with them a phone number noted on a paper and the amount to make the deposit.” (Group 3-Mavalane and Hulene, 02/05/2019)

“... The agents claim that some customers in the majority of the Malanga market do not know how to read or write, for one of the agents interviewed in this market says that “It seems to me that customers sign an account opening contract without really being aware of what treats, which often creates confusion. ” (Group 2- Neighborhoods of Chamanculo, Malanga, Unit 7, 02/06/2019)

Conclusions and Recommendations:

- Users of almost all age groups use the services of agents;
- There is a need for greater dissemination of the means available that provides interoperability between the mobile money account and the bank account and vice versa in order to better close the ecosystem of digital financial services;
- Clarification and awareness campaigns for the use of local languages geared towards the elderly and illiterate should be developed in order to enhance financial inclusion usage perspective;
- Need for training in the use of digital devices;
- It's urgent to provide inclusive solutions with accessibility for those handicapped and illiterate, such as biometric based authentication and voice biometry.

5. Final Remarks and Recommendations

5.1. Final Remarks

- The presence and role of the agent is noticeable and is playing its role on financial inclusion;
- The action of the agents has greater notoriety and availability in large urban centers and district headquarters, in places with a greater agglomeration of people and mainly informal economic activities;
- Agents are an important platform for small business operators, especially informal ones;
- As a result, agents are contributing to attract and enroll citizens into formal financial system;
- There are some changes in the way that agents operates, for instance, some of them do not stay at a fixed point waiting for customers, instead, they move to meet customers;
- The majority of agents are predominantly operating on thoroughfare, it causes a very high security risk for both customers and agents;
- It is noticeable that the activity has established itself and is experiencing changes in its performance, urging the need to update the regulation and its recognition;
- On the other hand, users of agents services have benefited from the services available, although it is felt that the level of coverage, especially in rural areas, is still limited. For this reason, coordinated actions between the different actors are encouraged in order to create incentives and attractive favorable conditions for the activity, as well as the revision of the specific legislation that regulates the activity of agent that includes bank agent and non-bank agent.

5.2. Final Recommendations

Table IV: Final Recommendations

Recommendations	Regulators/ Government	Financial Service Operators
Recognition of the Agents activity as an economic activity	X	
Disclosure of the role of Agent	X	X
Dissemination of digital money services	X	X
Implementation of interoperability between operator systems	X	X
Regulation review and categorization of agents	X	
Review of the agent regulation and introduction of mandatory liquidity reserves for agents	X	
Inspection and awareness raising actions to comply with agent regulations	X	
Creation and maintenance of the agents database	X	
Review of the system of attractive incentives for agents operating in rural areas, for agents operating in urban areas and who are attractive to the end users of services.	X	X
Definition of incentives that encourage the participation of women as agents	X	X
Training of Agents	X	X
Creation of conditions for non-bank agents		X
Reinventing the role of non-bank agents taking into account the integration of PSF systems		X
Motivation and awareness of agents to act in an associative model	X	X
Introduction of cash collection mechanisms held by agents at the end of the day	X	X
Improvement of fault resolution channels in the execution of agent services operations		X
Improved communication between the end user - agent - operator.		X

From this study, it can be concluded that ICTs play a facilitating and dynamic role in the activity of banking and non-banking agents. On the other hand, people have been contributing significantly to the process of financial inclusion in Mozambique, both in urban and rural areas. However, it is important that debates and in-depth studies are conducted to guide the redefinition of the agents role taking into account the current trend automation and integration of agent service.

The agency of banking and non-banking services must be assumed as an action of financial inclusion and not just as a source of income. It's recommended that higher education and research institutions be more involved in carrying out more studies to better understand the phenomena associated with the performance of bank and non-bank agents and the consequent definition of optimal models.

A challenge is launched to the Mozambican academy and startups for the development of a tool (software as a service) that allows the collection and statistical analysis of data.

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7. Annexes³

Annex 1: Questionnaire for agents

Annex 2: Questionnaire for users of agent services

³ Note: Annex 1, Annex 2 and Google Studio Database are available as per request to the team members
(Wilson Ramuge: wilson.ramuge@gmail.com)