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AGRICULTURAL MICROCREDIT IN COTE D'IVOIRE

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ABSTRACT

The financing of agriculture in rural areas for poverty reduction remains an important concern that has involved several research.

The granting of microcredit to people with low income is viewed as an opportunity to increase farm income in rural areas.

The survey led in Côte d'Ivoire in the region of Tchologo attempted to shed light on the relation between microfinance institution and farmers.

This region has about 65% of poverty rate and people are mainly involved in the production of cash and food crops.

Through financial diaries methodology, farm needs were tracked to know how farmers manage his little financial resources by the identification of main farm needs and their difficulties to meet them.

Indeed, the survey takes into account 202 respondents with farm as main profile among which 34% are credit beneficiaries of UNACOOPEC-Ferké institution.

The analysis of the economic and social characteristics provides various information regarding the consideration that grants microfinance institution to farmers. Besides that, the statistical significance (t-test) allowed to dress the concern of the improving of farm income through microcredit supplying.

ACRONYM

ANADER Agence Nationale d'Appui au Développement Rural ,
APSPD-CI Professional association of decentralized financial systems in Ivory Coast.
ASCA or ASCRA Accumulating Savings and Credit Associations
BACI Banque Atlantique de Cote d'Ivoire
BCEAO Central Bank of West Africa States
BFCD Office of Training and Councils in Development
BICICI Banque Internationale pour le Commerce et l'Industrie de la Cote d'Ivoire
BNI Banque Nationale d'Investissement
CDCI Compagnie de Distribution de Cote d'Ivoire
CGAP Consultative Group to Assist the poor
CHCE Coopérative d'Habitation des Cantons de l'Est
CNM National Commission for Microfinance
COIC Compagnie Ivoirienne de Coton
CVGFR Comité Villageois de Gestion du Foncier Rural
DM Direction of the Microfinance
DRA Régional Direction of Agriculture,
DSRP-I Document Stratégique de Réduction de la Pauvreté Intérimaire
FAO Food and Agriculture Organization of United Nations
FIRCA Inter-professional Agricultural Research and Advisory Fund
GDP Gross Domestic Product
IMEC Mutualists Institutions or Cooperatives of Savings and Credit
MEF Ministry of the economy and Finances
MINAGRI Ministry of Agriculture
NNP National Nutrition Program
NSI National statistical Institut
OCPV Office d'Aide à la Commercialisation des Produits Vivriers
OHADA Organization for the Harmonization of Business Law in Africa
ONDR, National office of Development of the Rice
OPA Organisation Professionnelle des Agriculteurs
ROSCA Rotating Savings and Credit Association
SFD Systèmes Financiers Décentralisés
SHG Self-Help Group
SIB Société Ivoirienne de Banque
SODEPRA Société de développement des productions animales
SODEFEL Société de fruits et légumes
SODERIZ Société de développement de la riziculture
SECO Société d'Exploitation Cotonnière Olam
PAFARCI Support project in the relaunch of agricultural network of Ivory Coast
PAS Plans d'ajustement structurels
PDDA PLAN DIRECTEUR DE DEVELOPPEMENT AGRICOLE
PLDR Programme Local de Développement Rural
PNASA National Program of Support for the Agricultural Services
PNIA Programme National d'Investissement Agricole
PNLCP Plan National de Lutte Contre la Pauvreté
PPMS Project of Support for the Small farming
PREMT The Plan of Economy Recovery in the Medium-term
PROPACOM Project of Support for the Agricultural production and the Marketing
PRAREP Project of Agricultural Rehabilitation and Reduction of the Poverty
PSRE The Plan of Stabilization and Economy Recovery
UNACOOPEC-CI Union Nationale des Coopératives d'Epargne et de Crédit de Cote d'Ivoire
UNDP United Nations Development Program
USAID United States Agency for International Development
VSLA Village savings and loan associations

WFD Water Framework Directive
WAEMU West Africa Economic and Monetary Union

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ABSTRACT

ACRONYMS

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INDEX

INTRODUCTION

Introduction

Context of study

Objective of study

CHAPTER 1: POVERTY AND MICROFINANCE

1.1-Introduction.....	8
1.1.1- informal practice of microfinance.....	9
1.1.2- individual and collective informal financial practice.....	10
1.2- Microfinance and microcredit: perceptible difference.....	15
1.2.1 Risk management and intervention of the microfinance	18
1.3- Objective of microfinance.....	21
1.4- Microfinance and impact study.....	25
1.4.1- Microfinance and agriculture financing.....	30
1.5- Measuring impacts of microcredit.....	35
1.6- Presentation of UMOA.....	38
1.6.1- Poverty in the UMOA.....	41
1.6.2-Microfinance, institutional and legal organization.....	44
1.6.3- Microfinance in Côte d'Ivoire.....	46
1.7- Conclusion.....	53
1.8- References.....	54

CHAPTER 2: AGRICULTURE IN COTE D'IVOIRE

2.1- Introduction.....	62
2.1.1- Agriculture in sub-Saharan Africa.....	63
2.2- Agriculture in Côte d'Ivoire.....	66
2.2.1- Evolution of Ivorian agriculture.....	68
2.3- The agriculture situation and Ivorian State.....	70
2.3.1- Agricultural Policy.....	70
2.3.2- The agro-business sector.....	71
2.3.3- Challenges of agriculture.....	72
2.4- Conclusion.....	74
2.5- References.....	75

CHAPTER 3: METHODOLOGY AND SURVEY IN THE REGION OF TCHOLOGO

3.1- Introduction.....	77
3.2- Financial diaries methodology.....	77
3.2.1- Financial diaries method and context of study.....	79
3.3- Presentation of the Tchologo region.....	82
3.3.1- The economic situation.....	83
3.3.2- Assets and potentialities of the region.....	83
3.3.3- The agricultural production in the region.....	86
3.3.4- The professional organization of farmers and agricultural products processing.....	91
3.4- Interviews of cooperatives and supervision structure.....	93
3.5- UNACOOPEC-FERKE and its financial services.....	97
3.5.1- Synthesis of deposit (2014-2015).....	98
3.5.2- Credit of the institution.....	98
3.5.3- Agriculture and offer of services.....	100

3.6- Conclusion.....	101
3.7- References.....	102
ANNEX.....	104

CHAPTER 4: RESULTS OF FIELD RESEARCH IN THE REGION OF TCHOLOGO

4.1- Introduction.....	108
4.2- Demographic and social situation of respondents.....	110
4.3- Economic situation of respondents.....	113
4.4- Financing of farm activities.....	120
4.5- Impact study of microfinance on farmers' income.....	124
4.5.1- The analysis of the probability to receive credit.....	124
4.5.2- Effect analysis of microcredit on farm income.....	126
4.6- Conclusion.....	129
4.7- General conclusion.....	130
4.8- References.....	132
ANNEX.....	133

INTRODUCTION

Introduction

Agriculture represents the main source of food for the world's population. The increasing of the world's population gives a great consideration to the development of agriculture to meet the growth of food demand.

Agriculture is seen as a strong option for spurring growth, overcoming poverty, and enhancing food security. According to Robert Bruce Zoellick, "the agriculture is a vital development tool for achieving the Millennium Development Goal", World Bank (2008).

In Sub-Saharan Africa, the agricultural sector employs 65 percent of the labor force and generates 32 percent of GDP growth, Christian Friis Bach et al (2008).

Despite this important contribution of agriculture to GDP, the supply of financial service to farmers is still limited. The failure of state-owned development Banks that had as primary objective the stimulation of the agricultural modernization, Morvant-Roux (2007), Malcolm Harper (2005), Meyer (2007) urged farmers to turn to others financial sources to increase their income and insure their livelihood.

It's the case of Côte d'Ivoire where the economic development is based on agriculture with 20% of GDP and two-third of workforce among the population who undergoes today an important rise in poverty rate in rural areas 56.8%, INS (2015).

The environment, climatic potentialities and others assets are not exploited by farmers because of the lack of modern farming materials.

This country considers mainly the production and exportation of cash crops such as coffee, cocoa, cashew nut and cotton. These crops depend on international market in term of purchase and price setting. While the national market requires food crops to satisfy the food demand of about 22.70 million of inhabitants, Word Bank (2015). This remains a major concern for government and an opportunity to apply the PNIA (Programme National d'Investissement Agricole).

In fact, PNIA is a development action for poverty reduction at the national level especially in rural areas through an increasing of economy focused on the improving of agricultural sector. This program has been implemented since 2010 but it still remains little perceptible in rural areas.

This situation of exclusion for farm development pave the way to microfinance institutions to supply small scale financial services to people with low income in the context of fight against poverty.

Indeed, microfinance is viewed as a new approach of financial inclusion of poor people throughout some innovation as: small loan with periodic repayment and even in weekly repayment, group lending and appropriate services for poor people such as savings, insurance, and payment services.

However, the distribution of credit services in Côte d'Ivoire shows an inequality regarding the main sectors of activity.

According to Commission National de Microfinance (CNM) in 2012, the distribution of microcredit considers mainly the trade activity (49%), craft and restoration, industry (19%) and transport (16%) on the total credit granted that is estimated at 72 billion of F CFA. Agriculture represents only 9% of credit distribution.

That raises questions about the real contribution of microfinance on poverty reduction in rural areas that is characterized mainly by agricultural activities.

To understand the contribution of microfinance in the improving of live conditions of rural lead to pay special attention on the improving of income of farmers through the surveys in the north region of Côte d'Ivoire.

This study tries throughout the research on microfinance and poverty to understand the reasons of the difficult access of farmers to microcredit and to know how the improving of microcredit offers can increase farm income.

This study is divided in four chapters. The first chapter discusses on the theories on microfinance and its involvement on social and economic aspects for poverty reduction in developing countries. This chapter considers also the objectives of microfinance fixed and some impact studies to verify these objectives. Besides, we explain poverty situation of poverty in UMOA region and the legal framework set for MFIs.

The second chapter concerns the review on agricultural situation in Côte d'Ivoire. For that, it shows the involvement of agriculture in the increasing of GDP and various policies that allow the State to improving public and private investments in agriculture sector. However, agriculture development in Côte d'Ivoire faces many challenges that are obstacles to make it efficient.

The third chapter addresses the review on the methodology of financial diaries that treats financial behavior of households through interviews and tracks on actual income and expenditures. This chapter considers also the presentation of the region of our surveys site and microfinance institution that is the subject of our study.

The last chapter is a viewed on the results of the sample collected in the region of Tchologo in North of Côte d'Ivoire. It shows the sociodemographic and socioeconomic characteristics of the respondents, their relation with the microfinance institution (UNACOOPEC-FERKE), their opinions on credit system and the impact evaluation of microfinance on cereal and cash crops.

These chapters help to understand the contribution of microfinance in the improving of well-being of farmers on the whole and the goal that MFIs must achieve.

Context of study

The level of poverty in Côte d'Ivoire, top economy of francophone west Africa, remains a major concern.

The politico-military crisis (2002-2011) raised issues that highlighted the difficulties of the population to access to basic social sectors related to the health, education, healthy food, safe water.

That crisis rose poverty rate to 51% in 2012 and reduced slightly in 2015 to 46% (of which 16.3% of depth of poverty and 8% of extreme poverty), INS (2015).

The poverty is more accentuated in rural area than urban area with respectively 56% against 35% and the contribution of the population to poverty is estimated at 61% in rural area and 38% in urban area.

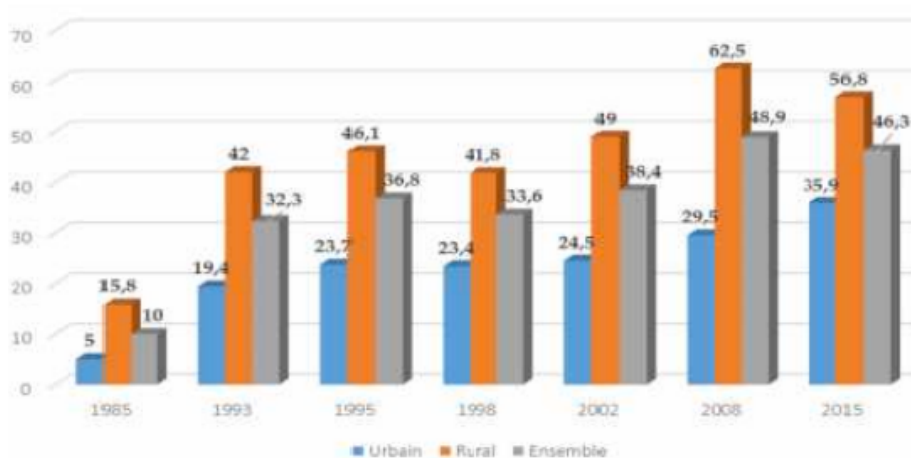
These data consider the impact of crisis, which the country is undergoing during a decade. The split of the country in two parts caused the destruction of basic infrastructures implemented by the State, the delocalization of the institutions towards the south and the closure of companies in the north and west regions of the country. Therefore, these regions was not included in the social program of the government in this crisis period.

This situation provoked the growing of unemployment rate, difficult access to basic services by the absence of civil servants and problem of availability of healthy nutrition.

However, it is important to note that, this crisis has affected mainly rural areas of the country where the question on poverty reduction has always observed a little involvement of the government.

The **Graph 1** highlights the trends of poverty in rural and urban areas since 1985. It's easily perceptible that poverty is especially a "rural phenomenon". The rate of poverty in urban areas is almost half that of the rural areas.

Graph 1: Evolution of poverty rate (1985-2015)



Source: INS, ENV 2015

To respond to this concern efficiently the State throughout the national program for agricultural investment (PNIA) adopted in July 2010, tries to improve the agricultural productivity, SARA (2015).

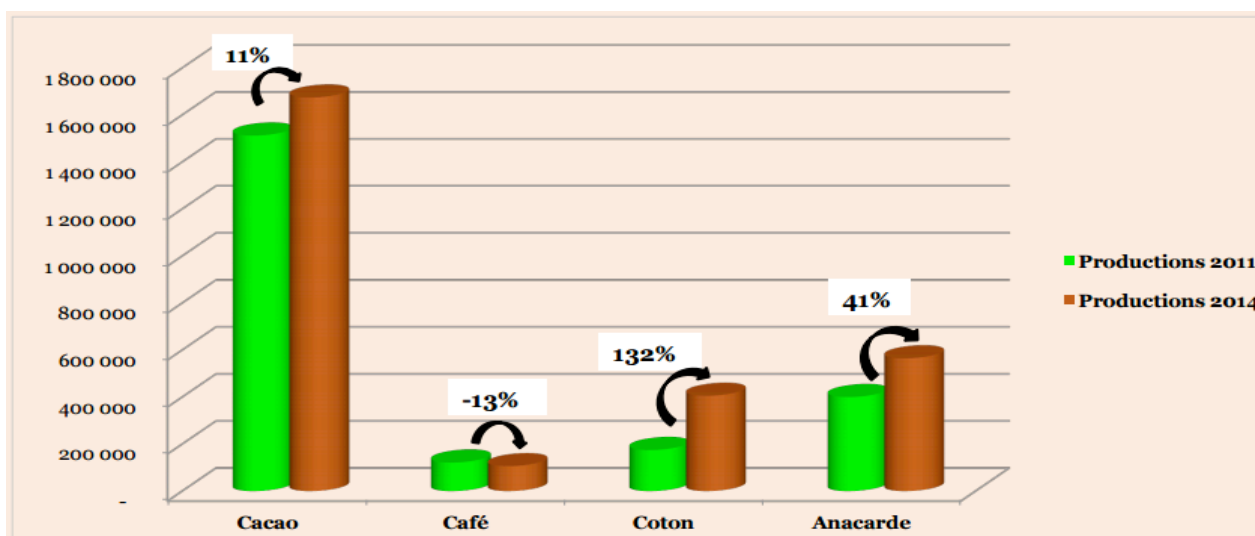
Indeed, PNIA is linked to PDDAA (Programme Détaillé pour le Développement de l’Agriculture Africaine), which has as goal to promote the processing of farm products, to ensure sufficient and healthy food and create economic growth and a better living conditions for people.

As for PNIA, it defines the actions intended to poverty index reduction on national level especially in rural areas through the consideration of an depth analysis of economy growth and agricultural sector in particular. The main objective of this program concerns: the increasing of agricultural production to 9% per year, contribution to poverty reduction to a level of 16%, creation of 2,400,000 employments, actions against food insecurity and achieve the transformation of farm products to a level near of 50%, (SARA, 2015).

The application of this program since 2012 allowed the government to be involved mainly in cash and food crops that helps to achieve the following results between 2012-2014: the increasing of the production of food crops is estimated at 28% and 14.1% for cash crop. These positive results are also the opportunities of investments of more than 2,040 billion FCFA (3,6 billion dollar).

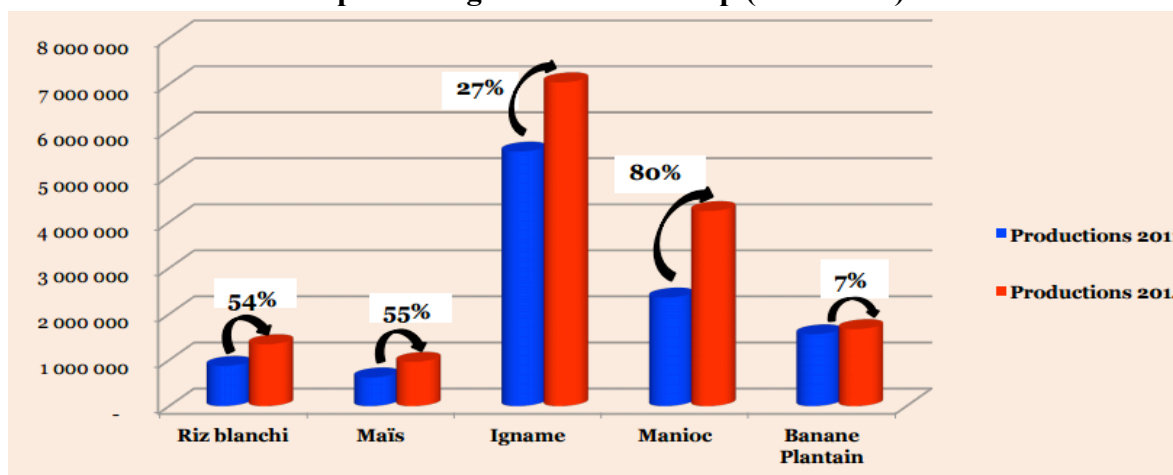
Graphs 2 and 3 explain the impact of PNIA on cash crop and food crop in Côte d’Ivoire.

Graph 2 : the growth of cash crop (2011-2014)



Source: SARA 2015

Graph 3: the growth of food crop (2011-2014)



Source: SARA 2015

Despite, these efforts of the government for agricultural sector, the poverty rate remains high in rural areas and located mainly agricultural regions of country.

Microfinance institutions in Côte d'Ivoire attempt to fill that void. But, the unequal geographical implementation of these institutions with about 8% located in agricultural region (North) limits the microcredit access to farmers.

UNACOOPEC-CI, the leader regarding the percentage of market share (65.7%), is implanted in the most regions of the country tries to provide its services to a great number of people, CNM (2014).

Through the case of this institution, we studied the distribution of credit to farmers in the region of Tchologo that is affected by a high poverty rate of 65.6%.

The interest of this study is to clarify the relation between UNACOOPEC-CI and farmers in rural areas, which focused on access conditions to microcredit, farm needs and repayment difficulties.

These allowed to study the impact of microcredit on the improvement of farm income in the region of Tchologo.

Objective of study

This research attempts to study the relation between microfinance institutions and farmers in rural areas. This relation is focused on the supply of financial services especially microcredit and the behavior of farmers to manage their financial resources.

The main interest of this study is to evaluate the impact of microfinance on farmers' income in rural areas. For that, three aspects of research are set and deepened in an analysis data of fields research led in the region of Tchologo in Côte d'Ivoire.

- The relation between MFIs and farmers remains complex through the lack of collateral and the difficulty to save regularly. The offers of credit is composed of individual and collective credit. These types of credit are viewed as an option for easy access to credit for all social classes. In rural areas, the lack of means to provide appropriate collateral leads people to form a group for credit access to finance their activities. The research attempts to know the confidence of MFIs in farmers through the analysis of the profile of farmers.
- The analysis of farmers needs takes into account the methodology that treats the financial behaviors of households. This methodology called financial diaries tries to trace the allocation of small resources of poor people and helps people to adopt better management method to deal with daily needs and unforeseen events. The survey led in the north of Côte d'Ivoire in the region of Tchologo allowed to interview farmers to know the difficulties linked to their activities and the allocation of their financial resources in farm needs.
- The research concerns also the impact study of microcredit on the improving of farm income. Several debates have been held on the role and real impact of microfinance in the poverty reduction in developing countries in particular in rural areas. In Côte d'Ivoire, the contribution of microfinance in the fight against poverty in rural areas is very little perceptible. The impact study on farm revenue can be an opportunity to shed light on the revenue of farmers and understand the level of involvement of MFIs in the improving of living conditions of rural people.

To achieve these objectives, the research on the involvement of microfinance institutions in poverty reduction is developed through the debate led between authors. This debate concerns the understanding of the purpose of microfinance, its effect on agriculture and the case of informal and formal microfinance.

CHAPTER 1: POVERTY AND MICROFINANCE

1.1- Introduction

The question of poverty eradication in the world is object of several suggestions of researchers. Indeed, poverty can be defined as an insufficiency of resources to cover households needs. The access to basic social services such as health care, education, employment remains the major concern of the population in developing countries.

The continuous satisfaction of needs requires the improving of households' revenue, which is linked to decent and stable employment.

In this context, the institutions of microfinance throughout its small scale banking services attempted to help population excluded from offers of classic banks and having limited resources.

Thus, the example of Grameen Bank shows that through the offers of this institution, poor people have obtained their economic emancipation that helps them to get access to decent house and instruction, provides work for beggars and creates and supports micro-businesses. This demonstrates that the services of MFIs give importance to the poor and persons in extreme poverty.

This chapter gives the opportunities to study the different aspects that link the offers of microfinance especially microcredit to poverty reduction in developing countries.

For this purpose, we have focused our attention, firstly, on informal and formal microfinance in order on understand the definition and difference points. Then, we are interested in the economic and social objectives of microfinance, talked about some methods of impact study and shed the light on the works of researchers on the effects of microfinance in particular microcredit on poverty reduction.

Finally, we are focused on UMOA area, which is an Union of French countries of west Africa, in order to understand the poverty indicators of the region and explain the regulatory framework set by central bank BCEAO to ensure the stability of microfinance sector and to protect customers. That allows us to analyze the indicators of a sample of 19 MFIs of Côte d'Ivoire stem from benchmarking report of DFS from 2013 to 2015.

1.1.1- informal practice of microfinance

The study of the models of microfinance can give a light on the area of informal finance.

The informal financial market gets a success in the area where formal financial policy do not consider people with low income. These people have the difficulty to satisfy the conditions of intermediaries financial as necessary collateral to receive financing.

Indeed, informal finance can be defined according to Schreiner (2000) as contracts without legal framework in which people “exchange cash in the present for promises of cash in the future”.

This type of financing concerns the practice of saving and credit focused on confident. The debtor and creditor are partners who know each other and fixe themselves their conditions.

The practice of informal finance is explained by some reasons such as: the difficulties of access to banking services, religious reasons, Malamoud (1980) and continuing with traditional method more accessible.

The practice of informal finance is classified in individual practices and collective practices according to Lelart (2006).

1.1.2- individual and collective informal financial practice

The individual practices are more widespread in the regions or countries where personal relation is strong like in most cases of African countries and in other countries of Asia as Bangladesh and India.

This informal finance is mainly practiced in developing by moneylenders and deposit collectors.

Indeed, the moneylender is the trusted person with whom the neighborhood residents or villagers save their money. This person is generally a religious, a formal official, the neighborhood chief or a trader who has succeeded in his business. In other words, he is a person more familiar to people.

The role of moneylender is characterized by the receiving saving and ensuring the security of deposits, undertaking to restore the money which is given by people. He does not receive interest deposit and remuneration for the security of savings, Akpaca M. (1995). He plays also the role lender with people in need of financing.

For deposit collectors, unlike the activity of moneylenders, the deposits are the same amount and regular. The total saving is restored to according to a fixed schedule. The collectors take savings on the street with informal trader, shopkeeper, etc.

For transparency, customers receive saving books that represent their saving account in which the collector notes the deposits until the last day for restore the totality. But in this case, collector takes one day of deposit as remuneration of security service, Lelart and Gnansounou (1990), Aryeety E. and Steel W.F (1995) and Cohen (1980).

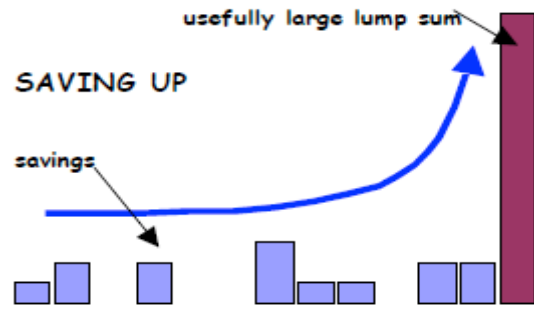
These individual practices create a debate concerning its contribution to well-being of poor people. The authors found that these practices in particular moneylender is a great obstacle to fight effectively against poverty to the extent that moneylenders have generally the local monopoly power that is “protected” regarding the lack of important information by potential competitors to break into local market, Armendàriz and Morduch (2005).

The knowledge on informal finance is necessary to set the schemes of microfinance because both practices share the same customers with low income and excluded from financial intermediary system, Aryeetey (2008).

As regards the collective practices, it concerns mainly the savings clubs. In the review below, one talked about different types of saving clubs that is mainly practiced in developing countries. Rutherford (2002) found some models of saving club that he sets on three models with specific methods.

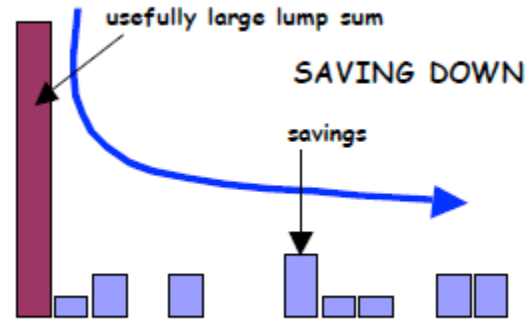
- The model of saving up is explained with **Graph 4**, it is the model through which saving is stored until accumulated large sum that is used for expenditure needs. It is viewed by other authors as a series of accumulation of money until the end of twelve months which is a lump sum for needs.
- The model of saving down considers the loan and repayment through which, the repayment is depending on the act of saving (**Graph 5**). In saving down, the loan is granted in advance and deducted by interest in the operation without the request of collateral. Thereafter, the credit is restored periodically by a small sum.
- The model of saving through is the mixture of saving up and saving down. A lump sum becomes available at some points during a series of savings. One can observe the best example with insurance coverage in which saving is on progress as a series of monthly and lump sum becomes available in the case of unforeseen events, (**Graph 6**).

Graph 4: Saving up



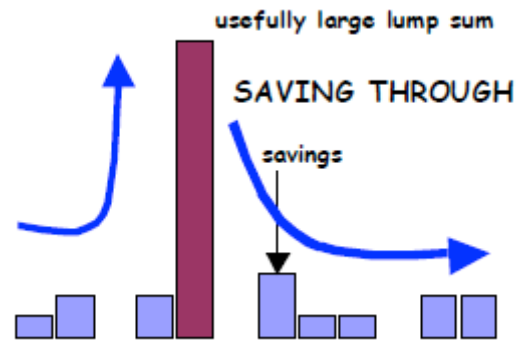
Source: safe save on Bangladesh (Rutherford, 2002)

Graph 5: Saving down



Source: safe save on Bangladesh (Rutherford, 2002)

Graph 6: Saving through



Source: safe save on Bangladesh (Rutherford, 2002)

Besides, these three models of saving, authors talked also about ROSCA and ASCA, Wilsworth (1980), Johnson (2001), Raikes (1989), Ardener S.(1964), Geertz (1962) and Besley, Coate and Loury (1993). These models are more structured and show some different applications related to regional and national context.

Indeed, Rotating Savings and Credit Association (ROSCA) is characterized by repeated contributions of group's members and withdrawals from a common fund. But authors define it as an association in which members save a regular contribution to a set amount to which in the rotation all members have access Armendariz and Morduch (2005).

According to Armendariz (2010), ROSCA are local institutions constituted of group of person who know each other. Their activities are various and related to the creation of saving to develop and strengthen the social capital.

This informal association presents also some advantages that are no transaction costs, the transparency in the process of the receipt of capital available for a member through agreement stipulated during each turn and lottery for the choice of the first beneficiaries, Rutherford, (1997). As well, members have a direct view on the management of financial resources of the association by the presentation of financial resources at the meeting.

These advantages have influenced the socioeconomic situation of people in developing countries. As example, in Ethiopia its contribution to GDP is estimated at about 8—10 percent in early 1970s and 20 percent of all bank deposits in Kerata State, India according to Bouman (1997).

In ROSCA, there is a strong cohesion that is viewed through the agreements during the turns. That concerns members those most in need.

Furthermore, ROSCA could be modified to help people to save and borrow to more than one person, Bouman (1995) and Rutherford (2000) and Collins et Al. (2009). Therefore, ROSCA is transformed into an ASCA (accumulating savings and credit association).

In fact, Accumulating Savings and Credit Associations (ASCA) is described as saving groups in which funds are not immediately withdrawn like ROSCA, but are left to grow for loan making, Bouman (1995).

The savings are accumulated in regular meetings throughout monthly cycle (from six to twelve) that are lent out in part to group members and other groups of non-members with a high interest rate.

In this model, each member can agree on different conditions that take into account the duration of the cycle, the frequency of meeting, the amounts saved (and whether deposits are mandatory or optional), also loan granting conditions (amount, interest, payback, etc.) according to their wish and need, Beck (2013).

Most ASCA considers a schedule fixed and at the end of the cycle, the individual savings are cashed out and gains are shared among members, Collins et Al. (2009)

The comparison between ASCA and ROSCA, ASCA provides higher levels of trust through the management and record keeping for the good functioning of the association, Dean et Al. (2005).

However, others authors such as Johnson and Sharma (2007) argued that this management method is a complex system of bookkeeping in which illiterate members can be the victims of fraud or the possible case of mismanagement.

This point of view is justified with the study of Wright and Mutesaira (2001) in which they found that in ROSCA, 6% of savings were lost over the course of a year, but in ASCA as much as 21%. That showed the insufficiency of funds management and the difficulty to ensure the security of savings.

Furthermore, there are also some informal self-management group as VSLA and SHS. Village Savings and Loan Associations (VSLA), is a self-management group that offers the possibility to its members to save their money, receive small loan and obtain emergency insurance. VSLA is characterized by periodical saving of members for short period and provides them the appropriate credit for their needs that considers the repayment capacity of borrowers.

VSLAs create the self-respect of individual members and helps to build social capital within communities, particularly women who represent about 70% of members according to Singer (2010).

As for Self-Help Group (SHG), it concerns a community of low income people. It is composed mainly by women who try to improve their socioeconomic situation through family planning, the dressing of mutual concern, training to improve knowledge on the aspects of empowerment and provide financial and non-financial services to each other.

Financial services provided include savings and loans in which loans are financed by group savings.

One can find also a strong relation between NGO (Non Government Organization) and SHG.

The NGO promotes and finance this group in particular women club for social inclusion in order to fight against poverty in households. This organization incites women to create their own self-help group. For that, they are followed in training that considers a good practice of management of the group and the financial resources in order to receive also the financing of microfinance institution.

This review has presented some informal microfinance that consider mainly people with low income. This non-formal finance remains the only solution for people who find difficult the conditions of formal financial system. However, the informal way is subject of mismanagement by illiterate or members with small level of instruction and as well as the case of robbery. Thus, the security of savings is a great concern to improve their socioeconomic situation.

The formal microfinance tries to answer to these concerns despite the high cost of its services. In the next review, we tried to explain the concept of microfinance and services linked and showed its role in the poverty reduction.

1.2- Microfinance and microcredit: perceptible difference

The research for a solution concerning the reduction of poverty is still a topic debate between authors. The economic and social suffering of poor take into account a large number of needs to be met lead authors to work on various ways.

Indeed, international assistance is recommended for the developing countries that have not a minimum wealth to begin the development. The capital per inhabitant becomes weak whereas the population is growing, that leads Sachs (2005) to evoke the support of these countries by the large-scale foreign aid.

However, William Easterly (2006) refutes the notion of development aid and proposes a targeted support on a small scale which holds people responsible while focusing on a rigorous evaluation of initiatives or projects results.

For Esther Duflo (2011), poverty must be rethought through the key issues that affect the social and economic life as the health, education, savings, credit, work, market, etc.

Through these authors, poverty reduction is related to the satisfaction of immediate needs of poor and the availability of necessary resources that improve his well-being. As well, the responsibility of the poor to improve his economic and social situation is a determining factor insofar as he steer his resources in accordance with his needs and household expenditures.

This autonomy to move out of poverty urges some authors to evoke the access to financing to generate or increase their income by profitable investments. But the difficulty to access to the classic bank services by the lack of guarantee and the offer of high loans caused the exclusion of poor people.

It is in this context that the supplies of small loans and savings are seen as a healthy solution. That facilitates the financial inclusion of the poor people.

The concept of microfinance was conceived by Prof. Muhammad Yunus and experimented in the village of Jobra through small loans granted to poor villagers. He then created in 1983 Grameen Bank which mean “the Bank of village” in order to meet the economic and social needs of the poor.

The desire to provide financial services to poor people creates a confusion regarding the definition of microcredit and the microfinance.

The microcredit is a loan of low amount with interest intended for self-consumption of people excluded from the traditional banking system. The aim is to encourage the entrepreneurship through the realization of micro-business of the customers that have an acquired competence.

The extreme poverty in developing countries presents credit applicants with a negative financial capacity to begin entrepreneurial activities in order to get access to basic social services.

That conducted Grameen Bank to introduce the mechanism of solidarity group to facilitate the mutual help and the cohesion within the members.

The principle of this type of collective microcredit is focused on an agreement between members who received the loan of microfinance institution and committed to do the repayment together within the deadline of the loan contract.

This strategy has for main object to facilitate access to financing of the poor people without supplying a material guarantee.

Besides collective microcredit, there is the individual type in which the loan agreement commits a customer to microfinance institution with the provision of a minimum guarantee that is generally financial.

The microfinance can be defined literarily by decomposition in “micro” and “finance”. The theme “finance” referred to the banking vision, Jégourel (2008). Therefore, microfinance is the banking activity on small scale intended for the people with reduced resources.

Apart from microcredit that is the most known, microfinance supplies to customers the services as savings, insurance, funds transfers, etc.

Microfinance strengthens the capacity of the customers on techniques and managements practices, implementation of association groups, collection of savings processes, family planning and instruction. In these terms, Provenzano (2012) said that the microfinance supplies non-financial services to poor people.

We can define simply, the microfinance offers as banking services and non financial services to people who are excluded from the traditional financial system by facilitating them access to microcredit to meet consumption needs and make the promotion of entrepreneurial activities.

Furthermore, the great consideration given to microcredit and microfinance is observed through the resolutions of the General Assembly of United Nations within the framework of poverty eradication.

These resolutions are the following: 52/193 and 52/194 of 18 December 1997, 53/197 of 15 December 1998, 58/221 of 23 December 2003, 59/246 of 22 December 2004 and 61/214 of 20 December 2006.

The reasons that justify the taking into consideration of these resolutions can be related to the effects observed on the programs of microcredit and microfinance.

Indeed, the microfinance in particular the programs of microcredit allow financial inclusion of the people to move out of the poverty by the creation of employment and encourage the entrepreneurship. These services are also useful for the women in their empowerment to the extent that they can increase their participation in the socioeconomic and political process of the society.

Besides these observations, the opportunities offered by the programs of microcredit and microfinance are also linked to the votes of the resolutions.

Microfinance and microcredit are the tools that can contribute to the realization of MDG (Millennium Development Goals) through the objective “number one” that is the reduction of poverty by half for people who live on less than one dollar a day.

Throughout the resolutions of the United Nations, the General Assembly tried to encourage member States, organizations of United Nations, non-governmental organization to support the important role of microcredit and microfinance in poverty eradication in developing countries by strengthening the policy of the institutions and the regulatory environment to enable the outreach of financial services and the sustainability of the MFIs.

These resolutions invite also the development partners to support poor countries to promote entrepreneurial activities and small and medium-sized enterprises (SMEs).

The desire to foster financial inclusion for the disadvantaged world population conducted General Assembly of United Nation to proclaim “2005 as international year of the microcredit” (the resolution of 53/197 of 15 December 1998) to make it more popular and encourage the best practice of this financial sector.

However, it is necessary to note that authors lead debates regarding the real mission of microfinance. That is more focused in economic and social impact studies of microfinance on the well-being of poor people.

Although this research uses a lot of the theme of “microfinance”, it is important to state that our attention is focused mainly on “microcredit” through which we realized the analytical study of the data on the agricultural income.

1.2.1 Risk management and intervention of the microfinance

The contribution of microfinance programs to poverty reduction must consider the satisfaction of the needs on the economical and social level.

Indeed, poor lead in their own way a management of economic resource that they use according to their daily consumption and future planning.

This resources management requires a confrontation with the daily risks and unexpected events that affect easily vulnerable people.

If poverty is seen as a situation where people is lacking sufficient resource to satisfy their needs, the vulnerability is defined as the fragility to protect itself against any factors that can damage the economic and social situation of the people. In other words, the weakness to deal with daily and unforeseen risks could affect the well-being by increasing the needs and worsening of the situation to satisfy them. Thus, we can observe the moving from poverty to extreme poverty.

A survey published by CGAP (2000) concerning seven (7) MFIs distributed in four (4) countries (Bolivia, Bangladesh, Uganda and Philippine) allows to set the risks that poor people are faced in developing countries.

These risks are various, that we shared in two, the exogenous risks and endogenous risks.

The exogenous risks is related to climatic hazards, inflation and variation of seasons. While the endogenous risks can concern some unforeseen events, disease and death of family member. Beside that the large expenditure that is linked to some obligations in the life of people as funeral, marriage and schooling of the children.

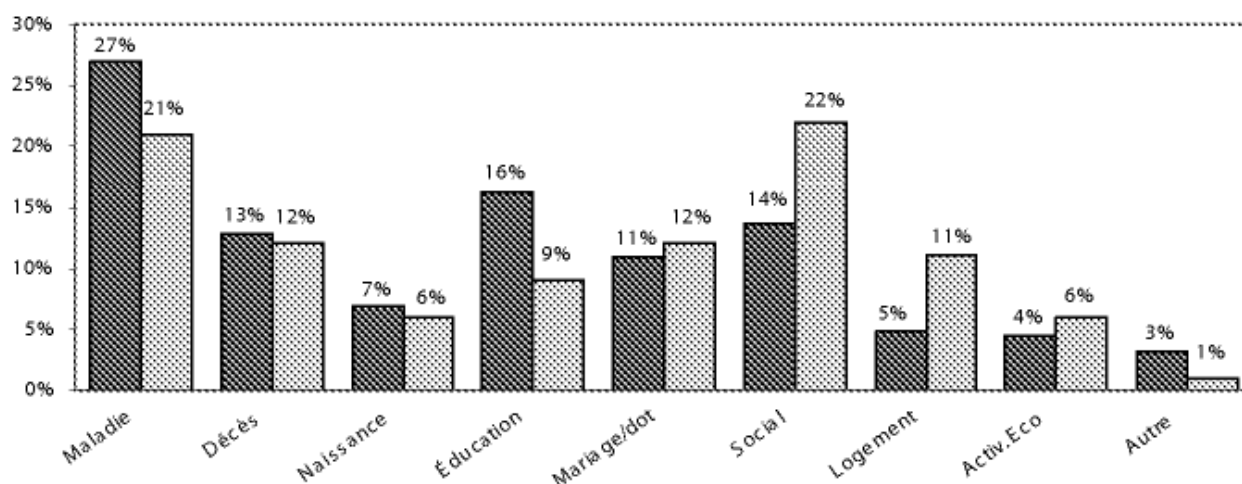
According to Rutherford (2000), these risks are economic shocks that force households to make all at once a spending which is above of their economic capacity. In other words, it is the financial stress that disturbs the budget set by households.

The question that arises is **how do the households behave in front of these risks?**

To understand better, we are interested in the field research led by Palier and Prevost (2007) in south India on the contribution of microfinance institution to reduce the vulnerability of the poor people between 2002-2004.

The risk management method used by poor people is an important aspect of their survey that allowed to conduct the interviews with women Self-Help Groups (SHG). Thus, the main unforeseen expenditures of these women are the disease, education, death, birth, marriage or endows and other social obligations.

Graph 7: Main reasons of unforeseen expenditures (case of New life-Samam)



Source : Vulnerability and Risk Mitigation: the experience of microfinance in South India, Palier and Prevost (2007)

To deal with these risks members of SHG have used on the one hand internal loan of the group and private loans with moneylenders and on the other hand, the gain from the sale of jewels or land, the family help and the reduction of expenses of the households.

We can stress that the adjustments operated on their economy or family support, these women also proceed to the liquidation of their assets to increase their financial availability. The debt with the informal finance is the main way of people interviewed that is an opportunity for the MFIs to offer their services according to the request of the population.

The advantages of the intervention of microfinance in the risk management are observed through its most important financial services (credit, savings and insurance).

Through the credit, the microfinance allows to diversify the revenue sources of customers by the creation of self-employment facilitating the access to consumption and ensuring the expenditures related for example to the children education and the health. For access to savings services, it is an opportunity for customers to save a part of their revenue to satisfy the future expenses, as well as, the savings can be link to the request of credit to the extent that it is used also as financial collateral. The insurance services, it limits the risk of irregular expenditure linked to the unforeseen events according to the type subscription.

With regards to non-financial services that are the training on good techniques and management method and the capacity to work in group aim to empower MFIs members through the increasing of their participation in the socioeconomic and political process of the society.

These advantages that offered MFIs is a way to limit the risk by helping households not to give up their assets for financial input and to facilitate the satisfaction of the social needs.

If the merits of the microfinance services are known, however the weaknesses of these institutions tarnish their image.

The questions are still asked on the contribution of the microfinance in poverty eradication.

Indeed, some authors thought that microfinance doesn't play fully its role, quite the contrary, pushes poor people to get into debt and force them to make the repayment at high interest rate that can be a difficulty for the customers who have not obtained a return on investment of the credit borrowed in the case of slowing down of the market or others obstacles from their activity.

In the case of collective exogenous risk, the microfinance institutions could have the difficulty to meet the high demand of credit from its customers and new members. For example, the natural plagues disastrous as an earthquake or the passage of a cyclone, in which the damage is generally collateral with a recording of the loss of assets. These are some insufficiencies of the microfinance institution in the prevention and assistance of people with low income.

In sum, the economic behavior of the poor is related to the daily confrontation of the risks. The management of these risks pushes them to make a reduction of households' expenditures, to require a family help or borrow.

Microfinance convinced other authors by helping the poor people to manage better the unforeseen risks by its financial and non-financial services on a small scale, but other authors remain septic as for its efficiency to fight against poverty.

In the following review focused on the objectives of microfinance in particular the microcredit, we highlighted some impacts studies on the improvement of the socioeconomic situation of the poor. This took also into account the impact of microcredit on the agriculture in rural areas.

1.3- Objective of microfinance

The aim of the microfinance is to contribute to the improvement of the social sufferings of the people with low income.

The unequal distribution of the financial capital through the exclusion of the poor prevent this people to get access to basic social services. To deal with this problem, the institutions of microfinance became the choice of these underprivileged people.

Several literatures define the microfinance as a bank of the poor people to increase their income by the creation of self-employment and satisfaction of consumption needs. That is related to its objectives to reduce poverty by supplying its financial and non financial services. Indeed, microcredit and the microfinance are considered as tools contributing to the realization of the millennium development goals (MDG) of the United Nations for poverty reduction of half in the 2015.

This great consideration granted to microcredit and microfinance is explained by two (2) examples among main successful cases take into account by the United Nations.

The case of Bolivia and Bangladesh are among the examples that allow the microcredit and the microfinance to get an international recognition. Thus, the proclamation of year 2005 "as international year of the microcredit".

In Bolivia, the customers who received the microcredit double their income and increased the possibility to have access to the education for their children and benefit from health care. As well, in Bangladesh, 48 % of the poorest households have passed above the poverty line after receiving the microcredit, UNO (2005).

These two cases highlight the positive impact on the revenue of low income people (small farmers, storekeepers, craftsmen, the street vendors, etc.) by giving them a financial independence through the self-employment and an easy access to the basic social services.

It is important to specify that basic social services are dependent on some vital needs. For example, the sector of health depends strongly on hygiene and sanitation, thus, people cannot be healthy if they have not access to the drinking water.

Besides, several studies tried to handle the objectives of the microfinance regarding its impact on the society. In this context, Aliya Khawari (2004) summarizes on three important aspects the objectives of the microfinance: alleviation of the poverty, the women empowerment and the sustainability and outreach.

According to the author, one of the most important conditions to reduce the poverty is to increase the income of the poor through the supply of credit. This objective cannot be achieved without taking into consideration long-term the struggle against poverty that requires the viability of the institutions of microfinance.

The alleviation of the poverty considers the improvement of the quality of life of the poor people and the poverty can be defined as a situation by which income is insufficient to cover needs. This situation affects the living condition of the people, Mc Graw Hill (1973).

In this sense, the relation between income and credit can contribute effectively to improve the socioeconomic situation of the poor to the extent that this relation concerns a continual success cycle of the activities financed, as said by Muhammad Yunus "low income, credit, investment, more income, more credit, more investment, more income ", IDSS (1994). Thus, the pioneer of microfinance tried to inverse the vicious cycle of the traditional finance which is focused on "few income, few savings, few investments".

This continual success cycle is understandable by the financing of the activities through the small loan that generate a surplus of income and on a continuous basis, these small fund support the growth of activities and help people to improve progressively their socioeconomic situation.

In the same way, Sutcliffe (2012) added that the primary objective of the microfinance is the reduction of the poverty in developing countries through the provision of basic financial services with the aim to help poor people to earn more, accumulate more assets and protect itself against any unforeseen. According to the author, the program of microcredit is the best service adapted to deal with the daily survival and the investment planning.

The opinion that the credit of low amount increases the income is seen as a good solution. The increase of assets and the prevention against the unforeseen can be only made if there is a good financial availability of the household that one gets generally throughout the diversification of income source or the growth of the activity.

Although, it is necessary to encourage all processes of financing which help effectively the poor but it is important to underline that the gender inequality remains a delicate matter in the achieving of the objective of microfinance.

Indeed, the inequality between men and women is established by Global Gender Gap Report (2012) throughout four indicators such as the education, the health and the life expectancy, the political empowerment and economic opportunities.

It is observed that the women have the problem of access to employment, education and training. They are excluded in the decision-making and involved in unpaid housework.

In Human Development Report (1995), 70% of the 1.3 billion people living on less than 1\$ per day are women and have a higher unemployment rate than men in virtually every country.

United Nations (2015) added that women work mostly than men but their activities are paid less and their situation remain fragile. They do 2.5 times the care work and domestic work than men and also the paid employment, however, they earn less.

In developing countries, majority of women lead informal activities that is unorganized sector. This can be an obstacle to maximize earnings in the market without legal framework.

That led authors to make women the priority of microfinance program to increase their income in the hope to give them the independence, confidence and make them financially responsible.

In reality, the desired result is to alleviate poverty in households to the extent that women are more involved in the home expenses such as nutrition, children education and leisure and various factors related to the family welfare.

It is in this context that, Grameen Bank in Bangladesh has 95% of women among total customers that is estimated at over two million of borrowers, Hashemi and Morshed (1997).

The supply of microfinance program faces to the high number of poor people that are characterized by various needs require the financial sustainability of microfinance institution to contribute to the alleviation of poverty in the world.

The sustainability of microfinance institution takes into account two aspects in the evolution of MFIs. On the one hand, sustainability of microfinance institution is viewed as the capacity of the institution revenue to cover the costs, offer sustainable financial services to the poor and creates a financial growth margin.

It is also the capacity of MFIs to lead its activities without access to subsidies as concessional loan and donation. In one word, it is the permanence of MFIs in the carrying out of its activity.

As example, among approximately 1300 MFIs reporting to the MIX platform in 2006, about 565 institutions have a positive return on assets. That shows the efficiency of the half of sample of MFIs to make profit through their assets and an opportunity to increase their activities. If the existence of the institutions of microfinance is compromised, the supply of finance service to underprivileged population may have the difficulties.

On the other hand, this financial sustainability concerns the achievement of the social mission of microfinance institutions. That is to ensure the financial access to a maximum number of poor. It is the key objective of microfinance because unsustainable microfinance imposes costs to poor through the high transaction costs, interest rate and other application credit costs, while sustainable microfinance tries to effect outreach by the way to increase difference between social benefit and social cost, Navajas et al. (2002). In that sense, the offers of microfinance are set at lower costs and intended to foster the access to basic social services.

To facilitate the distribution of credit, Consultative Group to Assist the Poor (CGAP)¹ developed some keys to achieve social and economic goal of microfinance. For that, it thought that poor need a range of financial services that are convenient, flexible and affordable. Besides loans, they want also savings, insurances and cash transfer services.

Microfinance is a powerful tool to fight against poverty. Like everyone else, poor people can earn more and build their assets when they have access to financial services. With microfinance resources, poor invest in better nutrition, housing, health and education.

¹The Consultative Group to Assist the poor (CGAP)¹ is a global partnership of 34 leading organizations that seek to advance financial inclusion. his mission is to improve the lives of poor people by spurring innovations and advancing knowledge and solutions that promote responsible, sustainable, inclusive financial markets.

Microfinance is often seen as a marginal sector, so donors, government, or social investors might care about helping microfinance institutions to reach the maximum number of poor customers.

Achieving sustainability of microfinance means lower transaction costs, to offer services that are more useful to the customers and find the ways to reach more of the unbanked poor.

However, a vision too social could lead to application of too low interest rate and a reduction of the services costs that could cause the problem of sustainability of the microfinance institutions.

The objectives of microfinance is also discussed by authors through the studies impact led on the factors characterizing the low living condition of the customers of MFIs.

In the next review, we have talked about of some methodologies of impact studies used to verify if the microfinance achieved its goal of poverty reduction and the studies led by authors on the provision of microfinance services to poor people to know the effect on economic and social level.

1.4- Microfinance and impact study

The impact study considers the changes observed throughout the implementation of initial objectives according to a program.

Researchers have paid special attention to the impact study of microfinance at the micro-economic and micro-social scale regarding the factors related to individuals, families and micro-businesses.

The unit “family” is the most privileged to analyze the use of microfinance services in particular the credit in the consumption and expenditures.

The main concern of this impact study is to evaluate poverty in the households and their method of risk management. Throughout the study of microfinance services, researchers attempted to observe the changes made by this small-scale finance in the perspective to fight against poverty.

In 2015, World Bank encouraged the developing countries and their international partners to lead surveys with the households every three years that must begin in 2020.

The purpose of this campaign is to resolve the lack of data that creates the difficulties to observe the trends and progress on the improving of living conditions of people. This difficulty to observe the trends of the poverty evolution prevents the implementation of the solution contributing to poverty reduction.

The debate on the effect of microfinance on the economic and social satisfaction of poor remains a crucial issue.

The following review, throughout the discussion between authors, we tried to highlight the contribution of microfinance in particular the microcredit to bring some answers on its involvement in poverty reduction.

This review considers essentially three aspects: the economic situation, social situation and a view on agriculture.

The economic aspect concerns the opportunities offered by microfinance resolve economic and financial sufferings of poor.

Indeed, some factors in the impact study of microfinance are the variation of income, employment and financial management of unforeseen events.

The report of OECD (2009) showed that the lack of decent and productive employment is an important obstacle to poverty reduction and the achieving of Millennium Development Goals that can be a factor of social and political instability.

The creation of employment for poor people allows to increase resources and improve the productive capacities of the people. That can affect thus, the income to facilitate the access to basic social services.

In the same way, Yunus (1999) thought that microcredit gives the opportunity to every individual to become a potential entrepreneur to make turn the small economy. In other words, by small credit, microfinance presents opportunities of self-employment for people.

The case of Grameen Bank handled by Hossain (1998) on the creation of employment allowed to observe a growth of client income through the granting of small loan. Indeed, he found that the bank helped to create some self-employment particularly for women. That is explained by the fact that a third of clients were unemployed before joining Grameen Bank. They are estimated at almost 7% of men and 50% of women.

The author deepened his argument by an analysis of the variation in income of households' survey in five villages project and two control villages. For this fact, he showed that the income of bank members are 43% higher than the income of target group in the control village and 28% higher than the income of non-participant target group in project village. This level of income is the result of the gains from trade, process activities and transport that are received the bank financing.

For micro-business, the small loan of microfinance enables the hiring of additional workforce especially in production and trade sectors where the work time increases to satisfy the strong demand of customers, Juliette Renaud (2007).

The income growth throughout job creation is viewed as a way for poor people to increase their assets and improve their economic situation, Chowdhury et Al (1991).

The studies of these authors show the creation of employment as one of better way to alleviate poverty in developing countries. The process by which the microfinance fosters the creation of employment that increases the income tends to attribute financial independence to borrowers in particular women who contribute so much to the family expenses.

Moreover, the majority of MFIs customers are involved in disorganized activities. These are the activities which are outside of the formal standards of organization set up by the State.

The smooth running of micro-businesses requires a good management of resources available especially financial resources.

Through non-financial services, MFIs try to supply a training in business management, health or literacy in the meetings with members.

The objective of these trainings is to help customers to conduct better their activities, deal with daily challenges, facilitate the reimbursement of credit and give them empowerment in the society.

That is observed by Dean and Valdivia (2011) with the case of non-profit microfinance FINCA in Peru. This institution has many young customers with low level of instruction and are often responsible of family. The measuring of impact took into account credit granting and training program. For that, a comparison is made between test and control group. The test group participates in 22 trades training sessions on how to use the profit, where to sell, make the discount or to sell on credit, the case of and loan repayment. The results showed that the sales of test group were 15% higher than those of control group, as well as the yields were 26% higher.

The organization of training and provision of loans contribute effectively to improve the business management and customers' loyalty to microfinance institution through savings and credit program for his businesses.

The economic impact of microfinance through job creation is to increase income that can improve the well-being of poor people. The non-financial services of MFIs supply a complementary contribution to the extent that the purpose is to organize training for customers on the management of informal activities and facilitating social integration.

Furthermore, the social impact study as well as economic impact of microfinance attempts to verify if MFIs contribute to achieve its main objective of poverty reduction.

If the economic impact study is more interested in the value create, social impact recovers the political, societal, environmental and economic aspect.

Indeed, the social impact studies attempt to identify the consequences or the changes by bringing a program that answers or anticipates the future needs of the population and contributing to social change.

The advent of microfinance has created a hope in the fight against poverty and gender disparities.

Poverty is defined as the lack of resources to satisfy the fundamental needs of people. It is also related to the concern for well-being improving by access to basic social services.

The issue of the fact that if "poor households move in and out of poverty" is addressed by McCulloch and Baulch (2000). For that, they examine two factors involving "smooth out incomes" and factors that promote the growth of income. They advocated that poverty reduction must consider the ability to increase income, include the supply of financial and non-financial services and State involvement by seasonal public work and the price stabilization.

The contribution of MFIs throughout micro-services supplied to poor people in developing countries tries to cover basic needs. These services help people to adopt a new behavior for a good management practices related to the distribution of their scarce resources, deal with unforeseen and stimulate the capacity to plan projects.

The social impact study of microcredit led by Renaud (2007) to shed light on the consequences of the increasing of household income. She noticed an improvement of family diet where there are a growth of meat purchase, milk products and other food products that were not easily accessible before the customers become MFIs members. She also observed a repair or enlargement of the accommodation to live in the comfort and give a new value that could be sold in the future.

Therefore, the management of daily spending and the improvement of consumption is a concern of households that MFIs services especially microcredit help to satisfy by the growth of income.

Besides, poverty reduction cannot be achieved without taking into account the gender equality.

The discrimination of women in the case of employment, education and training aggravate the problem of inequality between genders, United nations (2000).

This exclusion maintains the majority of women in unpaid households work and to practice disorganized informal activities. Thus, 70% of poor people in the world are women, UNDP (1995)

This situation of women pushes the precursor of microfinance, Muhammad Yunus to feminize microfinance services to give them an empowerment. That led many development partners to grant a careful watch to the sector.

MFIs through its services encourage women to lead economic and independent activities to generate an income.

The main objective of microfinance regarding the situation of women is to help them to get an important economic and social strength to surpass various inequalities factors related to the education, health, decision-making power and contribute to the improvement of the well-being of poor families. In other words, microfinance wants to improve the living condition of women and helps family to get out of poverty.

The example of west Africa, precisely in Mali, in households with low income, women are very active as men. They practice informal activities to meet family needs and to complete the small resources of their husband, Koloma (2007).

In the same western region of Africa, in Ghana, access to credit and savings allowed women to practice a better method of breastfeeding which has a positive impact on the growth of children unlike non members of MFIs, MKNelly and Dunford (1998).

These example emphasize the capacity of microfinance to encourage women to participate to family well-being through helping the spouse and an involvement in the good nutrition of children.

This integration of woman in poverty reduction process places this one at the heart of gender equality concerns. Therefore, MFIs tries to promote women on economic, political, social and cultural plan by granting the place in the society.

The empowerment of women depends first of the self-confidence. Women have small projects in the informal sector, however, they lack of ambition to initiate the activities. Women in particular housewife are faced with several concerns to beguine an activity. These concerns are the following ones: how to lead activities when they are pregnant? How to keep child during work schedule? How to combine the home expectations with new activity? These problems of confidence is also increased by the absence of family support and the lack of successful feminist model to motivate them. Hence, their prudence to make financing requests unlike for men.

In the light of this concern and the lack of management experience, microfinance trains women on individual and collective organization of economic and social activities. This is intended to improve their ability to control their resources by good practice of management, encourage their participation in the family decision and their involvement in social activities.

Through non financial services of microfinance, women benefit from a training and advice to deal with their concerns and the financial services help them to increase their income and assets. Therefore, microfinance motivates women on mutual help in order to become autonomous vis-à-vis men.

Several studies emphasized on the capacity of microfinance to improve living condition of poor households. However, other studies consider microfinance as a tool that impoverishes people.

Despite the efforts of microfinance in the fight against poverty, it is important to underline the critics made by other impact studies.

Some researches observed 30 years of experience of microfinance as less convincing in theme of poverty reduction. Indeed, the non existing of a clear method of effect analysis questions its capacity to reduce effectively poverty. It is in this context that, IRIN (2012) that is invested in humanitarian though that the choice of randomized controlled trials and systematic evaluation can help to supply clear results.

Microfinance tends to deteriorate the situation of its clients by pushing them to get into debt with high interest rates that causes the difficulties of repayment. In that way, Montgomery (1996) said that microcredit forces poor people or borrower groups to get into debt to superior level compare to their capacity to repay or oblige them to practice activities in which it is difficult to increase their resources in order to meet their needs.

Other authors denounced the great consideration that MFIs grant to credit than savings. Through savings, the households can also deal with unforeseen and ensure consumption. For Richardson (2000), it is hypocrite and heretical to talk about poverty reduction without taking into account savings. As for Remanyi and Quinoes (2000), they criticized the subsidies of credit granted by government or microfinance providers as an obstacle for poor to access to saving deposit facilities.

These negative criticisms on microfinance show the insufficiency of the small-scale financial services to reduce poverty. Microfinance can satisfy effectively the needs of poor people if it is completed by the actions intended to facilitate the access to basic services.

As well, to achieve its goal, microfinance must necessarily adapt its services to economic and social conditions in rural and urban areas. That requires the consideration of the population distribution, income inequality and the dispersion of activities.

1.4.1- Microfinance and agricultural financing

The great majority of poor live in rural areas. These people are mainly in the less developed regions of the south Asia and Africa.

In 2011, the rate of poor people who live on less than 1.25 Dollar per day is estimated at 35% that leads international organization to involve strongly in the fight against food insecurity and hunger.

However, it is important to identify some characteristics related to poor people in rural areas.

According to FAO, in rural areas, the majority of poor people are small farmers who practice subsistence farming or family farming by which they produce a sufficient quantity for household nutritional needs.

These farmers are not owners of farmland. They exploit temporarily to cover family nutrition needs.

These people are sometimes elderly and powerless in the face of the growing rural exodus of young people that causes the lack of workforce and limits agricultural production.

In rural areas, the efforts of poverty reduction deal with an insufficiency of politics for the improvement of agricultural production and lack of rural infrastructures in particular roads, electricity supply network, hydraulic, telecommunication and other services. Indeed, these infrastructures are important to reduce the cost of transport, increase investment and competition and facilitate access to basic social services to improve agricultural income.

Moreover, the efforts of the government to encourage agricultural development by facilitating financial access to farmers has led them to set up agricultural banks in the 1960s and 1970s with a mission to stimulate agricultural modernization, Morvant-Roux (2007).

This approach was intended to support farmers has become expensive and unsustainable for farmers through the repayment difficulties.

The failure of agricultural development bank, due to an inadequate credit offer has conducted to the liberalization of sector in favor of private financial institutions.

This situation has grown an interest for microfinance in financing and promoting of agriculture and rural small business in the third world.

The supply of small-scale financial services is seen by some studies as a model of success in term of financial inclusion contributing to support low-income households in rural areas. This observation is explained in the following review concerning the adaptation of microfinance services to agricultural needs and the examples of studies impact analyzing effect of financial services on agricultural productivity.

The relation between microfinance and agriculture is focused on the proximity and development of microfinance service to adapt to the reality of agriculture.

Meyer (2012) tried to show how a few MFIs successfully adapt microcredit to rural farm and seasonal producers. For that, he found three important features that contributed to their success. Firstly, these institutions led some researches about their customers in order to develop appropriate products for them. Then, they have set the interest rates and various fees with the aim to cover expenses and risks. Finally, they avoided to expose strongly their credit portfolio to agriculture to mitigate lending risks.

The lack of knowledge on agricultural sector leads MFIs to invest in research to collect appropriate information on farm needs. To provide their support to farmers, MFIs tries to take into account the agricultural season and campaign forecast. That implies the satisfaction of needs as farm inputs, irrigation and other commercial needs as transport to ensure the sale on the market.

For that, MFIs supply financial services to facilitate the acquisition of resources for good farm and commercial practice.

This precaution helps MFIs to set up the services costs and the repayment terms of credit by taking into account more or less the standard living of the population to face the risks. For a better involvement of MFIs, Morvant-Roux (2008) though that an important condition is the supply of non-financial services. This condition requires also government support.

Furthermore, the main needs of farmers consider the acquisition of inputs for a good farm practice (seed, fertilizer, phytosanitary product, etc.) and commercialization of their products.

The implementation of their network store of farm products by peasant organization allow farmers through the collaboration with external partners to have easy access to inputs and storage center. That helps to access to commercial circuits for a better distribution of their production at the appropriate price. It is useful in a context of the high inflation and the risk of robbery of people, Marcus (1999).

The desire to increase the low farm income in the outline of poverty reduction, the financing of non-farm activities can be hopeful.

In developing countries, rural people is little involved in non-farm activities. This disinterest led some studies to link mainly farm income to rural household's income.

Thus, Khander (1998) stressed that poverty reduction must be focused on the combat against unemployment and the MFIs through microcredit can make the promotion of non-farm activities.

It is important to note that, the advantage of non-farm sector in rural areas allow to slow the fast urbanization by a diversification of self-employment and to limit the excessive abuse of natural resources.

In the context of difficult access to farm credit, non farm activities can supply financial help to cover inputs needs, FAO (1998).

Microcredit helps also to link non-farm activities to agricultural sector because it is involved in the processing and distribution of farm products, inputs sale, equipment repair and the provision of other goods and services.

The effective intervention of the MFIs in rural areas has to consider the satisfaction of farm and non farm needs. MFIs must provide adequate services and fixe affordable costs for poor people.

The success of MFIs involvement depends on politics that governments of developing countries practice for the development of agricultural sector.

The interrogations on the efficiency of microfinance to poverty reduction in rural areas lead authors to conduct research through impact studies on agricultural financing.

Various studies were made in the agricultural field, in our case we are interested to some examples of impact studies concerning the capacity of the MFIs to increase farm productivity and to insure food safety. The purpose of these studies is to verify the existence of an effect on the growth of rural households' income and the improving of their nutritional situation that is the access to the healthy and sufficient food for people.

For the agricultural productivity, Girabi F. (2013) led an impact study of microfinance on productivity of smallholder farmers in Tanzania with the case study of Iramba District. Throughout a random selection, he asked 98 respondents that are credit beneficiaries and non-credit beneficiaries. He showed that, credit beneficiaries realized high agricultural productivity than non-credit beneficiaries respondents. Thus, he justifies the high productivity by good access to market of agriculture commodities, the use of farm input and access to farm technologies.

Through this study, we can stress that the satisfaction of farm needs is essential to increase farm production. The distribution of farm products is considered as an activity connected to agriculture allowing to transport the products from production place to consumption place.

These two main activities depending from one another need a strong implication of the financing of MFIs to meet market demand, increase farm income and develop other activities linked as processing, transport, trade, etc.

In the same vain, Alam (1998) was interested to the productivity of agricultural surface exploited by members and non-members of Grameen Bank. He found that the small and marginal farmers who participate in the Grameen Bank programs can allocate a higher percentage of their land for the cultivation of high-yielding varieties (HYV) and have improved their agricultural productivity. He showed also that members of microfinance could bring 81.5% of their cultivable land and non-members about 76%. The yield of the microfinance members was 47.6 Maunad per hectare, while it was 38.2 Maunad for non members.

Through the granting of microcredit, MFIs encourage farmers to work on great cultivable surface that affect positively farm productivity.

The improving of the living conditions in rural areas concerns also the preoccupation to ensure the access to sufficient and healthy food that remain essential for the hunger reduction in the world.

Through the using of survey data from Rangpur, Dinajpur, Bogra and Rajshahi districts of northern Bangladesh, Wadud (2013) analyzed a sample of 682 farmers of which 450 have received microcredit and 232 without microcredit. The results showed a positive impact of microcredit on farm income which subsequently could contribute to strengthening food security. The average income of microfinance members is 9.45% higher than those of non members.

The author attempted to make the link between the growth of income and food safety. In this case, the increasing of income is attributed to microcredit that conducts to the productivity growth towards the availability of a sufficient and healthy food in rural households.

Regarding the need of financial capital by farmers, microfinance must supply an adequate financing for the satisfaction of farm activities cycle and a long-term financing to renew farm equipment and insure the securing of farm surface.

However, the positive effect of microfinance depends also of the skill of programs' beneficiaries and the commercialization of their production.

Adams S. (2010) examined the impact of microfinance from perspectives of maize farmers in Nkoranza in the Brong Ahafo region of Ghana. The study of a survey of 100 participants in the microfinance program indicates that the impact of microfinance on both social and economic well-being is marginal. The main question is the identification of the lack of entrepreneurial skills and the difficult access to market for the sale.

The promotion of farm activities requires the acquisition of agricultural competence and the access to the market for the commercialization of farm products.

To promote an equitable growth and financial inclusion, farmers have simple skill need a minimum school level, knowledge on good farm practice and the use of new technologies to maximize the profitability.

This small number of impact studies on farm productivity show the important role of microfinance in poverty reduction. However, the efficiency of micro services of MFIs depends of their adaptation to the needs of rural people in developed countries. These studies stressed that, the intervention of microfinance in the field of agriculture must relate necessarily the production and the distribution to increase the revenue of farmers.

The access to inputs and farm materials are essential aspects for the execution of farm work to obtain a better harvest. Besides that, non-farm activities (processing, transport and trade) can support agriculture to increase its productivity through various services in order to ensure a better supply of the market.

Thus, through financial and non-financial services of microfinance, farmers have the possibility to work on large surface areas and increase their yields. That is an opportunity to provide to people sufficient and healthy food intended for consumption.

1.5- Measuring impacts of microcredit

The impact study is viewed as a process that uses some technical methods to verify if the initial goals has been achieved. It is the case of public program such as health, education, employment, etc.

The methodologies of impact study are various. Indeed, these methods are focused on the comparison between persons, households and enterprises that have benefited from program and those who have not benefited from it.

In the case of the microfinance, it is a question to identify the disturbance related to the program by the difference between two situations with and without program for example, its effect on the increasing of the added value and on the economic agents with low-income.

Concerning the economic agents with low income, the desired effect of the program of microfinance is an improvement of their living condition through the increasing of income to meet their daily basic nutritional needs and access to social services.

For this purpose, researchers are focused on the quantitative research by which they select borrower's sample that is compared to non-borrower group.

The evaluation difficulty of the impact study of microfinance in particular the microcredit concerns the fungibility of the credit. In households for example, it is difficult to set credit traceability that is used in various consumption needs. This problem is also observed on the link between credit granted and the repayment sources because households use all ways which can allow them to fill their commitment with the financial institutions.

To lead impact evaluation in microfinance, researchers sometimes try to measure its effect on the income. For that, they have as reference the observable attributes such as the age, education and work experience.

The sample selection can present the bias and influenced the study result.

These bias can be related first to the selection method of the customers led by MFIs employees. To satisfy the request of customers, the credit officer is focused on the observable attributes, while the unobservable are determining in the selection that pushes clients to introduce the request for credit. These unobservable attributes are entrepreneurial skill, seeking goals, organization ability and access to valuable social network.

Other cases on the bias concern the choice of areas with complete installation of the institutions that allows the easy access to social services as education, health, financial, etc. Therefore, the comparison between control area and isolate area causes a bias of the study result because the isolate areas lack of the good infrastructures to help people in the satisfaction of their economic and social need, Armendariz and Morduch (2005).

Through this difficulty, some methods are used to study the effect of microfinance program.

The impact study notes a progress in term of methodology. However, in the case of microfinance, there is no real methodology concerning the impact of the program on households or participants in the context of the fight against poverty.

To carry out effect evaluation, some approaches are developed by researchers. The choice of these approaches depends of the data available, the project to be assessed and the issues addressed in the study. Therefore, this evaluation consider mainly the criteria linked to the sample selection that is focused on the choice of the area and program participants.

For the choice of the area, the needs of people excluded from the classic financial system in the developed countries is different of the needs of those in developing countries. That leads the MFIs to provide various services. The diversification of the activities of the MFIs is more observed in developing countries and focused in particular on the aspects contributing to poverty reduction through the activities of training, education, hygiene, all these are linked to the financial services, Servet (2006).

On the other hand, in the developed countries, the needs are essentially based on the employment, accommodation and the credit to ensure their more consumption.

Besides that, the choice of participants that is made according to characteristics concerning the access to the basic social services and other personal characteristics of people that are generally observable attributes.

Furthermore, the methodologies for impact study are various. In a brief review, we tried to explain five (5) methods and our choice for the surveys in the region of Tchologo in Côte d'Ivoire.

Indeed, one method consists to know the situation of clients before the program. That is an insight on the economic and social situation of the participant before the implementation of the program. But, this method presents a risk of error by the availability of reliable data.

Another method called “before versus after” attempts to compare the situation of the program participant before to their situation after access to the program. Through the credit example of microfinance institution, this method compares the situation of the first request of credit of the customers to their situation some periods later. This method cannot provide a reliable result because others factors happening to the same time.

Some researchers use also “with versus without” method or “matching method” that consists to identify non-participant group that presents the same characteristics with participant group and to lead a comparison between these two groups. For that, it is taking into account the attributes as age, sex, activity, etc. However, the important unobservable attributes as entrepreneurial skill, motivation or self-confidence are excluded by the lack of satisfactory observation.

Beside “with versus without” method, “difference-in-difference” studies the differential effect of treatment between a participant group and non-participant. This method combines “before versus after” method and “matching” method to meet bias.

Finally, the researches use also an experimental method where people of a target group are assigned at random either in an “experimental” group that will benefit from program or a control group that will not benefit from it. This method is viewed as more credible because its proper application will allow to avoid the disparities between the participants and control group.

In our research in the region of Tchologo, the choice is made randomly in eight (8) surveys site. That is explained by the problem of availability of microfinance customers for repayment reasons.

Through this approach, we have chosen beneficiaries and non beneficiaries of the credit of microfinance institution that is the subject of our study. For this fact, we focused on villages where people have already receive the credit of our microfinance institution for their farm activities.

According to the survey, 69 people received credit and 133 are non beneficiaries.

We complete our study with a data analysis with statistical significant t-test to know the effect of microcredit on the income from most practiced crops by respondents.

In sum, the impact study contributes to observe the consequences of the microfinance on the improvement of the living conditions of people with low income. However, the bias in selection concerning the unobservable attributes or little perceptible elements affect some studies.

The impact study remains an important tool to reassure investor on the consequences observed on the economic and social level and to confirm to the analyst the efficiency of the approach used to reach desired objective. In microfinance, the interest of this tool concerns its capacity to observe the possible change on the living condition of poor people after the services provided to encourage self-business and facilitate the access to social services.

1.6- Presentation of UMOA

West African Monetary and Economic Union (UMOA is the French acronym) is created to strengthen the monetary cooperation between the signatory States.

Its main objective is to support the competitiveness of economic and financial activities of member States within the framework of an open and competitive market characterized by a rationalized and harmonized legal environment. Thus, to facilitate the creation of a common market and the free movement of persons, goods and capital.

UMOA is created the 10 January, 1994 on the eve of the devaluation of the Franc CFA through the treaty signed in Dakar (Senegal) by the heads of State. It is composed of eight (8) countries of which seven (7) francophone (Benin, Burkina Faso, Côte d'Ivoire, Mali, Niger, Senegal and Togo) and one Portuguese countries (Guinea Bissau). These countries are linked to the use of the common currency, the CFA franc.

It covers a surface of 3,506,126 km² and has 112 million inhabitants. In 2015, the growth rate of GDP is estimated at 7%, INS/C.UEMOA (2016). With this growth rate the member States are among countries with strong economic growth in Africa.

Fig 1: The map of State members



Source: www.izf.net

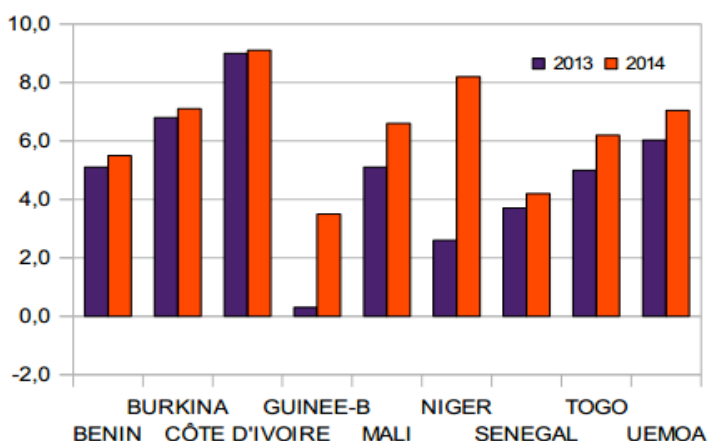
The comprehension of this level of GDP rate is related to some factors that favor its increasing. For that, the analysis of the **Graph8** on the prevision of GDP of 2014 show agriculture and services sub-sectors as main factors.

The case of agricultural sector is explained by the implementation of the important projects and investment programs in hydro-agricultural development and yield increasing. The reforms in export channels facilitate also the positive results through the improving of the quality and quantity of productions.

As for service sector, the good contribution to GDP increasing is attributed to market services as telecommunication, transport and retail business and other non market services.

Besides, the added value from the secondary sector remains high in the region. That is observed through the performance of agro-industrial activities and textile industry, the growth of mining activities and the intensification of infrastructure construction to cover the deficit in the Union and the insufficiency in basic social services.

Graph 8: the forecasting of the rate of growth of GDP (%)



Source: national services ; BECEAO

However, this institution is faced with various challenges that affect negatively the economic and social situation of State members.

The economic growth is mainly dependent of an agriculture linked to unstable rainfall. That causes an erratic variation of agricultural productions. This situation explains also an insufficiency of the development work for water control and appropriate infrastructure to optimize agricultural production.

The access to electrical energy is still low to meet the growing demand of households and the functioning of various business sectors.

Besides, the absence of the improvement of legal and judicial security and administrative barriers adversely affect the investment climate.

All these challenges are factors that prevent the economic growth of the State members which are still lacking of sources diversification for their development. The stimulation of the investments requires necessarily to create a favorable environment of economic activities that is seen as a factor contributing to poverty reduction.

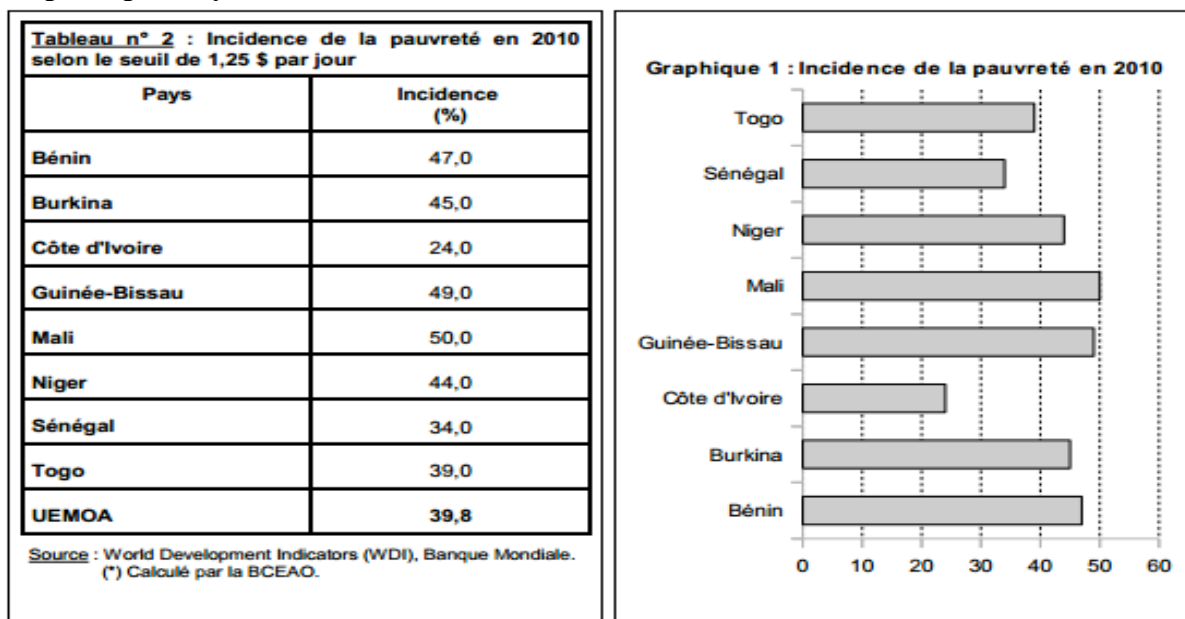
Furthermore, this region is exposed to persistence security risk (terrorism) despite the efforts made in the field and remains also powerless against the natural plagues (drought, floods and acridine) that affects negatively investment climate and favors poverty increasing in the region.

1.6.1- Poverty in the UMOA

Poverty index of the region is one of the lowest in the world and the State members are among low-income countries with almost half of the population who living below the poverty line are estimated at 49.4%. therefore, Guinea Bissau has the highest rate (69.3%) and Benin the lowest (35.2%).

However, through the poverty line of 1.25 dollar a day, poverty index of the union is estimated at 39.8%, world Bank (2010). Through this criterion, Côte d'Ivoire is the least poor (24%) and Mali is the poorest country (50%), **Graph 9**.

Graph 9: poverty index in 2010



Source: Rapport sur la situation de pauvreté dans les pays de l'UEMOA(2012)

The depth of poverty that is the rate necessary to achieve poverty indicates a concern especially for Guinea-Bissau (25%) and Niger (24.1%).

It is important to stress that this level of poverty affects mainly rural areas (from 38% to 75%) with a population involved in agricultural sector (agriculture, breeding, fishing and craft).

In the region, the level of unemployment is another several women practice farm activities and job with low revenue.

This situation of income inequality between the population in the union shows the disparity regarding access to basic services and insufficient availability of resources to satisfy their fundamental needs. Besides, the politico-military crises in some countries aggravated the precariousness and the vulnerability of people.

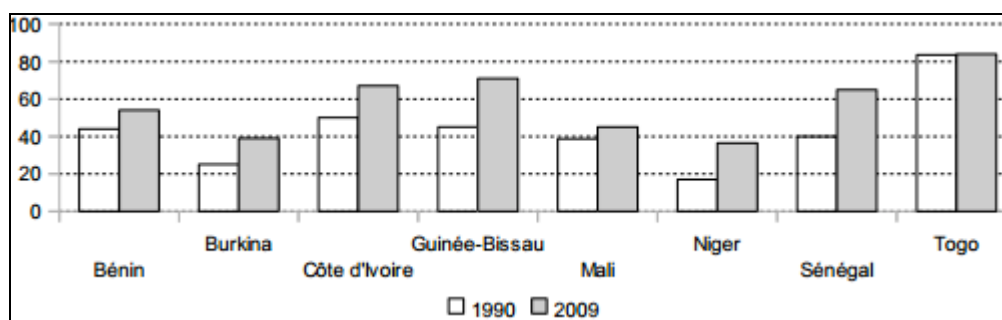
To understand better poverty phenomenon in the union, some important social indicators are analyzed to catch knowledge on the reality of poverty in the region.

These indicators are education, health care, foods safety, access to drinking water and electricity.

We attempted through these indicators to understand the link between an insufficiency access to basic resources and poverty. For this fact, we referred to the data of UMOA on the situation of poverty in 2012.

In UMOA, the level of the schooling is evolving from 2005 to 2011 with an average of 15%. This increasing is due to the improvement of the access to education and the efficiency of education system in some countries. As for literacy rates, it notes a rising between 1990 and 2009, that is viewed in the **Graph 10** which presents constant evolution in Togo and an improvement in seven (7) others member States. The State members must deal with the important challenge linked to illiteracy in the region. Indeed, the difficult living conditions is the main cause of illiteracy that is related to the lack of means to have access to academic materials. This is one reason that pushes low income parents to not send their children at school as well as the dropping out of school by students. That is mainly observed in rural areas which still lack of the education infrastructure.

Graph 10: Literacy rate for young people



Source: Report on the situation in the countries of UMOA (2012)

The indicator of health care is observed through the indicators of mother and child health that sheds light on an insufficiency of access to health care to face in particular the case of maternal mortality. According to WHO (2016), 99% of maternal deaths arise in developing countries and is higher in rural areas and poor communities. In the Union, we note an improvement of this indicators from 2005 to 2010 with 580 deaths for 100,000 births that is still far from the objective fixed at 140 for 100,000 births. On the other hand, the infant mortality decreased of 75 deaths for 1000 births, but remains high regarding the objective of 7 deaths for 1000 births. This improvement is understandable by the free prevention services for the children, prenatal consultation and access to health care. Despite these efforts, some concerns can be set through the need of qualified medical personnel, needs of training on the assistance before, during and after childbirth to save the lives of the women and newborns.

Regarding the food safety, it considers the availability of healthy, sufficient and nutritive food to ensure alimentary demand of the population. In the Union, 20.2% of the population suffer of malnutrition. That affects mainly children of less than five years old in areas rural than urban areas. Therefore, the calorific standard of FAO set at ,400 calories/persons/day is not achieved in the Union. This is related to the small mechanization of farm activities and an agriculture little diversified and affected mainly by climatic hazards.

For access to drinking water, the Union indicates an improving. That is explained by an increasing of access by the population by a rate varying from 65% to 69% in five years (2005-2010). This performance is observed in urban and rural areas in the region. However, some countries as Sahelian countries (Mali and Niger) show a rate below 50% of drinking water access. This is related to the insufficiency of the implementation of hydraulic system and the small level drilling in village to foster the access to drinking water.

Furthermore, the access to electrical energy is a real concern in the world to the extent that 1.2 billion of people do not have access, World Band (2013). That is the case of UMOA where the effort of electrical energy supply is still insufficient despite the improving from 2005 to 2008 that allows to achieve 11kwh. Thus, the Union has the difficulties to satisfy demand of households and ensure the running of business sectors.

In sum, some indicators showed that the access to social services remain a priority for the well being of the population. In States member of UMOA, the rate of people having access to basic services increased, but is still insufficient regarding the strong demand of people.

This situation is due to a difficult control of population growth and the small number infrastructure to meet the demand of people.

Besides, the economy of the Union depends strongly on rain-fed agriculture and non diversified that presents a low average income. To deal with poverty and hunger, UMOA attempts to set various strategies to foster the access to basic services and give a push to economic and social development to the countries.

1.6.2- Microfinance, institutional and legal organization

During the period of 1980-1990, the member States of UMOA have suffered of an economic and financial crisis caused by bad management of banking system and an inadequate monetary policy of central bank. This crisis conducted the Union to lead the reforms in the financial sector.

During the crisis, the non-performing loans reached high amounts with the rates varying between 50% and 80% of loan portfolios of banking systems.

Thus, the consequences of the crisis are explained through the failure of 30 banks on 79 during the period 1980-1995, Powo (2000) and the disparity of most of financial institutions. That affected the financing of development specially for rural sector, small and medium-sized enterprises and the households.

The difficult access to classic banks financing in the 1980's led people with low revenue to turn to microfinance for the satisfaction of their financial needs.

Indeed, the mission microfinance is to foster the mobilization of savings and facilitate the integration of informal sector in the modern economy. However, these institutions worked in an environment without regulatory framework.

Therefore, the development of this sector, has led the Central Bank to set up a regulatory framework to foster its integration in the financial system.

In the region, the number of MFIs has increased from 100 to 770 between 1993 and 2011, Setondji (2016). To handle the evolution of microfinance, the Union tried to ensure its sustainability and viability through the adoption of the law Parmec in 1993.

The objective of this law takes into account the harmonization of the legal status of the MFIs that allowed to Finance Ministers to grant operating licenses to cooperatives of savings and credit.

But some weaknesses observed in this law consider the supervision of authorities that is explained by an insufficient control of microfinance sector and the difficulties to apply the sanctions in the case of non-compliance of legal and statutory measures. That provoked an insufficiency of the reliability of information from financial statements of microfinance institutions.

It is in this context that the Central Bank (BCEAO) led the reform of the law Parmec in 2007 to improve the regulatory framework.

The objective of this reform is to ensure the stability of the sector and to protect customers in the Union. This reform facilitates also the supervision and integration of MFIs within a forum AP/DFS to strengthen their capacities and the vision of the actors.

Therefore, this reform allowed the implementation of new services and raised the investment in the sector. That helps the development and modernization of MFIs while the old law (Parmec 1993) was focused on the activities of non-profit institutions.

If this reform attempts to bring an improvement to the failings of the MFIs, some insufficiencies are also observed in the supervisions of microfinance activities.

It is in this sense that the survey of CGAP in 2012 in UMOA revealed that 14 MFIs were under temporary administration status at the end of 2011, because these institutions were viewed as a threat for customers.

This survey showed also that the bad governance and default of the safety management system are the main causes of the failure of MFIs.

The instability of microfinance sector stem from the weakness of supervision conducted the implementation of new reforms to set a regulatory framework. That must ensure the sustainability and viability of MFIs. Thus, these reforms help microfinance sector to contribute effectively to poverty reduction in UMOA areas.

1.6.3- Microfinance in Côte d'Ivoire

Microfinance was born in Côte d'Ivoire in 1976 with the creation of the network CREP-COOPEC to promote rural development.

The success of this sector is related to the liberalization of banking system and the support of the international institutions within the framework of fight poverty in this country.

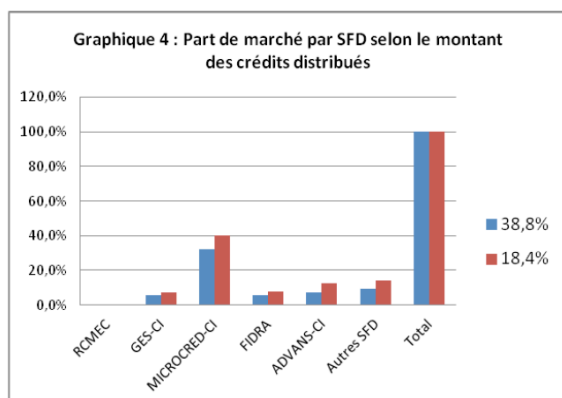
At the end of 2014, this sector has 75 MFIs and 322 service points. In the same period, it indicates 827 912 customers on national territory and savings and credit outstanding are respectively 146,7 billions F CFA and 100,7 billions F CFA.

The success of microfinance institutions depends mainly on their adaptation to informal market because some institutions have set daily savings in small amount as the offers of deposit collectors.

Furthermore, in terms of classification, UNACOOPEC-CI still remains the leader among microfinance institution. That institution has a subsidiary in almost each region. It receives also the great support of the State through subsidies and guarantee fund and loan. Therefore, UNACOOPEC-CI is the most important microfinance institution with a market share of 65.7%. However, it is the first on savings collection with a rate estimated at 60.3% in 2014. While, MICROCREDIT that is an international microfinance institution achieves the first position in credit distribution (40.1%) according to CNM (2014).

On the whole, the market is distributed between six great microfinance financial institutions such as UNACOOPEC-CI, MICROCRED-CI, FIDRA, GES-CI and ADVANS-CI (**Graph 11**).

Graph 11: Market share based on the credit



SFD	déc-13	déc-14
UNACOO-PEC-CI	68,0%	60,3%
RCMEC	3,7%	3,2%
GES-CI	3,9%	4,6%
MICRO-CRED-CI	10,4%	12,5%
FIDRA	6,3%	6,9%
ADVANS-CI	1,5%	3,3%
Autres SFD	6,1%	9,1%
Total	100,0%	100,0%

Source : CNM 2014

The total financing of the economy sectors in 2012 is estimated at 72 billion of F CFA. MFIs pay greater attention to trade sector with a share of 49% of total financing. The sector of craft, restaurant and others activities linked get 16%.

While agricultural and livestock sector that is the main important sector the country received little funding from 9% on the total credit distributed according to CNM (2012).

This share of agricultural sector concerns only 8% of agricultural regions located in north and west of the country where poverty rate is still high varying from 39.1% to 61.5%, ENV (2015).

To understand the situation of MFIs in Côte d'Ivoire, we attempted to analysis their performance to get insight on the management of these institutions. Therefore, the analysis of the quality of their portfolio that provide knowledge on the management of credit portfolio and how their deal with the risk of non repayment. Besides that, we take into account an analysis of the capacity of these institutions to create the revenue and to ensure partners about the health of the institutions for the continuity of the activities.

In this context, we considered the sample of 19 MFIs stemming from the benchmarking report of DFS that shed light on the activities of the period from 2013 to 2015. Among these institutions 13 are cooperatives and mutuels (MUT/COOP) and 6 are limited companies.

The following review showed the analysis led to understand the situation of our sample in Côte d'Ivoire.

General data

The general data is a set of information that highlights the evolution of financial activities of MFIs on the market.

Our sample is observed on three years (from 2013 to 2015) attempted to understand the evolution of customers' number, outstanding credit and savings deposit.

The analysis of customers' number, one notes a continuous growth of the performance of the sample. That is explained by an annual growth of more than 23% through a variation from 183 661 to 290 565 customers in three years.

This high rate of customers is linked to post-electoral crisis in Côte d'Ivoire, the period during which the financial institutions were closed and the activities has dramatically declined by security issue. Thus, at the end of the crisis in 2011, this increased the needs to save capital and to borrow to the aim to resolve the case of assets loss and the urgency to relaunch the activities to ensure family needs. Thus, some customers have built a loyalty with microfinance sector, (**Graph 12**).

As for outstanding credit, its value has more than doubled, rising from 36 billions to 92 billions F CFA. This evolution is linked to increasing of credit request of customers. That shows an important contribution of MFIs in the financing of activities in Côte d'Ivoire especially in informal sector and small and medium-sized enterprises.

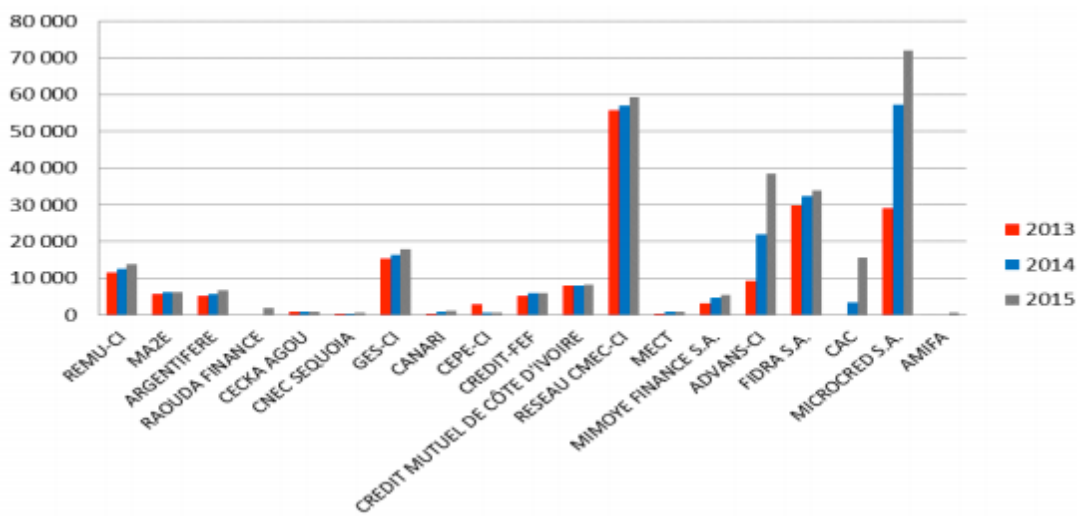
On the same period, the variation of outstanding savings is observed from 36 billions to 79 billions. This is the result of the confidence of people in microfinance sector during three (3) years.

Our sample presents globally a good evolution of the performances related to service offered. The confidence of people can be explained by the competitiveness between MFIs that conducted them to adapt their services to people who practice mainly informal activities. Therefore, their services is more intended for micro-business and women solidarity group.

These customers benefit also from training in financial and commercial management of informal activities and the sustain for social integration through health and literacy program.

It is also important shed light on the capacity of the sample to lead a sustainable activity and to ensure partners regarding the health of the MFIs.

Graph:12 number of customers



Source: APSFD-CI (2015)

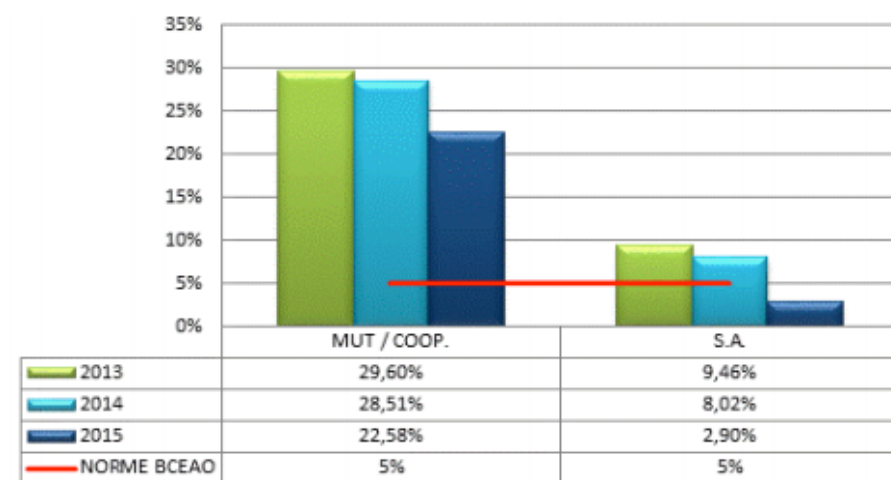
The analysis of financial indicators

The study of the portfolio quality of MFIs is focused mainly credit portfolio that represents the most important asset of these institutions.

To get insight on the situation of credit portfolio, we gave priority to the analysis of non repayment risks and the capacity of the MFIs to supply appropriate services to satisfy the request of customers.

In this sense, we used the portfolio at risk (PAR) rate at 30 days to identify the possible short-term risks. For this indicator, the standard of Central Bank is set at less than 5%. Indeed, we observe a progressive improvement of the trends mainly for limited companies (from 9.46% to 2.90%). But mutuals institutions show a bad performance that conducted to the deterioration of credit portfolio, **Graph 13**. This situation can be explained by non appropriate study of the profiles of borrowers and the lack of adequate strategy for credit granting. As well, these institutions have the difficulties to adapt offers targeted population. Thus, this indicator stresses that a good management of credit portfolio by limited companies, while mutuals institutions must be involved in an appropriate credit management to offer adapted services to market and facilitate the credit repayment.

Graph:13 portfolio at risk (PAR) rate at 30 days



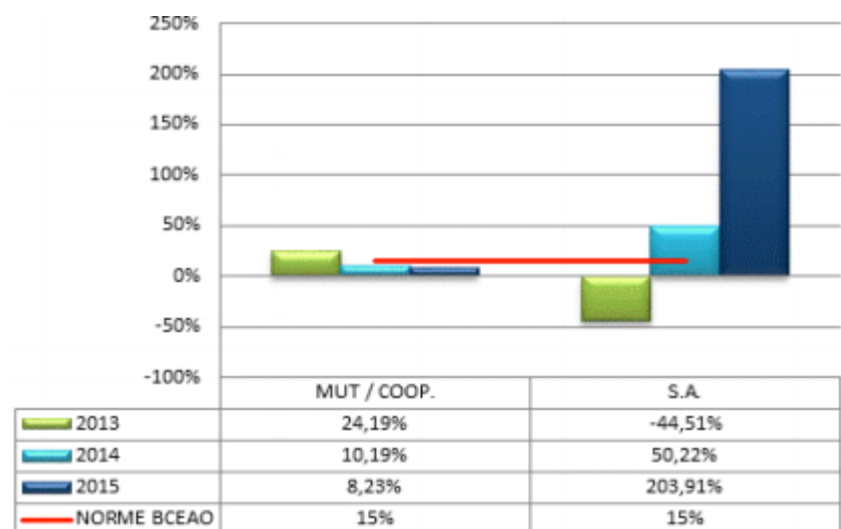
Source: APSFD-CI (2015)

The research on the equity capital lead to analyze the profitability of the sample. For that, we are interested to the return on equity to the extent that this indicator allows to measure the capacity of MFIs to generate revenue throughout its equity capital. That highlights the independence of the financial institutions without access to external financing.

For this ratio, the standard of Central bank is set at more than 15% and the observations indicate that the situation of limited companies seems a good performance especially the last year. That is the fact of two MFIs with a negative performance set in absolute value. As for mutuals institutions, the performance is in decline on the three years and share the same case as limited companies.

These two kinds of institutions show a worrying situation through the difficulties to optimize the revenue from equity capital and to contribute effectively to cover the costs. That situation affects the sustainability of these institutions.

Graph 14: Return on equity



Source: APSFD-CI (2015)

Besides the analysis of credit portfolio and the return on own capital, we attempted to understand the health of these institution through three indicators that are intended to shed light on the productivity of the assets and to ensure partners regarding viability and sustainability of the institutions.

Indeed, the indicator of return on asset provides information on the capacity of MFIs to generate profit from its assets. The standard of Central Bank is set at more than 15%. The performance of limited companies presents a decreasing (from 34.30% to 13.22%) while that of mutuals and cooperatives s institutions show an increasing (from 34.09% to 70.23%).

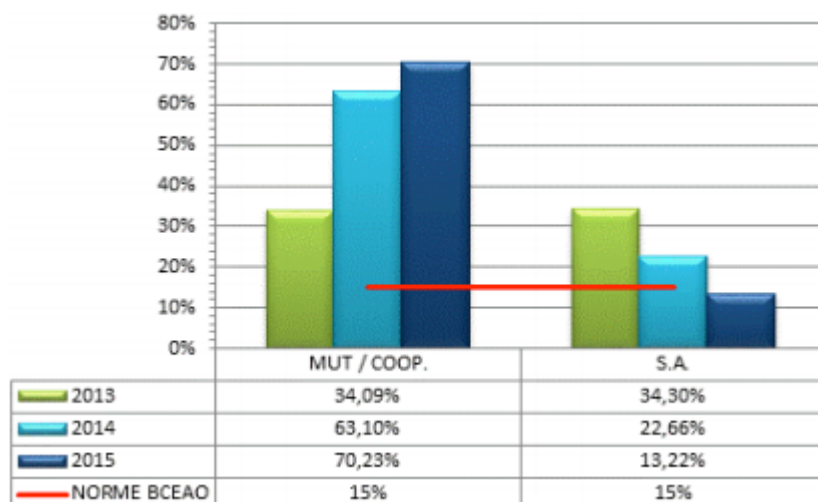
Regarding the standard, only the assets of mutuals institutions are more and more productive in terms of revenue. That is thorough with the indicators of liquidity to get view on the capacity of microfinance institutions to respect its commitments with third parties.

The standard of set this indicator at more than 5% and the variation of mutuals institutions remains above the standard (from 32.32 to 26.97). the situation is observed for limited companies (from 15.19% to 27.14%). That means that, these institutions are able to honor their short-term commitments with thirds parties in the case of failure. That stresses also that the short-term debts from thirds parties remains inferior to current assets on the whole despite the reduction of performance observed in some mutuals.

To that, the indicator of solvency of the sample that allows to observe the capacity of these institutions to meet their long-term commitments. The standard is set at 15%. In this case, the results are diversified. The mutuals show the negative rates (from -27.07% to -62.25%) and the limited companies indicate a decreasing of positive rates (from 21.91% to 5.21%). This situation exposes the importance to strengthen the capital of these institutions. This is viewed as an emergency for the mutuals.

Through these three indicators, the performances from the balance sheet management of limited companies and mutuals present various results. These are productive and liquid assets regarding thirds parties. On the other hand, their solvency set a great concern in particular for mutuals institutions, hence the need to strengthen of equity to meet possible risks. Thus, the financial situation of the sample is reassuring in short-term, while in the long term is worrying in particular for mutuals.

Graph 15: return on assets



Source: APSFD-CI (2015)

In summary, the strengths of our sample consider on the one hand the improving of credit portfolio quality during three (3) years but still requires an adaptation on the reality of Ivorian market characterized also by informal sectors. On the other hand, our sample is able to satisfy its creditors and third parties in short term debts that is observed with its indicator of liquidity.

However, some problems affect the credibility of these institutions as the difficulty to generate revenue from their equity capital and aggravated with non productive assets especially for limited companies. This is viewed as a threat for the viability and sustainability for their activities. These institutions are also exposed to an emergency to strengthen their capital to meet their long-term commitments.

In Côte d'Ivoire some important dysfunctions related to microfinance sector consider the failure to follow proper procedures of credit and the weakness to ensure the security of savings. That conducted CNM to place four (4) institutions under closer surveillance, CNM (2010).

As well, the market offers some opportunities to microfinance sector through the needs of people to secure their capital and cash flows. That requires essentially an adaptation on informal market to satisfy this population with low income.

1.7- Conclusion

The financing of poor people still remains in developing countries an important debate on the financial inclusion.

The born of microfinance after a positive series of experiences of small loans granted to households is seen as a success in the framework of poverty eradication in third world, Yunus (2008).

The unequal distribution of the financial capital led researchers to set the goal of microfinance around the improvement of the social sufferings of people. Therefore, they considered mainly the questions of unemployment and gender inequality in developing countries.

Indeed, throughout the provision of microfinance services, people can earn more by the diversification of revenue source, accumulate more assets and to deal with the daily survival. That ensure easy access to consumption and expenditures related to basic social services.

For gender inequality, the exclusion of women in the access to social services led authors to make them the priority of microfinance program to increase their income in the hope to give them the independence, confidence and make them financially responsible. For that, non financial services is observed as a complementary tool to achieve this goal to the extent that the purpose is to organize training for customers on the management of informal activities and facilitate social integration.

Despite the efforts of microfinance in the fight against poverty, some insufficiencies are stressed by authors. According to these pessimist authors, through debt, MFIs tend to deteriorate the situation of poor by high level of interest rate and management fees that cause the difficulty of repayment and affect their capacity to increase resources.

For farm activities, MFIs are less involved in the financing of farmers. Some authors though that microfinance can improve its relation with agricultural sector through a proximity approach that requires the providing of adapted services to farmers according to their needs and the harvest season. Thus, to improve the livelihoods of rural people.

In the area of UMOA, the analysis of some indicators on the access to social services allowed to note an improvement but is still insufficient regarding the strong demand from population growth.

In this context, to facilitate access to financial services and set up a regulatory environment for MFIs, the Union led the improvement on the law Parmec of 1993 to ensure the stability of the sector and protect customers in the Union. That helps to achieve about 770 MFIs in 2011.

In Côte d'ivoire, the success of this sector is related to their adaptation to the market through the increasing of credit granted to formal and informal sector activities. But the State remains vigilant face to the case concerning especially the failure to follow proper procedures of credit and the low level to ensure the securing of customer's savings.

To achieve its goal, microfinance must necessarily adapt its services to economic and social conditions in rural and urban areas. That takes into consideration the population distribution, income inequality and the dispersion of activities.

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CHAPTER 2: AGRICULTURE IN COTE D'IVOIRE

2.1- Introduction

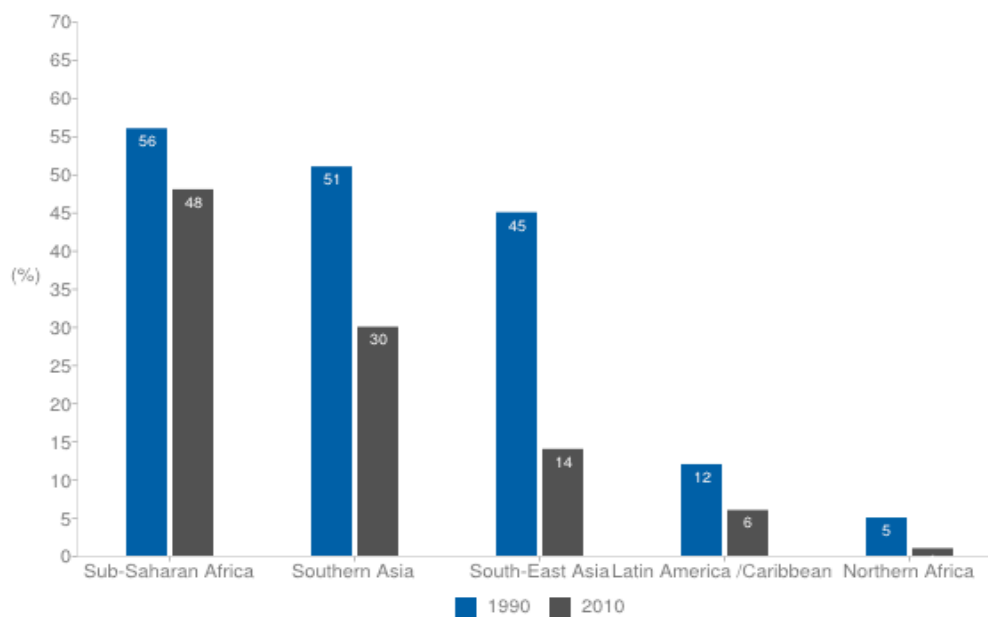
Agriculture represents the main source of food for the world's population. The population growth gives a great consideration to the development of agriculture to meet food demand.

One can respond to this concern through more involvement in the agricultural development process and better management of natural system.

It is shown that the non managed natural system can feed about 600 millions of people or one tenth percent of world's population, Mazoyer and Roudart (1998). That means that, the sustainable management of this resource can significantly improve the availability of food production for world's people and also an opportunity to increase farm income and protect natural resources. This is viewed as one of better way to move out of poverty in rural area.

The issue of the fight against poverty in developing countries remains a dominant matter regarding the strategy to be adopted by governments and international institutions.

Graph 16: Proportion of people living on less than \$1.25 a day, 1990 and 2010



Source: The Millennium Development Goals Report 2014

As solution against poverty, some authors advocated the development aid, but others thought that this strategy is worth nothing, only the market economy or the rethinking of poverty in the aim of access to basic services. For that, they tried to understand these issues in details and know why a lot of efforts to help poor have failed.

This chapter is mainly focused on agricultural situation of Côte d'ivoire. That takes into account its history since 1960 and various policies adopted to achieve sufficient and healthy food production and meet other challenges especially the improving of rural households' income.

2.1.1- Agriculture in sub-Saharan Africa

In Africa, the growth of gross domestic product (GDP) attributable to agriculture has more positive influence (two to four times) on the income of poor people than GDP without agriculture.

In the same way, Jeffrey Sachs (2005) recommended the support of agriculture through fertilizers, green manures and cover crops, irrigation, improved fallows and seeds. That sustain has as goal to increase considerably the foods yields per hectare and deal with chronic hunger.

Agriculture represents an important economic factor with 32 percent of GDP and employs 65 percent of labor force.

Moreover, the growth of food demand throughout the increasing of world population set the challenge for food availability.

According to FAO (2003), thirty years ago, in the developing countries, the consumption of cereal was 141kg/person per year that was 61 percent of calorie. Their new results showed that in 2004 the consumption achieved 173/person per year which correspond to 56 percent of calorie.

This challenge can be observed also through the variation of cereal production from 1960's to 1998 that is evaluated from 0.94 billion to 1.89 billion tones.

In that sense, the emergence of food availability in developing countries causes negative impact on well being of people.

That is the case of Sub-Saharan Africa with about 200 millions of the population and 46.8 % of poor in 2011 are exposed to food emergency assistance.

Agriculture offers a livelihood option to 86 percent of rural population and employs 1.3 billion of small farmers and rural people without land, World Bank (2008).

These cases show that the agricultural development is a way to reduce efficiently poverty to the extent that among the most important priorities, the availability of sufficient and safety food and the improvement of revenue represent the emergence in poorest countries.

The concern of food availability of sufficient agricultural product must be necessarily related to food safety regarding the debates and statistics on malnutrition in the poor world.

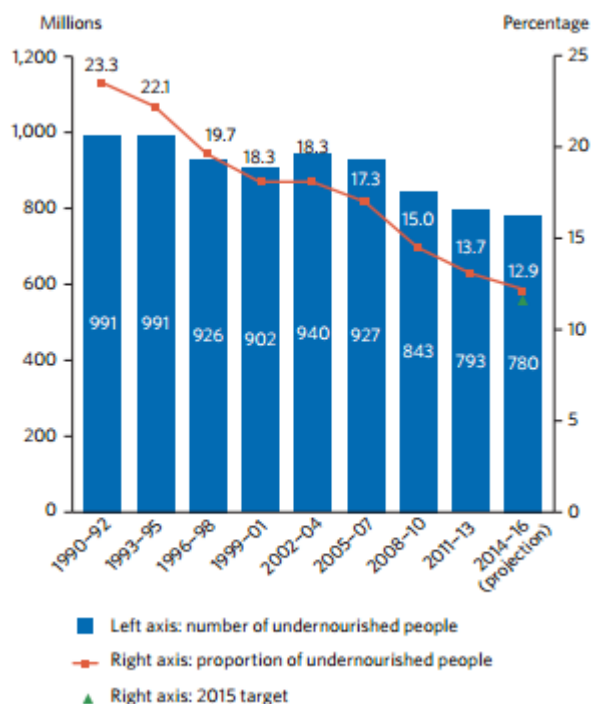
Indeed, in dozens of countries of Sub-Saharan Africa, the emergency of food availability and uncertainty of food assistance highlights the vulnerability to poverty and food security.

World Bank (2008) justified this case by an insufficient sustain for agriculture that is observed through the absence of investment in irrigation, degradation of agricultural lands, illiteracy of agricultural population and the rural exodus limits the production of food.

In this context, farmers need support for a better agricultural practice to overcome these problems which can foster the provision of an adequate and healthy food.

This support of agriculture is helpful for the case of undernourished people estimated at 795 millions.

Graph 17: Number and proportion of undernourished people in the developing regions



Source: The Millennium Development Goals Report 2015

To understand the evolution of the trend of undernourished people in developing countries between 1990 and 2015, we have summarized the analysis of the **Graph 17**.

The projections show a reduction of the trend almost half of undernourished people, from 23.3% in 1990–1992 to 12.9% in 2014–2016. In following the trend, the evolution of the graph shows a slower decline in hunger about five years after 1990 and increase slightly around 2008 before a continuous drop. The progress of this trend is significant despite a difficult global context over the last decade, MDG (2015). This situation of undernourished is observed in developing countries in particular in Africa sub-Saharan, Van Haute (2011).

The investment in agricultural sector could play an important role for the achieving of the sustainable food safety. This is a way to improve the competitiveness and increase the income of farmers through the involvement of researchers to find solutions for appropriate feed capacity of people, Touzard (2012).

The agriculture represents the main source of nutrition of people in developing countries. however, it is faced with challenges which are major barrier for its growth.

These challenges concern land pressure linked to the rapid growth of the population, climate plagues and price volatility.

The example of the transformation of farm products in the Sahel mentioned by World Bank (2005) allows to relate on the one hand the challenges of land pressure to difficult control of food price to the extent that the case of land conflict and the increasing of the price land cause the problem of access to adequate surface for farm activities. That influences the rising of food price through unforeseen costs. On the other hand, the declining of climate condition by the repeated cycle of droughts, desertification and floods are the great risks that researchers attempt to treat through a better prevention method.

Besides these challenges, we can add the persistent need of mechanization and the improvement of farm income of agricultural population.

The knowledge of these risks is viewed as a step toward solutions for a better agricultural practice and the provision of sufficient and healthy food.

2.2- Agriculture in Côte d'Ivoire

Côte d'Ivoire is a country of west Africa with a surface area of 322 462 km² and 550 kilometers of coast. Its national population was estimated at 22.70 million in 2015 and the GDP was about 31.75 billion dollar that allow to observe a growth of 8.4%.

The forecast data of World Bank foresees a variation of economic growth between 7 and 8% until 2017.

Since its independence, this country is focused on agricultural sector to launch its development strategy. This choice allowed to get a continuous success with some crops in Africa and in the world.

According to World Bank, in 2015, the agricultural production increased throughout major crops such as cocoa (36%), coffee (16%), cashew nuts (18%) and sugar (12%). That is explained by the fact that agricultural sector benefited from guarantee schemes of price for farmers and the implementation of private-public production programs.

The objective of Côte d'Ivoire is to promote the modern farm and competitive to achieve food self-sufficiency and increase farm income. This is linked in reality with the aim to improve living conditions of poor people in particular young and women who are mainly involved in farm practice.

The poverty index in Côte d'Ivoire has increased from 1985 to this day. Therefore, one can observe the variation of poverty index from 10% in 1985 to 48.9% in 2008 and a slight reduction (46%) recorded in 2015.

The main reason for this fast increase in poverty is due to the political-military crisis from 2002 to 2011 that caused the difficult access to basic social sectors and increased social inequality.

Table 1: Poverty index in Ivory Coast

Milieu	Ratio de pauvreté		Gap de pauvreté		Sévérité de pauvreté	
	P ₀	CTR(%)	P ₁	CTR(%)	P ₂	CTR(%)
Urban	35,9	38,8	11,2	34,4	5	31,4
Rural	55,8	61,2	21,5	65,6	11	68,6
Ensemble	45,3	100	16,3	100	8	100

Source: INS, ENV 2015

In 2015, NSI through some data attempted to explain poverty situation in this country (**Table 1**).

Indeed, poverty rate on national territory is evaluated at 46.3% of which 16.3% of poverty gap and 8% of severity.

This table shows also the strong share of poverty in rural areas with 56.8% against 35.9% in urban areas. The contribution of rural people in the growth of poverty is set at 61.2% against 38.8% for urban people. These index highlight also the small place that have the rural areas in government's

development programs. Therefore, there is an emergency to take concrete measures for poverty reduction especially in rural area.

Moreover, for food availability in Côte d'Ivoire, some policies led since the independence allowed to ensure food self-sufficiency throughout State involvement by the management policies and investment in public companies as SODERIZ, SODEPRA, SODEFEL and CIDV.

This food self-sufficiency was affected by a decade of political-military crisis that created alimentary difficulty in the regions of center, north and west of the country.

A study is led by the Ministry of agriculture with the involvement of NSI (National statistical Institute) and some international organizations such as FAO, WFD (Water Framework Directive) to know the situation of food safety in the west and north regions of the country in 2013. They found that about 20% of the sample of 387 198 people in west region suffer of food insecurity among which 3% are in severity food and in north region 18% on 193 138 people are affected by food insecurity. This situation is caused by land pressure and conflict, insecurity and climatic variations. Some factors are worsened by political-military crisis that affected mainly the west and north regions.

This chapter considered also the different factors that characterize the agriculture in Côte d'Ivoire. It is important to highlight some aspects regarding the evolution of agriculture, the policies after independence and agro-business situation in this country.

2.2.1- Evolution of Ivorian agriculture

The evolution of agriculture in Côte d'Ivoire can be observed on four major periods since independence.

This considers the involvement of the State through agricultural policies that allows to note the variation of economic growth.

Indeed, from 1960 to 1980, this country reached a high economic growth with an annual rate of 7% and an average agricultural GDP estimated at 33.78% of total GDP. It allowed the country to get an important position on the international market through its cash crops. Besides, the State implemented a policy to foster sufficient and healthy food. For that, it developed the sector of animal production and fisheries and food crops sector. Therefore, the State has created the structures as SODEPRA (animal production and fisheries), SODEFEL (fruit and vegetable) and SODERIZ (rice production). That are the result of the heavily investment of the State in agricultural production, transformation and commercialization.

Contrary to the first step of farm development, the period between 1981 and 1993 notes the decreasing of economic growth with an average agricultural GDP of 28.74%. To respond to this problem, Government withdrew from production chains to give priority to the development of private sectors. Besides that, to relaunch agriculture and fight against poverty, the State set up a strategy document “Plan Directeur de Developpement Agricole 1992-2015” that set the agricultural policies of until 2015. Its main objectives are to ensure the increasing of the productivity and competitiveness related to agricultural, livestock and fisheries field.

From 1994 to 1998, this period is linked to the devaluation of the currency Franc CFA and notes 5.64% as growth rate per year. The contribution of agriculture sector to GDP remains low (24.41%). That is due to the decrease in export price of cocoa and cotton that caused the difficulty to improve the economic performances of the country.

The period between 1999 and 2010 is linked to politico-military crisis which affected the economic growth and created economic downturn. However, the agricultural sector kept a strong share of GDP (24.02% of total GDP).

After post-election crisis of 2010-2011, the economic growth is resumed with 10.7% in 2012, 8.7% in 2013 according to World Bank (2014).

This economy always recovers with the great dependence of agriculture that offers employment to two-third of the population.

Furthermore, it is important to show some agricultural performance of this country on international scale. The following table highlights some best position in agricultural production.

Table 2: Performance in 2015

PRODUCTS	PERFORMANCES OBSERVED
COCOA	1 st world producer with 42% from 800,000 producers
KOLA NUT	1 st world producer
COTTON	3rd African producer with 550,000 tonnes
COFFEE	3 rd world producer
CASHEW	2nd world exporter
PALM OIL	2nd exporter in Africa with 300,000 tonnes
RUBBER	1st exporter in Africa with 325,000 tonnes
FRUIT SECTOR (BANANA, MANGUO, PINEAPPLE)	1st exporter in Africa with 350,000 tonnes per year
TUNA	1st exporter in Africa

Source: Agence Ivoirienne de Presse

For food crop, Côte d'Ivoire recorded a commercialization of more than 14 million tonnes per year which cover the national demand. These last three years, the production of local rice has achieved 1.3 million tonnes for a need estimated to 1.6 million tonnes. Thus, the self-sufficient alimentary in rice was a hope in 2016. As for animal production sector, one notes an improvement but the country still remains a deficit in animal protein.

The agricultural development of Côte d'Ivoire is mainly focused on cash crop which is the base of its economic growth and gave it an international reputation. Whereas, food crops which represent the main nutrition source of national population show less attention granted by the State regarding the rapid growth of people.

2.3- The agriculture situation and Ivorian State

The evolution of agriculture in Côte d'Ivoire is related to the main orientations fixed by the State throughout various policies since independence.

The improvement of these policies allowed Côte d'Ivoire to be among leader of agribusiness activity in Africa especially in west regions of the continent.

However, some important challenge are major obstacles against farm development that affect food availability and nutrition quality.

2.3.1- Agricultural Policy

The objective to fight effectively against poverty and to hold a higher level in the national economy, the State focused agricultural policies on modernization to achieve an intensive farm, diversification and competitive.

Until 1985, agricultural policy has concerned only the great agricultural objectives as the fast development of cash crops products intended for export markets, but the PAS (Plan d'Ajustement Structurel) contested this approach in the nineties and the State adopted a policy of liberalization to increase private investments and attract better skills for the industrialization of agriculture.

Today, the State resumed the management of agricultural sector and tries to associate with private sectors because the PAS was not a success.

It is important to note that over the last 20 years, PDDA (Programme Détaillé de Développement de l'Agriculture) is the main text that provides the great orientations on the period of 1992-2015. This plan concerns economic recovery strategy in Côte d'Ivoire that is characterized by the Plan of Stabilization and Economy Recovery (PSRE) in 1990 and the Economic Recovery Plan in the Medium-term (PREMT) in 1991.

The PDDA was adopted in July 1993 in the council of Ministers but it was never approved by the parliament. It is the tool for agriculture, livestock, fishing and forest.

The important perspective considered by this text are following: the improving of competitiveness, food security and self-sufficiency, diversifying the agricultural production, development of marine fishing and rehabilitation the forest heritage.

The PDDA is also used as strategic base of the fight against poverty in rural area that is linked to PNLCP (Projet de plan national de Lutte Contre la Pauvreté, 1997-2000) and DSRP-I (Poverty Reduction Strategy Paper 2002).

After independence, agricultural policies are mainly set for the modernization that urge governments to give great interest to private investments and new skills.

Through PDDA, the important guidelines of farm development and poverty reduction are drawn among which PNIA (Programme National d'Investissement Agricole). The objective of PNIA is to increase agricultural growth in order to influence food security. It takes also into account the reduction of poverty until 16% in 2020 and the creation of employment especially for young people.

However, the socio-political military crisis caused the difficulty of application of agricultural policy that provokes a slow growth of the economy during a decade.

In the development strategy of this country, the State is most interested in the processing of raw materials. For that, it develops a strong collaboration between public, private companies and farmers for the increasing of productivity and facilitate the implementation of agro-industries. The following review highlights the impacts of agribusiness for the country in particular for rural world where the revenue is still low to satisfy the needs of households.

2.3.2- The agro-business sector

In Côte d'Ivoire, the State tries to reinforce its cooperation with private sector for the transformation of agricultural raw materials.

Indeed, the question of modernization of agricultural sector requires the availability of various factors that allow the processing of farm products into in semi-finished or finished products.

In the field of agro-business, Côte d'Ivoire get today an important position in West Africa. This position is explained by a growth in the number of manufacturing implemented in the country through an improving of fiscal environment by the tax allowance.

For a better commercialization of processed food products, the country supplies on the national scale and in the sub-region.

In Côte d'Ivoire, the sector of agro-business is composed of more than 700 companies which employs more than 30,000 people that allow to realize more than 220 millions of Dollar as revenue in 2008. Many activities such as milling, processing of coffee, cocoa, fruits and poultry are led by these companies.

The most profitable activities are: the production of beverages and fish canning, the processing of cocoa in butter and chocolate.

In the farming field, many structures collaborate with village community for the increasing of farm productivity. These structures work with rural people by supplying farming tools, inputs and other services to develop their production and rural farmers give back the raw materials after harvest.

The successful model of collaboration between manufacturing structures and rural communities can be explained by the case of the group SIFCA that reinforced its development through rural plantations. It creates its own plantations and facilitates the creation of village plantations for the communities around its fields.

The strategy is based on the balance between industrial and village plantations. The group works with planters of palm oil and rubber who provide 60% of raw materials.

This collaboration provides a market on which producers can sell their agricultural productions. Thus, that allows the improving their revenue and their livelihood. That can be viewed as an effective way to create jobs for rural people by including them in agribusiness process of the country.

2.3.3- Challenges of agriculture

The challenge in Côte d'Ivoire can be viewed at various levels that cause the weakness of agricultural sector.

Indeed, the main problem of agricultural sector is an insufficient modernization. That is explained by the lack of agricultural infrastructure, low mechanization and former crops practice by farmers.

Besides, there is no interlocutor between professional association organization and the government to discuss on the important question as: access to input subsidies, organization of production and commercialization, integration of family farming on the market and the training of farmers.

The training, supervision and management of farming activities remain complex in rural areas for reason of illiteracy of major part of the people. Therefore, the lack of organization skills and the absence of specialist for strengthening their capacity are the main problems of this farming organization.

To that, the lack of better packaging and long conservation of products to get a good quality is a few implemented.

These insufficiencies caused also continuous imports to ensure food availability and food safety through the products as milk, meat and the various qualities of rice.

The ageing of agricultural population and the rapid rural exodus of young people reduce agricultural workforce in rural area and the corruption of representative of producers through the collect of parafiscal taxes impoverishes farmers.

The advocacy paper of Ministry of agriculture on PNIA (2010-2015) allowed to set three main agricultural concerns that the State intends to lead with aim to increase the contribution of this sector in national economy. Thus, the State attempts to lead:

- the promotion of farm products for the security and food sovereignty that is linked to the access to less costly production factors (seed, fertilizer, phytosanitary products, equipment, technology...), ensure the seasonal production, reduce post-harvest losses and the maintenance of rural and agricultural roads.

- the promotion of global environment to increase the private investment in agricultural sector is focused on the limitation of financial delinquency, land disputes between owners and farmers and land access to women and rural youth.
- to ensure sustainable development, production diversification and exportation. For that, the state expects the intensification of productions and the promotion of good agricultural practice, access to quality plants and the promotion of transformational policy.

These challenges showed that the agricultural development of this country requires necessarily the involvement of the State in rural development. That requires the implementation of the useful reforms for an appropriate access to farm land in order to favor private investments.

The State is also aware of the insufficiency of production due to small level of mechanization and the hard work conditions of farmers related mainly to difficult access to inputs and the use of traditional materials.

The consideration of these main concerns by the State creates a hope for Ivorian agriculture. But the various social problems of the country make rural world sceptic about a favorable way for the improving of their living conditions.

2.4- Conclusion

The contribution of agriculture in poverty reduction led several research to take part in the debate.

Indeed, agriculture is viewed as the main source of nutrition for the world's population to meet with the increasing of food demand.

It represents also a great opportunity in the strategy of poverty reduction and an important economic factor with 32 percent of GDP and employs 65 percent of labor force in Sub-saharan Africa, Christian Friis Bach and all (2008).

The development of agriculture can be related to self-sufficient and food safety to the extent that the emergency of food availability and undernourishment case are still a concern in developing countries.

In Côte d'Ivoire, the economy development strategy is focused on agriculture sector. Thus, its contribution to GDP is estimated at an average of 20%.

The high level of poverty in rural area (56.8%) is located especially in agricultural regions of the country need a strong involvement of the State because farm yield is still low through the use of traditional method and difficult access to agricultural inputs.

The State has led several agricultural policies to ensure food safety and self-sufficient that are disturbed by two periods: the crisis of 1980s due to the collapse of cocoa and coffee prices and politico-military crisis from 2002 to 2011.

The modernization of agriculture sector throughout the processing of raw materials led the State to develop agro-business sector by an attractive private investment. This help the country to become one of leader in agro-business field in West Africa.

Despite these efforts, some challenges of the mechanization, training of farmers and support must be achieved. While, the State attaches a great importance to cash crops at the expense of food crops.

The cash crops intended for international market cannot answer to food demand of the population. For that, the State tried to implement some reforms in favour of food crops to reduce the imports.

The next chapter considers the methodology of data collection and analysis of financial behaviour of poor households and the measuring impacts study. These are applied in the fields research in region of Tchologo located in the north of Côte d'Ivoire.

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CHAPTER 3: METHODOLOGY AND PRESENTATION OF THE REGION OF TCHOLOGO

3.1- Introduction

Agriculture is the key economic sector for Côte d'Ivoire. It plays also a vital role by providing food to a growing population.

That can be observed through the main activities of the population in the region of Tchologo.

Indeed, this region has an appropriate land for various crops and a workforce who practice cash crops for international market and food crops intended for people nutrition.

Despite this great consideration for agriculture, the revenue of rural population is still low.

The different researches for the increasing of farm income take into account the offers microfinance institutions.

UNACOOPEC is the main institution of microfinance in the department of Ferké and serves almost thirty (30) others regions in Côte d'Ivoire.

The question about the contribution of this institution in the increasing of farm income led us to try to understand the advantages that offer the region to farm activities and make the review on the activities of UNACOOPEC-Ferké from 2014 to 2015.

First of all, we have explained the methodology of financial diaries which aims to track financial behavior of poor people especially his gains and expenditures. That methodology helps us to shed light on financial management of people interviewed.

3.2- Financial diaries methodology

The research on poverty is mainly focused on the difficulties to satisfy the needs and the solution to foster the access to basic social services.

Besides, only a few researchers paid special attention to financial behavior of poor people that requires to be close to households with low income.

The financial behavior of poor people has drawn the attention of a few number of researchers. But, they study still remain insufficient to explain better the behavior of households and also the management of savings clubs.

Indeed, some authors as Shirley Ardener and Clifford Geertz (1962) have talked about the difficulty to study some savings clubs. The case of saving clubs in 1960's shows a complex organization and functioning form as the case of Javanese rotating credit association and the similar associations observed in China, Japan, Indo-China and West Africa.

For Montgonery, Bhattacharya and Hulme (1996) the recall method allows to evaluate the quantitative impact of credit on borrowers' business and households. For that, it is studied the use of loan and the new financial management of the business after credit reception, which means in terms of marketing, technology and workforce.

This method is viewed as less accurate through data received and provides a few reliable information for better comparison generally on the beginning of borrowers' activities linked to the management of little financial capital for the running of the business. That is difficult to observe a possible change in financial situation people.

Other studies used data set of microfinance institution. This approach appears limited because the wide range of financial management method is understated and neglected. The quality of data is also weakened through the recall method, which became the main way to catch data on the previous activities of customers, CGAP (2009).

Through surveys study, one can collect data on the approximate number of poor people in the world in particular in developing countries and the attempts to measure their consumption during one year. But, these studies provide a few detailed information on the management of financial resources of poor households. These studies do not pay a great consideration on their weekly and daily challenge to meet their needs and unforeseen problems.

In that sense, Collins, Morduch, Rutherford and Ruthven (2009) have tried to answer to the following question: "how gives new insight into the day-to-day nature of poverty and yields concrete ideas for creating better solutions for it?"

The poor knowledge on financial live of farmers in Sub-Saharan Africa despite some studies led on the financing of poor people, Morvant, (2007), C. Van Rooyen, R. Stewart and T. De Wet (2012) give reason to report of World Bank (2012), which indicated that the "average, 40 to 45 percent of Sub-Saharan Africans live below the poverty line 1.90 Dollar per day". This situation leads us to give a contribution on financial behavior study of poor households in west Africa.

In that way, we are focused on the concern of the financial behavior of rural people and their relation with microfinance institution. That considers on the one hand, their main source of revenue, that is agricultural activity and how they deal with various needs. On the other hand, the difficulties to finance their activities and the use of microcredit received from MFI.

Therefore, it is important to refer to a method which could clarify the link between **"financing of the farm activities and the farm income"**.

3.2.1- Financial diaries method and context of study

In the light of these preoccupations, we have considered the financial diaries method.

The difficulties to study assets of poor households in developing countries led Collins (2005) to talk about the advantages of financial diaries approach. For him, this approach has main aim to collect rich data on a very small set of households. It is viewed as a way to get a systematic view into the financial lives of poor families, most of whom were excluded from the formal banking system.

According to Tara Leung and Kim Wilson (2010), financial diaries allows participant households to use a simple cash-based log for their financial transaction over a set period of time.

It is also a research method that combines the quantitative and qualitative methods by data collection from participating families, debts cash flows in and out of the households, financial instruments, employment, financial goals, and other attitudes about money.

Indeed, it treats the financial behavior of households through interviews and tracks the actual income and expenditures. According to Provenzano (2012) the objective of financial diaries is mainly the tracing of allocation of small resource of poor people and to help to identify their financial insufficiency to meet the needs. As example, poor people may need financing not only for entrepreneurship but to ensure daily expenditures and deal with unforeseen events.

Some studies have shown the importance of financial diaries in the analysis of the management of the small resources.

Financial diaries allow to keep track of the financial inflows and outflows of people that was initiated by Rutherford (2003) in Bangladesh, details were tracked by Ruthven (2002) in India and Collins in South Africa.

The recent study of Rajalaxmi K. And Smita R. (2015) has taken into account the application of financial diaries on the study of weekly cash-flows of informal business units operating in the periurban area of Ramanagaram, in the southern State of Karnataka in India. In the process, they collected the cash flows of informal businesses among a sample of 90 households. For that, they separated the cash flows of household from the cash flows of business. An in depth analysis of the cash flows focused on the issues that consider the following aspects of informal sector: their modes of business, the credit-needs, the reasons they cannot expand, and how and why this sector persists.

Kuntala Lahiri–Dutt and Gopa S. (2012) illustrated the complex, diverse and ingenious ways that the poor manage money. It is showed that the poor people who live on the charts, or river islands, in deltaic Bengal live in the mutual financial aid through which the family assistance and trust play an important role.

Through these studies, financial Diaries attempted to keep more information on full financial live of households to identify their financial behavior face daily challenge and the use of their finance for better running of their activities. Therefore, financial diaries tried to make the difference between cash flow of households and cash flow of informal business to know the allocations resources in needs and sources of income. Through Financial Diaries, researchers discover intelligent and ingenious financial methods used by poor people to ensure their livelihood.

However, some critics can be observed about financial diaries method. Indeed, authors found that the surveys of financial diaries method seem cramped to be a better reference to explain financial situation of poor families. Other authors though that the interviews can present a lower part of bias to the extent that poor can have the difficulty to provide exactly information on his financial management. Therefore, Collins et al. (2009) evoked the difficulty to collect detailed information on cash flow.

For the context of study, the methodology is focused on agricultural microcredit in the north of Côte d'Ivoire in the region of Tchologo, more specially in the department of Ferkessédougou. In this region, poverty index is estimated at 65% (ENV, 2015), 29.6% of poverty gap and 12.7% of severity according to National Statistical Institute (2015).

This study is initiated in order to understand the details of the use of credit of UNACOOPEC-Ferké by farmers that allowed to catch the expenditures linked to his activities and get an insight on others sources of agricultural financing.

For that, the study concerns the identification of farm financing sources, financial relation between UNACOOPEC-Ferké and farmers, evaluation the agricultural income and expenditures and knowledge on the main or regular challenge of farmers.

For a better field research, one finds important to use some tools for data collection, direct interviews and documents analysis.

- Questionnaire: intended to members and non-members of UNACOOPEC-Ferké, concerns firstly the research on the social situation as households' size, education level, capacity building. Then, the economic situation is also treated through the question on main crops of the region (surface, income, and expenditure), their farms' needs and how their satisfy these needs. The last aspect of the questionnaire considers the comprehension on credit access, the amounts requested under what conditions, the use of credit in farming activities. These different aspects allow farmers to give their opinions on the improving of agricultural microcredit.
- Direct interviews: the interviews allowed to get more information on farm situation of the region. Indeed, it oriented on the advantages and potentialities for farmers, the farming method, involvement of the government and farm capacity building. These interviews have concerned mainly the Manager of UNACOOPEC-Ferké, Manager of ANADER, some president of farm cooperative and association of shopkeepers.

- Report analysis: takes into account the annual report of Ministry of Agriculture, report of the Regional Direction of Agriculture, ANADER, OCPV and other agricultural structures in Côte d'Ivoire

- Google forms and Google spreadsheet: the information collected are treated on Google forms and Google spreadsheets. Google forms is a tool that collects and makes the synthesis of the information. As for the spreadsheet makes the analysis of the survey results and presents some graphs linked to the results. We use also statistical significance T-test to evaluate the impact of microcredit on the farm income of our respondents.

3.3- Presentation of Tchologo region

The region of Tchologo was created by the decree N ° 2011-263 of September 28th 2011. It is situated in the north of Côte d'Ivoire and covers 17 042 km² that represents about 5.3 % of the country.

The population of region is estimated at 467 958 inhabitants among which 316 545 people live in rural areas, RGPH (2014).

This region has three (3) departments (Ferkessédougou, Kong, and Ouangolodougou) subdivided into twelve (12) sub-prefectures and two hundred and sixty-two (262) villages according to PLDR (2016).

The department of Ferkessédougou represents the capital of this region. It is 514 kilometers from the economic capital (Abidjan), Tchologo information (2015).

This department covers 3 220 km² of the surface on 17 042 km² of the region of Tchologo.

Besides, this region consists of 262 villages among which 27 % in department of Kong, 25 % in department of Ferké and 20% to Ouangolodougou (**Annex 1**).

The demography of this region indicates that the number of men (238 095) is slightly upper than those of women (229 863).

These populations are traditionally farmers and practice other activities as breeders, storekeepers and craftsmen.

However, in this region the rate of poverty achieves 65.6%. That can be explained through reasons as the weakness of the incomes from the agricultural activities, local micro-companies and the deficit in infrastructures, PLDR (2016). This situation is understandable by the decade sociopolitical crisis that causes a slowing down of the economic development and stressed poverty in rural areas. The destruction of infrastructures and socioeconomic equipments, and disinvestment during this period of crisis affected heavily the economy of the region.

That urge the Government and authorities of the region to set various projects related to crop irrigation and processing of farm production.

3.3.1- The economic situation

The economy of this region is essentially dominated by primary sector composed of agriculture, breeding and fishing.

Indeed, agriculture is the main economic activity and the main income of the population that is focused on cash crops as cotton, cashew and sugar cane. As consumption, the maize is the basic food choice in the region.

In this region two great multinational SUFCAF-CI and SECOLAM are involved respectively in the transformation of sugar cane and cotton. These companies help the region to reduce the number of unemployed people especially in the period of agricultural campaign.

There are also micro-units for farm products transformation (cashew nut, shea nuts and cereal) and packaging station of mango.

Furthermore, one observes the return of some financial institutions and commercial structures that were delocalized towards the south of the country during war period.

Throughout these advantages, the region is also endowed with international highways that connects Côte d'Ivoire to two (2) others countries (Mali and Burkina Faso) and a railroad bound to Burkina Faso.

These economic advantages help the region of Tchologo to set its strategy on farm development to deal with the high rate of poverty through the planning of projects. To understand the strengths and weaknesses, it is important to get a view on the assets and opportunities and factors that distribute or threaten the good implementation of economic activities.

3.3.2- Assets and potentialities of the region

The region offers some advantages for farm crops development that is explained through its assets and opportunities. But, farm activities are faced with constrains and threats that affect its productivity.

Assets and constraints

The most important factors consider agricultural filed. Indeed, agriculture remains the main economic activity for the population that is practiced by about 60% of rural people with the involvement of relatively young people.

The climate and grounds remain favorable to the practice of several crops as cash crops (cashew, cotton, and mango), food crops (maize, rice, tubers and roots), and vegetable crops (tomato, eggplant, pepper, etc.).

To that, one notes the existence of an agricultural expertise, regarding the mechanization, the good cover of the region by supervision structures (ANADER, ONDR, BFCO, NGO federation Gnompinin, NGO CHIGATA, etc.) and implementation of various agricultural projects.

However, some obstacles are observed in the region that is related to the juxtaposition of laws, low level of mechanization and weakness of farm organization.

The juxtaposition of the traditional and modern laws doesn't favor the sustainable development of farm because the buyers of land plots are in a precarious situation.

The low level of modernization of the exploitation is explained by a mechanization to 50% in cotton and very modest motorization with about twenty tractors. As well, the low level of transformation of farm products with only two multinational (SUCAF-CI and manufacture SECO) in the region.

Other constraints as the low yields and lowers of the production due to poor soils, bad agricultural practices and difficult commercialization of farm products, in particular mango. To that, farmers are faced with the high price of inputs especially fertilizers, absence of stores and lack of access to farm credit.

The bad organization and the fragility of the professional agricultural organizations do not allow them to play really their role; and the low level of literate and elimination of illiterate people in the setting up of the rural committee doesn't favor the execution of certain programs linked to rural land law (functioning of the CVGFR).

The producers in this region have the difficulties to control the water for their irrigation for a pluvial agriculture and they have a recurring conflict with breeders due to the damages of farms by beefs.

These constraints show the problem of farm development in this region to increase the yields of farmers and improving the livelihood of households.

Opportunities and threats

This region has many opportunities regarding its geographical position and different project of development.

Indeed, the region represents the border between Côte d'Ivoire and two countries (Mali and Burkina Faso).

Concerning its various projects, the region planned the construction of a dry port that will be an important aspect for the flow of products and an opportunity to foster economic growth of the region, which will consider also the asphaltting of the international way Ferkessédougou-Bouna, and the initiatives concerning the implementation of agro-industries in the domains of cashew, mango and rice (unity of 25,000 tons of paddy by the ONDR). As well, the various ongoing projects, in particular the creation of sub-regional market of food-producing.

Furthermore, some threats are faced with the opportunities offer by the region, among which rural exodus of young people because the hardness of rural work through the using of traditional tools. Other threats are the desertification due to the deforestation by the running of creation of new exploitations, what would disrupt the seasons by the effects of the climate change.

Besides that, the recurrence of conflicts between farmers and breeders and recurring land conflicts due to the land pressure remain also the real concern in the region.

In sum, the factors that characterize the assets contribute to the improving of farm production that shows the involvement of high rate of people. The obstacles that affect farm production concern mainly land pressures, low mechanization and bad organization of farm association.

As for the opportunities of this region, these are focused on many projects linked to its geographical position and various agricultural assets. However, these opportunities are threatened mainly by the reduction of workforce and natural plagues effects.

The State tries to find solution through involvement of Regional Direction of Agriculture (DRA) and other structures that supervise agricultural production and create projects for rural areas development.

3.3.3- The agricultural production in the region

The involvement of the government in agricultural production concerns mainly cash crops or fruit crops of the region such as cotton, sugar cane, cashew and mango.

These crops are sent on international market and receive a great attention through framework of farmers and inputs subsidies. The agricultural situation of each product can be detailed through the production and farm surface area registered in 2014 by DRA.

Indeed, **cotton**, called white gold remains the main source of income of cash crops producers in the region. Its expansion is explained by an increasing of surface used between 2014 and 2015 from 7 to 16 % according to DRA of Tchologo (2014).

However, the rain delay has created a shift phase that extended the sowing until the end of July, 2014 precisely in the department of Ouangolodougou.

Fig 2: Cotton in Côte d'Ivoire



Source: COMMODAFICA 2016

For **sugar cane**, the average yields registered in 2014 are 80.65 and 39.62 tonnes per hectare respectively for industrial and rustic plantations that follows an increasing of 2.5 and 5.5 tonnes per hectare compared to 2013. The surfaces of industrial and rustic plantation are respectively 6610 and 831 hectares.

Fig 3: Sugar cane in Côte d'Ivoire



Source: COMMODAFICA, 2015

Concerning the **cashew nut**, it is rapidly growing thanks to the reform of the sector led by the cotton-cashew council and focused on the good farming practice and commercial aspect. That fosters a high rate of maintaining of land plots. ANADER estimated the orchard registered to 13,646.5 hectares for 3,480 farmers with a yield estimated between 300 and 400 kg/ha.

Fig 4: Cashew in Côte d'Ivoire



Source: Agrici, 2016

The case of **mango** considers the creation of modern plantations, the implementation and the modernization of packaging centers have caused the development of mango farms in the region.

The variety **KENT** is the most produced and represents approximately 60 % of the orchard on 4,732 hectares with 1,436 farmers according to ANADER (2014).

Fig 5: Mango KENT



Source: Special fruit

The **table 3** represents a census of surfaces used and the number of farmers who are involved in the practice of different crops.

Table 3: Census of cash crops

Speculations	Ferkessédougou		Ouangolodougou		Kong		Total region		
	surface (ha)	number of farmers	surface (ha)	number of farmers	surface (ha)	number of farmers	surface (ha)	Average yield (t/ha)	number of farmers
Cashew nut	3,745	1,713	2,235	690	7,668	1,077	13,647	0.300	3,480
Mango	2,752	833	1,019	292	1,493	311	5,264	5	1,681
Cotton	23,871	5,962	50,634	11,391	3,842	1,474	78,347	1.100	20,529
Industrial Cane	6,610							80.65	
Villager Cane	831.3	363						39.62	

Source: annual report of DRA 2014

Census of cash crops shows the surface used and the number of farmers involved in the production in three departments of Tchologo.

The sector of sugar cane is handled by the multinational (SUCAF) with the involvement of rural farmers that allows to get an average yield of 120.27 t/ha. The sugar is intended to national consumption. The strategy of production is the collaboration between SUCAF and farmers in rural areas who receive materials of production and follow-up in technical itinerary by the multinational. In return, farmers supply their harvest intended for transformation, that is a way to improve their income.

For mango, its campaign duration is estimated between three or four months and it is produced mainly for international market. This fruit crops are faced with plant diseases, which damage the production. As for white goal (cotton) it notes a great interest for more than 20.000 farmers in the region that provides a high average yield of 1 100 t/ha.

The cashew sector exploits a surface of 13 647 hectares for 3 480 farmers with an average yield of 0.3 t/ha. This crop get the second position after cotton in term of surfaces and the number of farmers.

Table 4: Census of the speculations of the region

Designations	Speculations	Number of farmers	Surface (Ha)	Yield (T/ha)	Product. (T)
Cash Crops	Cotton	20529	78347	1.1	86182
	Cashew	3480	13647	0.3	4094
	Mangoes	1681	5264	5	26320
	Villager Sugar cane	363	645.24	39.62	25564
	Industrial sugar cane	1	6020	80.65	485513
	Groundnut	4512	12980.75	1.2	15577
TOTAL		30566	116903.99		
Food crops	Maize	3931	54153	0.95	51445
	Rice	3213	13493	3	40479
	Millet/sorghum	3247	4981	0.8	3985
	Yam	1912	5666	15	84990
TOTAL		12303	78293		
Vegetable Crops	Eggplant	746	111.6	12	1339
	Pepper	836	153	6	918
	Tomato	324	23	12	276
	Onions	606	29.22	27	789
	Okra	297	102	7.5	765
	Cabbage	308	21	14	294
	cucumber	168	11.37	12	136
TOTAL		3285	451.19		
TOTAL SPECULATION		46154	195648.2		

Source: annual report of DRA 2014

The observation of three main types of agriculture in the region in 2014 highlights an interest for cash crops by the exploitation of 116 904 hectares of surface with the involvement of 30 566 farmers including an industry sugar cane (SUCAF).

The food crop comes in the second position with the exploitation of 78 293 hectares and 12 303 farmers who practice this crops. Regarding the yields, yam and maize are more practiced but intended for households' consumption in the region.

As for vegetable crops, it uses 451 hectares of surface and has 3 285 farmers. All these speculations take into consideration allow to shed light on the great interest for cash crops intended for international market. The government sends agents qualified for the supervision of these crops that improves the knowledge of farmers in good agricultural practices and fosters the increasing of their income.

3.3.4- The professional organization of farmers and agricultural products processing

Regional Direction of Agriculture (RDA) registered 24 cooperatives in 2014 that practice mainly cash crops as cotton, cashew and mango. However, one finds a few cooperatives of food crop.

It is important to stress the existence of a large number of associations or grouping of men, women or mixed involved in the agricultural sector in an informal way.

These organizations that are weakened by the sociopolitical crisis in Côte d'Ivoire present a mismanagement of their agricultural activities by a lack of organizational skill or absence of specialist for strengthening their capacity.

The dysfunctioning of these OPA (Professional organization of agriculture) is observed through the non compliance of the main regulations of a formal cooperative as the holding of an ordinary general meeting and the writing of an annual report of management.

For manufacturing activities, the installation of processing plant of raw cashew nuts by ANASTASIS-CI group has a capacity of cruise of 16-20 tonnes/day of raw walnut that produces 4-5 tonnes/day of fines with 190 husking machines and employ 180 people.

The project rice is waiting the implementation of a processing plant of 25,000 tonnes/year of PADDY to strengthen two others units of 10,000 tonnes/year.

The projects of transformation of mango are subject of study thanks to the Inter-Professional Agricultural Research and Advisory Fund (FIRCA).

The region owns some manufactures as the factory of Ouangolodougou that is hold by the company of cotton (SECO) with a capacity of 32,000 tonnes or 180 tonnes/day and the factory of African Sugar refinery of Côte d'Ivoire (SUCAF-CI) that makes sugar cane into finished product with a capacity of 600,000 tonnes by campaign. There is also the micro-unit of transformation of cashew nut of the Cooperative Klognomon of Ferkessédougou with a capacity of 1.2 tonnes/day of raw walnut.

Besides these structures, it is necessary to note the existence of several micro-units of cereal and cassava processing with a capacity of 500kg/hour at least.

However, these micro-units present a low level of processing of agricultural production. The region holds 127 micro-units of transformation of which two (2) that have a production capacity superior at 1000kg/hour.

The great transformation concerns especially cash crops of the region as sugar cane, cotton, cashew nut. In spite of the great capacity of production of these structures, the transformation remains at a lower level.

The manufacture sector in this region is dominated by two (2) multinational companies (OLAM and SUCAF-CI) that improve the income of people mainly farmers through the supply of raw materials and professional integration of young people as labour force.

The poorly organization of farmer's association and cooperative remains an important concern that is an obstacle in the implementation of agricultural projects and disturb the collaboration of support structure.

3.4- Interviews of cooperatives and supervision structure

This part is focused on the interviews that we led with some presidents or office members of association or cooperatives met during the surveys in the region of department of Ferké.

The interviews led with agricultural cooperatives allowed to know the management of four (4) cooperatives, one national association of the storekeepers (FENACCI) and one private supervision structure (GNOMPININ).

These cooperatives are generally grouping of men, women or mixed. Indeed, Wopin in and Pkatchogo cooperatives are composed respectively of 517 and 85 producers.

These producers are involved in food crops (maize, rice, millet and sorghum), cash crops (cotton, cashew and mango) and vegetable crops (pepper, tomato and eggplant). These cooperatives are followed in technical itinerary by URESCO-CI (Union Régionale des Entreprises Coopératives de la zone des Savanes de Côte d'Ivoire) and FIRCA (Inter-professional Agricultural Research and Advisory Fund).

Indeed, FIRCA supplied a technical support as training to Wopin in, a financial sustain as donation for the purchase of drying machine of mango estimated at 45 million of F CFA and rolling fund of 4.5 million F CFA given as loan. As for, URESCOS-CI, it supplied the fertilizers, weed-killers and fungicide to Pkatchogo cooperative as loans that are paid off after the sale of their farm products.

It is important to note that most of the foods crops (rice and maize) are intended for local consumption and the cash crops for the sale.

These cooperatives complain about a problem of irrigation because the rain delay. These farmers dig water retention to irrigate their crops that dry up very fast.

The cooperative of women among these cooperatives is Kignofol that means the benefactor. This cooperative gathers 324 members, distributed in eight (8) sections. For its production, Kignofol is confronted to a problem of ground availability. This cooperative has only one (1) hectare on which it is produced pepper, eggplant and okra.

To compensate, these eight (8) sections of the cooperative collaborate with producers by supplying of farm inputs and all others necessary elements for a good cultural practice of vegetable crops. The details of the supply of inputs to farmers can be observed in the **table 5**:

Table 5: the supply of inputs for vegetable crops (Kignofol)

INPUTS	QUANTITY (tonnes)	UNIT PRICE (F CFA)	TOTAL AMOUNT (F CFA)
FERTILIZER NPK	35	300,000	10,500,000
UREA	7	340,000	2,380,000

Source: purchase of inputs for seasonal farm activity (interview guide)

For commercialisation, kignofol sends its products on the wholesale market of Adjamé in Abidjan. They take care of the transportation fees that varying from 500,000 to 800,000F CFA for the period of December and during the raining season (August) from 350,000f to 500,000F CFA depending on the type of truck 10 or 40 tonnes.

Their customers are wholesalers and retailers. The periods of decrease and increase in production create a variation of its sale price on the market. The following table shows the unit cost of each farm product of the cooperative Kignofol according to a 50-kilo bag or a crate:

Table 6: units cost of sale of kignofol cooperative

SPECULATIONS	QUANTITY	UNIT COST OF INCREASING PRODUCTION	UNIT COST OF FALLING PRODUCTION
EGGPLANT	50-KILO BAG	6,000	15,000
PEPPER	50-KILO BAG	1,000	20,000
OKRA	50-KILO BAG	2,000	11,000
ONION	50-KILO BAG	5,500	12,000
TOMATO	CRATE	2,000	11,000

Source: sale price of vegetable crops of Kignofol cooperative (interview guide)

Furthermore, CODERIZ Tchologo cooperative makes a difference in its organization compared with others cooperatives.

CODERIZ set up a company called Tchologo RI. SARL that is in charge of the transformation and the sale of the rice. It is composed of a supply, administrative, financial and commercial service.

This structure works with rice production of its 517 members. The producers of the cooperative are organized in grouping of commercial interest and followed by CSP (Charged of follow up of producers) in technical itinerary.

For the commercialisation, the customers of CODERIZ are civil servants and has a group of seller only women trained by CSP who operate on the market.

This cooperative produces three (3) qualities of rice: 75-25 semi-luxury rice, rice of luxury (100% long-grain) and the mass rice consumption (mixed white rice).

The cooperative buys the paddy rice with producers at 150F/kg and sells at various price depending the quality. The sale price is 340F/kg for retailers and 350F/kg for consumers.

However, this cooperative is confronted with the problem fund for the purchase of paddy rice with farmers, the covers of mechanical drying and vehicle of connection to get back rice in sections.

FENAC-FERKE (Fédération Nationale des Commerçants de Côte d'Ivoire)

The interview with the President of storekeepers of Ferké allowed to be oriented on the activities of FENAC-CI.

The National Federation of the Storekeepers of Côte d'Ivoire (FENAC-CI) is a trade union that defends the interest of storekeepers. It is created from the fusion of about 36 organisation of storekeepers and FENAC-FERKE represents its office of the department of Ferké.

The main activities of FENAC-Ferké are the supplying the local market, distribution and management of the market running. As whole, it manages the flows of goods and regulate the trade rules on the market.

Indeed, for a good management, FENAC-Ferké shared the market in 25 sectors managed by an office by sector. As example, there are the section of food crops, vegetable crops, household appliances, diverse goods, etc.

The department of Ferké has three (3) markets such as the main market located in the area of Zenden receives the local and foreign supplies and others small-sized secondary markets supplied by the sellers themselves with products in small quantity. These small markets are located in the residential and Lanviara neighbourhoods.

The instability of the prices due to the living cost is controlled at the level of wholesalers because the regular supervision of the prices over the market is done by Sate agents. But, at the level of retailers, there is an absence control that stimulates a variation of prices.

The supply of the market takes into account three (3) major actors: the buyer, the intermediary and the producers.

The intermediaries buy farms products at farm gate prices with producers in villages of the region and sell to buyers that are generally the wholesalers and the retailers.

Other products come from other departments of Côte d'Ivoire close to Ferké as Dabakala and Bouna.

The distribution lacks of pattern because the organization problem of the sellers. However, it is important to note that more than half of food distribution especially vegetable crops production go towards Abidjan and other part (pepper and maize) is intended to three (3) countries: Liberia, Burkina Faso and Mali. Thus, one observes a distribution towards the economic capital and the border countries of Côte d'Ivoire

GNOMPININ

Gnonpinin Federation is a private frame structure of farmers involved in vegetable crops and food crops.

Gnonpinin is composed of 161 mixed groupings in the region of Tchologo. It means “let us unite and speak with one and the same voice”.

Its mission is to train farmers of the region. It draws up its projects with the needs of farmers and set up through a collaboration of the funders such as UNDP, FAO, CSRS and PROPACOM

The train concerns vegetable crops as onion, tomato, pepper, eggplant, okra, zucchini, cucumber and bean. It is also interested in maize, rice and cotton.

The end of each year, the federation organizes a meeting with the producers to note their needs and concerns. However, it emerges from these meetings the complaints on the impoverishment of the ground and the great presence of bad herbs.

In sum, these cooperatives and structures of frame of the region make together the efforts to increase farm yields through better organisation and farm training. The financing of these cooperatives depend of their relation their structure of supervision that provides farm means to good agricultural practice. Other as FIRCA supplies financial sustain as donation to foster the yield increasing. While, some cooperatives as CODERIZ and KIGNOFOL try to treat with microfinance institution of the region (UNACOOPEC-Ferké) that remains difficult to the extent that these cooperatives have already receive credit and the conditions of repayment were not easy for members. That affects their relation with MFI.

However, the rain delay remains the major concern of the farmers for their production. This problem affects mainly vegetable crops that require better irrigation. The training and the supervision of these farmers, generally illiterate is a great challenge for these training structures that try to drive improvement by encouraging them to be organized in cooperatives.

3.5- UNACOOPEC-FERKE and its financial services

The politico-military crisis in Côte d'Ivoire has strongly affected the financial sector. The closure of banks, microfinance and other financial institutions in the northern part of the country highlights the tension that reigned during the crisis.

As result, a large number of financial institutions relocated from north to south of the country. UNACOOPEC-Ferké represents an example of these institutions.

Founded in 1993 in the region of the TCHOLOGO, UNACOOPEC-Ferké was relocated to Abidjan in 2002 and returned finally in its region in 2013.

This structure covers three departments of the region (Ferkessédougou, Kong and Ouangolodougou) and its sub-prefectures for the supply of its financial services.

UNACOOPEC-Ferké gained official recognition thanks to the great network of UNACOOPEC-CI in which it is a subsidiary.

This institution deals with legal and physical persons among which individual person and association that operate in the business sector as farm (agriculture, breeding, fishing, etc.), agro-industrial (processing), commercial and service sector (administration, services and miscellaneous).

The offers of this structure are the saving products, credit and insurance. These consider the term of project through the case of short, medium and long term.

Therefore, the savings products are savings sight deposit, and savings fixed-term deposit. For credit products, three types are offered to customers as short-term credit, medium-term credit and long-term credit. As well, the micro-insurances concern the health that is little known by customers.

Furthermore, this institution pulls its resources from contribution of stockholders (rights of membership, partnership share, services, etc.), subsidies and loans.

To the board of directors and the supervisory board of this structure, every business sector is represented by a member that defends the interest of all the members.

The analysis of the savings and credit situation allowed to observe the health of this institution over the period 2014-2015.

3.5.1- Synthesis of deposit (2014-2015)

The deposit of UNACOOPEC-Ferké is little considered by customers. After the opening of this institution, among offers, customers are more interested to credit. That is explained through negative impacts of the crisis by the destruction of the assets and the slowdown of activities urge people to give more interest to credit.

The evaluation of the savings in 2014 and 2015 highlights a few opening of account on short term. Indeed, the term deposit of the UNACOOPEC-Ferké in 2014 are eight (8) accounts estimated at 16,100,000 F CFA among which 76% are done by men and 34% by women.

In 2015, the term deposits are estimated at 4,000,000 F CFA distributed between one man and one woman.

The high amount of deposit in 2014 is explained by the return of the institution in the region after the delocalisation that caused the difficulty to secure their money and get access to financing to relaunch their activities.

3.5.2- Credit offers of the institution

Table 7: Short term credit (2014-2015)

Credit	Year	Type of credit	Number of clients	Amount total	Men		Women	
					Number	Amount	Number	Amount
Short Term credit	2014	Consumer	14	1,765,000	12	1,215,000	2	550,000
		Operating	1	150,000	1	150,000	-	-
		investment	2	1,050,000	2	1,050,000	-	-
	2015	Consumer	88	16,120,000	81	14,170,000	7	1,950,000
		Operating	11	8,050,000	7	7,000,000	4	1,050,000
		investment	5	3,300,000	3	2,000,000	2	1,300,000
TOTAL			121	30 435 000	106	25 585 000	15	4 850 000

Source: Credit rapport 2014-2015

The short-term credit of UNACOOPEC-Ferké represents the credits with a duration of up to 12 months.

The **table 7** shows the interest of the customers for "consumer credit" with 82 % of loans granted in 2014 and 85 % in 2015 with respective amounts of 1 765 000F CFA and 16 120 000F CFA.

This financial product observes the rapid rise through credit request of small merchants and association group especially women.

The majority of customers are men (92%) who received a total of 125,585,000 F CFA in two years. The number of women beneficiaries is estimated at 8% that is contrary to the goal of microfinance which is woman empowerment. Besides consumer credit, customers not paid important attention to operating and investment credit.

Concerning, the medium term credits, its period of repayment vary between 12 and 24-months.

Few customers are interested in this type of credit. The observation of the **table 8** shows five (5) customers in 2014 and six (6) in 2015 with respectively 2,170,000 F CFA and 3,800,000 F CFA.

The medium-term credits attract mainly men for their micro-businesses. The inadequate communication strategy of this institution on medium-term credit causes the difficulties to inform better customers who operate in various activities.

Table 8: Distribution of medium-term credit

Credit	Year	Credit product name	Number of clients	Amount total	Man		Woman	
					Number	Amount	Number	Amount
Medium-term credit	2014	Consumer	3	1,120,000	3	1,120,000	-	-
		Operating	-	-	-	-	-	-
		Investment	2	1,050,000	2	1,050,000	-	-
	2015	consumer	1	500,000	-	-	1	500,000
		Operating	-	-	-	-	-	-
		investment	5	3,300,000	3	2,000,000	2	1,300,000

Source: Credit rapport 2014-2015

Furthermore, the portfolio of credit in 2015 and 2014 is shared in healthy credit, late credit and bad credit. We led some comparison between these two years to know the change observed or the case of improvement in credit distribution (**Annex 2**).

Indeed, the amount of credit portfolio decreased after the activities of 2014 from 202,871,789 to 158,341,080 F CFA respectively in 2014 and 2015.

The large part of this portfolio is shared mainly between micro-businesses and women in the region during two years. Therefore, in 2015, women represent 27.67% and micro-business 60%.

The high level of credit portfolio is explained by the return after the crisis. The institution relaunches their activities through the grant of much credit in 2014. However, the high number of unpaid credit led this institution to reduce its credit portfolio the next years. That help them to reduce bad credit from 148 658 420 to 104 715 987 F CFA. Although, this reduction is observed, the credit late is in growing (from 0 to 6,524,625 F CFA) that comes from the high number unpaid of women (345 persons).

In general, the non repayment of micro-business and women, is due to many reasons of financial difficulties among which the bad faith and case of death are tripled the loss credit (from 502 316 to 1 530 915 F CFA). Therefore, this institution attempted to reduce its credit activities in 2015 and give place to rigorous recovery on a surface of 17 042 km² in the different departments and sub-prefectures of the region.

3.5.3- Agriculture and service offers

UNACOOPEC-Ferké hasn't a real offer for agricultural activities. Farmers are considered like all others customers.

Indeed, this institution improve mainly its relation with farm associations and cooperatives to deal easily with the case of non-payment of credit through which they are co-responsible.

However, this financial institution meets some problems regarding the lack of knowledge on farm seasons and the cost of farm needs. One can note also the rain delay and unstable of food price on market. These disadvantages led UNACOOPEC to reduce its financing for farmers.

The challenge faced in the distribution of credit to farmers include the lack of viable and profitable activities in the sector, bad organization of producers (conflict), bad faith of some producers (the misappropriation of the object of credit request) and the variation of the prices (difference between purchase prices and official market prices).

To tackle this obstacle, the institution gets the advices of farm training structure (ANADER) for better understanding of farm activities. That is still insufficient to study the request of farm credit.

This institution needs to set some adequate offers linked to farm season regarding the period, farm needs and trade opportunities.

3.6- Conclusion

The region of Tchologo presents some assets and opportunities for agriculture development. Its assets concern mainly the availability of ground for various crops and the existence of work force to ensure the productivity. As opportunities, two multinational and a few small size of processing businesses make the transformation of farm product and the projects to increase the number of agro-industries create hope regarding unemployment rate and low income level of households.

However, this region deal with some constraints and threats for farm development. The obstacles for farm activities development take into account the low level of mechanization, weakness of farm organization and climate instability.

The interviews led with four agricultural cooperatives has shown a great involvement of people in cash crops and cereal crops. But, these groups, are more composed of illiterate people and lack of agricultural means and training of capacity building.

Furthermore, the microfinance institution that is the subject of the research is a subsidiary of the great network of UNACOOPEC-CI. The relation between this institution and farmers is difficult and observed by the problem of trust.

The improving of this relation remains a major preoccupation because the institution employees have not a better knowledge on agricultural activities and farm credit request is made by illiterate people who find heavily the condition of credit access.

To study the link between “financing of the farm and the farm income”, financial diaries is chosen as methodology.

Indeed, financial diaries method tries to treat the financial behavior of households through interviews and tracks of the actual income and expenditures.

The method considers the field research in the region of Tchologo in north of Côte d'Ivoire where the interviews are led with farmer beneficiaries and non-beneficiaries of credit of UNACOOPEC-Ferké.

To carry out effect evaluation, some approaches are developed by researches. Through the measuring impact, the study is deepened to understand the impact of microcredit on farmer income.

The survey in the region of Tchologo, the sample is selected randomly and results analysis consider statistically significant test to study this relation between microfinance institution and farmers and to evaluate the effect of microcredit on agricultural income.

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ANNEX

ANNEX 1: The distribution of village of the region

Departments	Sub-prefectures	Surface (km ²)	Number of village	Number of municipality
Ferkessédougou	Ferké	2116.53	33	1
	Koumbala	1833.57	17	1
	Togoniéré		17	0
Total Ferkessédougou	3	3220	67	2
Ouangolodougou	Ouangolo	1354.33	12	1
	Kaouara		10	0
	Diawala	1964.49	16	1
	Niéle	1169.21	13	1
	Toumoukoro		13	0
Total Ouangolodougou	5	5380	54	3
Kong	Kong	8883.27	17	1
	Bilimono		16	0
	Sikolo		26	0
	Nafana		13	0
Total Kong	4	8442	72	1
TOTAL REGION	12	17042	262	8

Source: DRA 2014

ANNEX 2: Credit situation of UNACOOOP-Ferké (2014-2015)

	2015		2014	
	AMOUNT	NUMBER	AMOUNT	NUMBER
HEALTHY CREDIT (A)	47.100.468	437	54.213.369	441
MEN	17.565.898	92	16.458.600	92
WOMEN	29.534.570	345	37.754.769	349
LEGAL PERSONS	-	-	-	-
LATE CREDIT (1 TO 90 DAYS) (B)	6.524.625	120	-	-
MEN	-	-	-	-
WOMEN	6.524.625	120	-	-
LEGAL PERSONS	-	-	-	-
BAD DEBT(C)	104.715.987	109	148.658.420	110
MEN	1.966.744	10	5.010.871	26
WOMEN	7.757.977	85	26.193.167	70
LEGAL PERSONS	94.991.266	14	117.454.382	14
TOTAL CREDIT PORTFOLIO (D)= (A)+(B)+(C)	158.341.080	666	202.871.789	551
MEN	19.532.642	102	22.156.317	118
WOMEN	43.817.172	550	63.947.936	419
LEGAL PERSONS	94.991.266	14	116.767.536	14
ENCOURS PRETS AUX ELUS	-	-	188.359	1
CREDIT PRODUCTION	79.955.000	543	23.745.000	103
CREDIT LOSS	1.530.915	-	502.316	-
NUMBER OF STAFF (including trainees)	-	6	-	4
AVERAGE SAVING	44.447	-	51.384	

Source: Report UNACOOPEC-Ferké 2014-2015

INTERVIEW GUIDE FOR FARM COOPERATIVE

This study is focused on the activities of farm cooperative. Indeed, the objective concerns the identification of the main crops practiced and the challenge that meets these farmers.

This interview guide will allow to know how farmers meet their needs in term of access to farm means.

1- Farm cooperative

- 1.1. What are the objectives and missions of the cooperative?
- 1.2. What is the composition of the members and the mode of organization practiced?
- 1.3. What are the activities (production, transformation or trade) and the main crops considered?
- 1.4. How the cooperative satisfies its needs for good farm practice?
- 1.5. Did you benefit from the farm training and followed by a structure?
- 1.6. What is the commercial strategy practiced by the cooperative and who are your commercial partners?
- 1.7. What are the obstacles or constraints that prevent the normal conduct of cooperative activities?
- 1.8. Have you already received the support of the government?

2- Financing of farm activities

- 2.1. What are the possibilities of financing that are offered to the cooperative? (the modes of individual or collective financing, usurers, microfinance institutions and others).
- 2.2. What are your main source of financing and the needs considered (production needs, processing or trade)?
- 2.3. Are you member of a microfinance institution? Si yes, the amount and how many times?
- 2.4. What are the concrete actions led by the cooperative to get easy access to MFI credit?
- 2.5. What obstacle and constraints farmers meet in the request of financing?
- 2.6. According to you, why the institutions are not involved in the financing of the agriculture in rural areas?
- 2.7. What are you point of views to improve credit access to farmers?

CHAPTER 4: RESULTS OF FIELD RESEARCH IN THE REGION OF TCHOLOGO

4.1- Introduction

From May to August 2016, a survey was conducted specifically in the department of Ferkessedougou and its villages, which takes into account credit beneficiaries and non-beneficiaries of UNACOOPEC-Ferké.

For this survey, we have chosen random method as sampling selection regarding some difficulties to have direct interview with credit beneficiaries of UNACOOPEC-Ferké. This situation is explained by the problem of availability of customers for non-payment of credit and the coincidence of survey with rain season.

Indeed, the bad management of credit and the poor organisation of producers affected the confidence with microfinance institution. That situation leads defaulting customers to avoid meeting with agents of the financial institution. Besides that, our survey coincided with rain season that is viewed as an important period of work in the calendar of farmers in the region.

To carry out this survey, we have chosen some sites where we can find some customers of UNACOOPEC-Ferké and the choice of people in each village was a random selection.

To understand the financial behaviour of our respondents we used financial diaries method. That is focused on a identification of the needs of various crops practiced. This allowed to set the variation of farmland for each crop analyzed, farm expenditures, revenue from farm activities and access to various financial sources to meet agriculture needs. Therefore, this survey granted special attention to cash and food crops that are most practiced by a great number of rural people in the region.

Furthermore, the case of commercialization is also led through the interview made with traders of farm products in the market of Zenden (Ferké). That considers mainly retailers and storekeepers.

Thus, we have done eight survey sites of which seven (7) villages, one commercial district and one workers' town (SUCAF-CI). The distance between these survey sites and Ferké town varies between ten (10) and forty-five (45) kilometers.

The survey allowed to interview two hundred and two (202) persons with farm as main profile of which more than one third are credit beneficiaries. The **table 9** gives the details on respondents in each site.

The questionnaire prepared takes into account four (4) parts that permit to indentify respondents, his activity and relation with microfinance institution.

It is in this contest that, the questionnaire considers first, the sociodemographic characteristics that are set to explain the social situation of respondents. That concerns many factors among which education, membership in farm group and microfinance organization allowed to know the social involvement of respondents. Then, the socioeconomic characteristics provide better knowledge on activities of respondents through the detail on the type of crop, expenditures and the financing sources used by respondents to meet farm needs. Finally, credit request and opinion of respondents

are an evaluation of the relation between credit beneficiaries and microfinance institution and the analysis of satisfaction level of respondents.

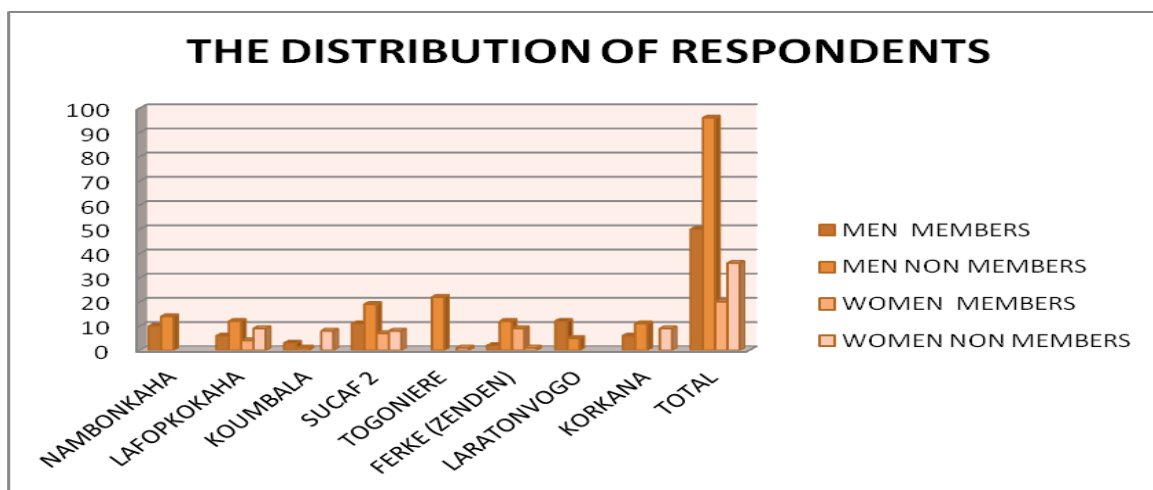
Throughout these points, we attempted to get knowledge on the practice of farm activities in the region through details of the needs of farmers and the implication of microfinance institution in farm financing.

Table 9: Distribution of respondents

SURVEY SITES	MEN		WOMEN		TOTAL
	NUMBER OF UNACOOPEC	NON MEMBER OF UNACOOPEC	NUMBER OF UNACOOPEC	NON MEMBER OF UNACOOPEC	
NAMBONKAHA	10	14	0	0	24
LAFOPKOKAHA	6	12	4	9	31
KOUMBALA	3	1		8	12
SUCAF 2	11	19	6	9	45
TOGONIERE	0	22	0	1	23
FERKE (ZENDEN)	3	12	9	0	24
LARATONVOGO	11	6	0	0	17
KORKANA	6	11	0	9	26
TOTAL	49	98	20	35	202
TOTAL MEN AND WOMEN	147		55		202

Source: Interview guide (questionnaire 1)

Graph 18: the distribution of members and non members of UNACOOPEC-FERKE



Source: Interview guide (questionnaire 1)

4.2- Demographic and social situation of respondents

The sociodemographic characteristics highlight the social situation of people in the survey sites in the region of Tchologo. Indeed, this part gives an insight on the responsibility of the respondents through marital status and family size and his involvement in farm practice and the financial management.

Through some indicators in the **table 11**, one attempted to analysis the social situation of 202 respondents asked during the survey.

In this region, the survey takes into account 147 men (72%) and 55 women (28%). In the sample collected, the average size of the family is estimated at 10 people with an average of 5 men and 5women. The high size of family is observed in the site of Korkana and Largatonvogo with respectively an average of 16 and 13 members by family.

The age of the majority of respondents varies between 31 and 45years that is estimated at 49% of the total of respondents and observed in the three sites of survey (Ferké, SUCAF2 and Togoniéré) whereas 40% of respondents have more than 45 years and they are interviewed in the site of Largatonvogo and Lafokpokaha. That shows an farming population more adult.

However, the small percentage of young people (11%) is explained by the phenomenon of rural exodus through which many young people leave the northern for the southern of the country seeking a better life.

For marital status, the majority of respondents are married among which are 47% of monogamous and 35% of polygamous. The polygamous is practiced by one third of respondents that favours the increasing of the size of households.

The issue of education, the interviewees are predominantly illiterate estimated at 75%. But only one quarter (25%) are literate with primary school level (78%) and secondary school level (22%).

The capacity strengthening of farmers in the region is made by ANADER (Agence Nationale d'Appui au Développement Rural) that is an agricultural semi-private structure. Thus, only 15% of respondents are beneficiaries of the training from this structure that remains insufficient regarding the great need of farm training in better farm practice especially in use of inputs and the method of exploitation of the land.

This farm training of this structure is focused on the follow up of farmland, crop growth and the method of dosage of phytosanitary product. This structure leads also the capacity strengthening of associations and cooperatives of farmers and traders and sensitized them on the protection of the environment of the region.

Furthermore, this training structure gives priority to farm cooperative or traders. In our survey, 81% of respondents are members of farm cooperative. This choice of grouping is has for objective to benefit from training in farm practice, organize harvest season and commercialization of farm

product, seek financing from financial institution of the region and defend the right of farmers Achancho, V. (2012).

Concerning microfinance organisation, about more than a third (34%) of respondents are members of UNACOOPEC-Ferké that is a cooperative of credit and saving and about 13% are involved in informal financial as home network or tontine network. Indeed, this informal finance is led in the context of a close relationship that encourages self-help and reinforces the relation of members.

The members of UNACOOPEC-Ferké among respondents are dominated by men (72%) and women (28%) in small number by. This shows, the great interest of respondents for formal institution through the offers of saving and credit. This interest is related to the need to secure their capital and the possibility to finance their activities by credits opportunities, Centre Walras (2011). However, the small number of women is a great concern to the extent that women must be the priority of microfinance to fight effectively against poverty.

As for informal microfinance, it presents the failures in terms of security of savings because the collector deposit can use the funds collected to satisfy his needs and this sector is faced with the cases of steal and bad management of savings, Lelart (2006).

In sum, the respondents in eight sites of survey are predominantly farmers organised in farm cooperative to deal with harvest season and follow commercialisation for income increasing. The lack of financing leads some respondents to become members of formal microfinance and others respondents prefer remain in informal sector as home network and tontine network.

The cooperative of SUCAF 2 is the most organized through an office established by literate members and a heavily involved of president who improved the relations between cooperative and microfinance institution that allows some members to receive until three times the credit for their farm activities. Therefore, a good organisation of cooperative can be related to the possibility of access to microfinance credit.

Table 10: Characteristics of respondents in region of Tchologo

Variables	Average	Minimum	Maximum
Size of household	9.57	1	40
Number of men	4.58	1	17
Number of women	4.97	1	30
Number observed	202	202	202
Variables	Total number		Percentage
Gender			
Men	147		72
Women	55		28
Age			
18-30 years	23		11
31-45 years	99		49
more than 45 years	80		40
Marital status			
Maried and monogamous	94		46
Maried and polygamous	71		35
Widower, Widow	3		1
Single	34		17
Education			
Literate	51		25
Illiterate	151		75
Education level			
Primary school	40		78
Secondary school	11		22
Farm training			
No training	172		85
Training	30		15
Organised group			
Members	169		84
Non-member	33		16
Microfinance organization			
Cooperatives of credit and saving	69		34
Home network or friendship network of tontine	20		10
Tontine network	6		3
Other	1		0.5

Source: interview guide (questionnaire 1)

4.3- Economic situation of respondents

The economic situation of the people in the region of Tchologo depends mainly on farm activities especially cash and food crops. Besides, the small number of companies which are mainly involved in the processing of farm products remain limited to deal with the great number unemployed people.

The State tries to support agriculture through some structures involved in agricultural research focused on the improvement and diversification of the quality of farm products and the commercialization of the products of various crops.

These structures ensure also the training of farmers in particular those grouping in association or cooperative on good farm practice and follow them during the evolution of their activities.

This intervention of the State remains insufficient regarding the high demand for on training and farm needs led farmers to search financial means to meet the difficulties of their activities.

The survey conducted in eight sites in the region allowed to understand the difficulties of respondents through an analysis of the activities, needs and their relation with the microfinance institution UNACOOPEC-FERKE.

The analysis of the factors linked to socioeconomic characteristics takes into account four parts of the survey.

In a first part, the results of the survey show various farm activities practiced by respondents including the commercialization of agricultural products. That considers mainly the farmland exploited by respondents and the estimation of their expenditures and farm incomes.

An analysis details is also led on their needs to get insight of the allocation of their financial resource in agriculture and set their regular challenge in this activities.

Furthermore, one attempts to identify among respondents those are interested in the credit offers of UNACOOPEC-Ferké. In other words, the potential customers of the institution. Therefore, they were asked on the collateral available in the case of a future request of credit.

The different interviews led in eight (8) sites of survey confirm the dependence of the region on farm activities.

The survey allowed to identify five (5) crops and trade of farm products practiced by respondents. Indeed, among 202 persons, 76% of respondents are involved in cereal crop. That is explained by the fact that this crop is intended to household nutrition and for sale. Thus, the cereal crops most grown are maize, rice and groundnut.

Besides cereal crop, cash crop is practiced by 75 respondents (37%) of the sample. This activity receives the support of the council of cotton and cashed that has for mission to optimize the production, improved the quality of cotton and cashew and ensure income of producers. This help these producers to get high income and work on large surface area.

However, farm activities as vegetable crop, fruit and tuber and roots crops note a few involvement of the respondents.

The production of vegetable crop requires a good irrigation system to meet rain delay in the region. The vegetable farmers of the sample estimated at 14% prefer to wait the rain period from June to September to begin their crop. For that, they dig the some well of water retention. These crops are especially pepper, tomato, okra, eggplant and onion.

Fig 6: Hydro-agricultural development in progress in the village of Togoniéré



Source: survey in the region of Tchologo (2016)

Concerning fruit crop, only 3% of respondents produce mango. This crop has one commercial campaign each year, generally from April to June. These products are mainly intended to international market.

In addition to farm production, the survey takes also into account the commercialization of farm crop. That allowed to observe 15 sellers (7%) in the sample. These respondents are divided in two groups. The retailers that practice trade activity in informal environment and sell mainly yam, eggplant, cassava and beans. Whereas wholesalers have the stores for their farm product and they

comply the price fixed by the State and receive occasionally the visit of supervisors for control. They sell shea nuts and maize in the commercial district of Zenden.

The interviews have shown that the respondents give consideration to food crops because intended for their own families nutrition and for commercialization on the market regarding the high demand of households especially in maize and rice that are the basic food of the region. The choice of cash crops by respondents is linked to the support of the council of cotton and cashew nuts that provides farm inputs, training and ensure the commercialization on international market.

It is also important to note that several farmers do a mix crops on the same farm area to diversified their production. Our respondents produce in small quantity.

The surface area of the farmland exploited by respondents depends of the type of crops and the availability of farm materials.

The analysis of the answers of respondents allowed to set the total surface area at 868.45 hectares.

Indeed, the cereal crop use more surface area (467.5 hectares) compared to others crops. That is linked to the great interest for cereal crops throughout the involvement of 153 respondents. The sites of Largatonvogo and Nambonkaha grant more farmland for this crops with an respective average of 7 and 5 hectares (**Annex 4**).

In Ferké and Nambonkaha, respondents give important consideration also to cash crops activities to the extent that the farmland exploited is estimated at 340 hectares with an respective average 7 and 6 hectare. They practice especially cotton and cashew.

Unlike the cereal and cash crops, others crops use a small surface area. That is linked to rain delay, the difficulties to meet farm needs and conservation problem after harvest.

The agricultural areas exploited by respondents are made mainly for cereal crops by a great number of respondents among which 100% of women practice the same crops in women farm cooperatives or family farmland with their husbands.

Table 11: farmland exploited by respondents

	AREA				
	CEREAL CROPS	VEGETABLE CROPS	FRUITS CROPS	TUBER AND ROOTS CROPS	CASH CROPS
TOTAL AREA	467.5	17	19	24.5	340
AVERAGE LANDFARM SIZE (HECTARES)	3	0.629	3.167	1.289	4.53
NUMBER OBSERVED (FARMERS)	153	28	7	19	75

Source: interview guide (questionnaire 2.3)

In generally, if farmers exploited more surface, their yields increase but if they exploited less surface, they get less yields. However, the lack of mechanization of agricultural sector in the region of Tchologo leads respondents to work with traditional materials that takes a lot of time to exploit great surface area. For that, they require the help of a group of 5 to 10 people for the growing and harvesting, Bonnefond (1970).

The bad farm practice are observed during the survey. That concerns the bad growing method and misusing of phytosanitary products cause the impoverishment of soils. To that, the use of the seeds infected by plant diseases and non-practice of farm rotary method aggravate this situation that affects yields.

Through data collected, we attempted to analysis the expenditures and incomes of respondents.

The Survey showed that the expenditures of cereal producers is one of the highest in the sites survey. Indeed, the total expenditures of this crops is estimated at 28 519 500F CFA in one year with an average expenditures of 186 401 F CFA. Whereas, its total income is slightly higher than the total expenditure, set at 28 805 000 F CFA. The average net income is estimated at 293 681 F CFA. This small average revenue is explained by the fact that one part of cereal production is intended for the consumption of the families. Thus, 61% of respondents (93 people) produce cereal products for nutrition. That is viewed as the only solution for poor people to satisfy the alimentary needs of the high size of their family.

As for cash crop, it presents an high income of 72 045 000F CFA that is dominated by the production of the respondents of Nambonkaha and Largatonvogo. The difference between average income and average expenditure of this crop allows to set the average net income at 611 866 F CFA. This revenue is linked to the involvement of the council of cotton and cashew nuts and the grow on larger surface area.

Besides cash crops and cereal crops, trade activity notes the highest average net income of 8 658 666 F CFA. That is linked to the high revenue of wholesalers that supply to national and international companies while retailers sell only on local market that are more often women.

The commercialization of farm product is an important aspect to ensure the distribution of the production and increase the income of producers. Despite the small number of traders (15 persons) interviewed the income is highest than farm production activities. For food crops, the lack of training and farm needs in particular agricultural inputs affect the productivity of this farm sector and lead farmers to produce mainly for family nutrition.

The crops as vegetable, fruit, tuber and roots are less practiced in the region that is viewed by small number of respondents and a little average net income on one years (**Table 13**).

Table 12: synthesis of income and expenditure of farm activities

AGRICULTURAL ACTIVITIES	CEREAL COPS	VEGETABLE CROPS	FRUITS CROPS	TUBER AND ROOTS CROPS	CASH CROPS	TRADE
EXPENDITURE						
N	153	28	7	19	75	15
TOTAL	28519500	5310000	400000	1415000	26155000	86887500
AVERAGE	186401.96	189642.86	57142.86	74473.68	348733.33	5792500.00
INCOME						
N	60	16	7	10	75	15
CONSUMPTION AND SALE	93	12	0	9	0	0
TOTAL	28805000	4604000	1300000	3040000	72045000	129880000
AVERAGE	480083.3	287750.0	216666.7	304000.0	960600.0	8658666.7
AVERAGE NET INCOME	293681.34	98107.14	159523.8	229526.32	611866.67	2866166.7

Source: interview guide (questionnaire 2)

The research on farm practice and the difficulties of farmers to deal with their needs allowed to identify some important agricultural factors.

Indeed, the analysis of farm needs in the **question 2.3.9** of the respondents showed that the main farm needs are equipments, raw material, inputs, labor force and transport.

The observation of different survey sites, we found that in Nambonkaha and Largatonvogo people need mainly farm equipments to carry out their farm activities and they are estimated at 58.33% among respondents.

For raw material, Nambonkaha (45.83%) and Korkana (43.47%) show the most important need by respondents. However, the need of inputs for a better growth of their plants and get a good quality of product is required by all survey sites in the region.

To get a good yield, farmers organize their crops activities on larger farmland with the involvement of the workforce who is remunerated. This practice is observed in all sites of survey.

The financial need to satisfy the transport of products is related to the process to supply farm products to national manufacture structures and international companies. That concerns especially cash crops and food crops products as cashew nuts and maize.

The difficulties to satisfy the needs of farm pushed respondents to turn to various ways (**question 2.5**). Thus, they use their trade income, wage for the companies' employees, pension or personal income.

The many respondents (92%) use their farm income to meet their needs while 7% others prefer the trade income. Among respondents those have less financial means some persons require inputs on credit or use their wage, pension or personal income for their farm activities.

Moreover, the survey attempted also to know the kind of collateral that producers can provide in the case of credit request with financial institution.

One observe that 68.5% of respondents are owners or get proprietary right on a parcel, but, only 48.2% agree to use as collateral. Those who refuse to use it as collateral said that parcels are family heritage that can create a conflict and others respondents are not the real owners, they use the parcel for the nutrition of their family. Besides that, some respondents desired to provide livestock as cow, sheep, goat, etc.

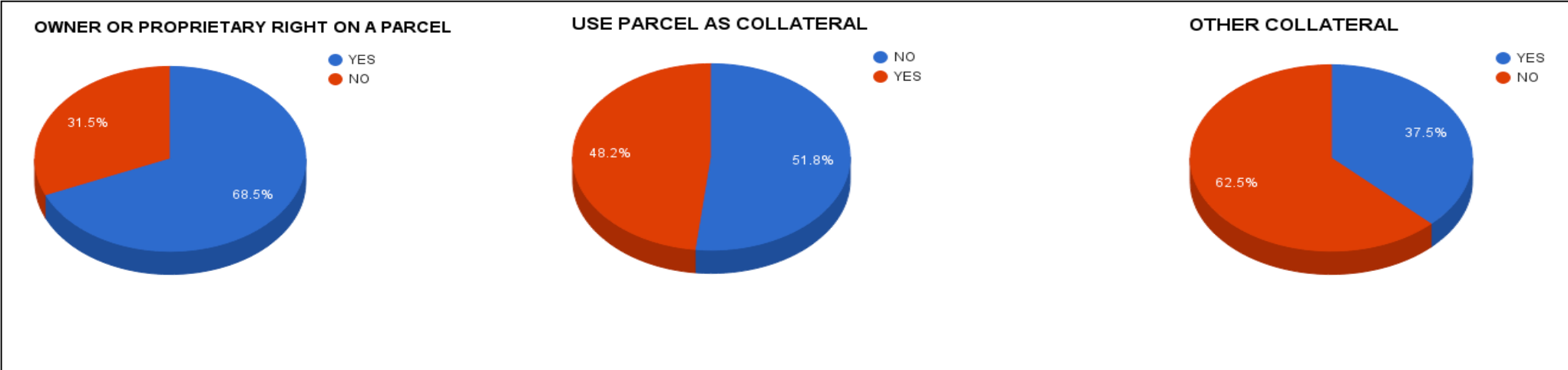
The socioeconomic situation in the sites of survey allowed to understand the great dependence of respondents to agricultural activities. The variation of net average incomes according to the types of crops and trade activity highlights the level of expenditures in farm needs and farmland exploited.

Cereal and cash crops are the most practiced by respondents for family nutrition and the supplying to manufacture structures by wholesalers.

However, the low level of production is related to the poor growing method through non mechanized, difficult access to inputs and problem to ensure transport for the sale on local market.

These difficulties urged respondents to make the request of credit in UNCOOPEC-FERKE to resolve some farm problems and increase their yields.

Graph 19: Some assets of respondents



Source: interview guide (questionnaire 2.6 and 2.7).

4.4- Financing of farm activities

The increasing of agricultural yield requires the satisfaction of important needs of farmers. To deal with this situation, the respondents turn to informal financing source or credit of microfinance institution of the region.

The survey showed that the needs of respondents are various, but the most useful are inputs, labor force and raw materials and equipments. To meet this challenge, 34% of respondents have received the credit of UNACOOPEC-Ferké and only 13% are members of informal institution as home networks or tontine network.

Indeed, 69 people on 202 have credit beneficiaries of UNACOOPEC-Ferké, among which 72% of men and 28% of women.

The large number of men who have received credit are observed in the sites of Sucaf 2, Largatonvogo and Nambonkaha. That is explained by a better organization of farmers into cooperatives in which they set an office that draw the guidelines of the activities and negotiate the credit with microfinance institution. While, women are mainly observed in the commercial district of Zenden and involved in the sale of agricultural products as retailers on local market.

However, respondents have been asked on the reasons of no request or no receipt of credit. The respondents without credit are estimated at 66% and composed of those have not ever made the request and those who have failed.

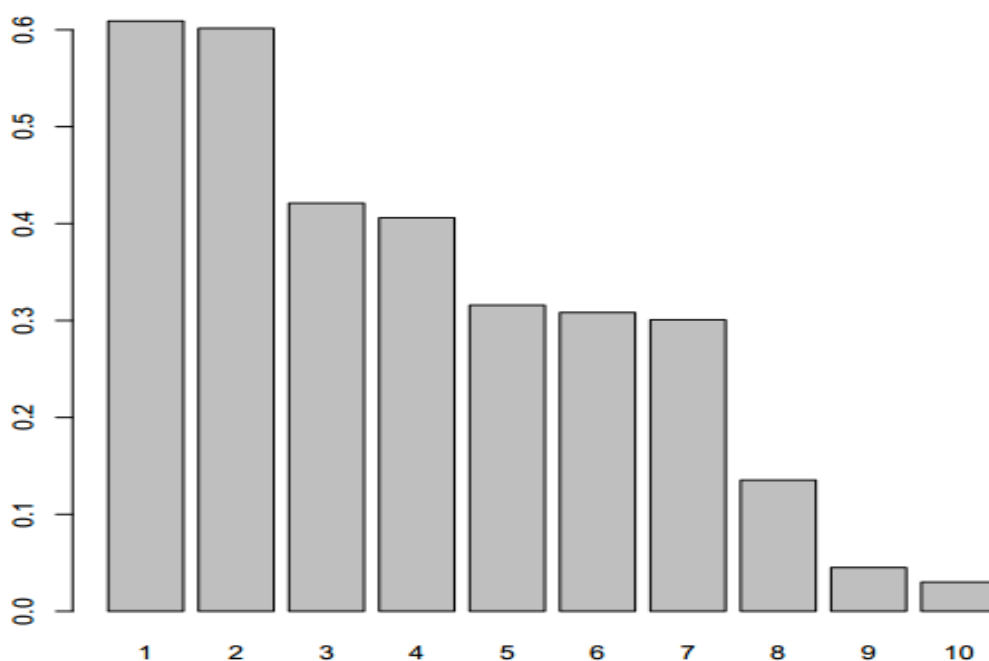
The result allowed to note various points of view through the representation of bar plot (**Graph 20**).

It is in this sense that, 61% of respondents complain of the lack of information on credit offer. Rural people are rarely taken into consideration in the campaign of information on the offers of microfinance institution and the services especially savings and credit are set without an adaption to the demand of farmers regarding cropping seasons. Others respondents are fear of failure (60%) that is linked to the reason of the lack of information on credit offer.

Besides that, the bureaucracy procedure remains heavily in the region of Tchologo, through which customers provide the important documents of personal identification and the localization of his home that takes more time to be delivered. Some respondents complain also of short delay of repayment, high amount of collateral and high interest rate.

Therefore, the conditions of credit access are viewed difficult throughout its period of repayment which is not linked to farm season that depends mainly to an erratic rain season and unstable price of food products.

Graph20: The reason of no request of credit



Source: interview guide (questionnaire 3.2)

(1): Lack of information on credit offer, **(2):** Fear of failure, **(3):** Lack of collateral, **(4):** Too much harassments before obtaining of the credit, **(5):** Short delay of repayment, **(6):** High interest rate, **(7):** Don't want into debt, **(8):** others reasons, **(9):** Previous bad experiences, **(10):** Refuse or lack of authorization of husband.

The credit offers of microfinance institution consider especially an individual credit applicant and collective request. Indeed, 71% of respondents have received collective credits and 29% individual credit. Among 59 members of farm cooperatives, 23% (14 people) have requested individual credit.

The high percentage for collective credit allows to understand that UNACOOPEC-Ferké gives a great consideration to grouping. As example, the good organization of farm cooperatives of Nambonkaha and SUCAF 2 improves their relation with UNACOOPEC-Ferké. That helps 57% of respondents to receive one time the credit and 18% respondents, two to three times.

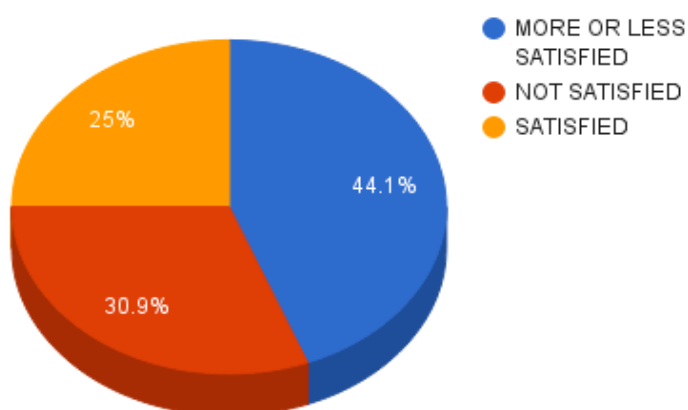
The credits received from UNACOOPEC-Ferké by survey sites vary from 30,000 to 500,000 F CFA with total average of 238,550.72 F CFA. That shows that people who are served are more or less poor without great means for their farms activities. For that, microfinance institution employees consider the size of farmland and an estimation of the revenue of farm activities.

The repayment term of the loans depends to the types of offer to customers. Many farmers prefer the short and medium term of which the repayment terms vary from 1 to 12 months (short term) or 1 to 24 months (medium term). The reimbursement terms of our respondents are set until 8 or 24 months, while taking into account of several factors that affect the repayment.

In this context, 97.1% of respondents respect their commitment of repayment that highlights a good strategy of recovery by the institution. The case of non-repayment estimated at 2.9% of respondents notes the reasons as diseases, organization of parents' funeral and reducing of income from the failing of farm production.

Others cases of no reimbursement is linked to bad organization of farm cooperatives through the problems leadership, mismanagement of financial resources and absence of communication between members.

Graph 21: Satisfaction degree



Source: interview guide (questionnaire 3.5-i)

The analysis of collateral of respondents allowed to find 69% of credit beneficiaries are cooperatives members who have provided collective guarantees and 31% have given personal savings as collateral.

The credit received have been used to meet various farm needs that concerns mainly inputs, equipment, workforce and transport. For transport, many respondents prefer to leave at the expense of intermediaries.

The distribution of the credit of UNACOOPEC-Ferké helped to analysis the level of satisfaction of our respondents.

Among respondents who received credit, 45% (31 persons) are more or less satisfied, 25% (17 persons) are satisfied and 30% (21 persons) are not satisfied.

The respondents satisfied have easy access to farm needs that allows to lead a good agricultural season to increase and repaid the debt on time.

For the case of medium satisfaction, some respondents complained of a high interest rate, a long delay before credit reception and strong pressure for reimbursement.

Those who are not satisfied share the same opinion that those are more or less satisfied, but they insist on the possibility of negotiation to extend the repayment schedule in the case of difficulties.

The following testimony is an example of a not satisfied respondent:

“I am widow and member of KIGNOFOL association. I received collective credit of UNACOOPEC-Ferké. During the repayment, I was confronted with the disease of my husband in which I used all my business capital. Today, I am a widow and I manage with a small activity of food-selling to meet my daily needs. For the repayment of the remainder of the credit, I undergo a strong pressure of the agents of UNACOOPEC-Ferké. Through, my small activity, it is difficult for me to save or deduct repaid part for this financial institution”.

Alima Coulibaly, 57 years old

One can understand a hard situation of this woman to the extent that her priority is to meet daily challenge. That shows a poverty situation to which is added the debt of microfinance institution. This example confirm the argument of pessimists authors who thinks that microfinance tend to deteriorate the situation of poor by high level of interest rate and management fees that affects their capacity to increase resources, Montgomery (1996).

The analysis of the relation between UNACOOPEC-Ferké and farmers allowed also to study the opinion of respondents on the services of the microfinance institution. Indeed, the critics on the system of credit offers in particular is led by respondents who have a duration of fidelity varying from one to five years with this institution.

The main opinions are good appreciation of repayment schedule, easy credit access for women and good reception of clients. However, other respondents thought that the amount of credit is sufficient regarding the needs of farm activities. That cannot affect positively the yields if farmers have not access to important farm means for good practice.

Many respondents are not satisfied with the training of this institution and they complain also of bureaucracy case to set document required for credit access and long deadline to study credit request.

The survey attempted to know the contribution of the State through its subsidies. The testimonies of the interviewees show that only 1.5% (3persons) of respondents received the aids of the State. That are traditional farm equipment as hoe, machete and wheelbarrow. Besides that, farmers in the region benefit from the subsidies on farm inputs that favour the reducing of the price of these farm products.

The research in the site of Tchologo has shown the difficult relation between farmers and UNACCOPEC-Ferké. That is explained by the absence of proximity communication of the institution for rural people and thus, causes the problem of the information on various opportunities that farmers can get.

The lack of financing to satisfy farm needs prevents poor farmers to increase their yields and work on a great surface. That stresses the importance of the involvement of UNACOOPEC-Ferké in farm financing in the region.

4.5- Impact study of microfinance on farmers' income

This part considers the comparison between credit beneficiaries and non beneficiaries through an analysis of some variables chosen in the questionnaire.

The analysis can be divided in two parts. The first is focused on the study of the characteristics of the respondents that takes into account the probability to receive the credit. The second part considers the significant t-test to know the effect of credit on farm income.

The analysis of some variables allowed to observed various results.

4.5.1- The analysis of the probability to receive credit

This analysis give priority on the selection of some variables that are compared to identify the trust of microfinance institution on specific characteristics of respondents.

The variables under analysis are gender, education, farm group membership and credit guarantee.

The respondents are estimated at 202 who practice agricultural activities among which 34% are credit beneficiaries and 66% non beneficiaries.

The analysis of the probability according to gender considers 20 women and 59 men who benefited from the credit. We found that the probability of men to receive credit is lower (33.33%) than that of women that (65.84%), which is related to the goal of microfinance to empower women through the granting of microcredit to help them for improving their livelihood, Aliya Khawari (2004).

In the same way, through the comparison, we try to know the level of trust of microfinance institution in literate people.

The comparison between illiterate and literate people permit to set the total number of literate at 51 persons among which 20 respondents received credit. The probability for literate to receive credit is higher (39.21%) than illiterate people (32.45%). This shows that microfinance institution paid more attention to educate people because its confidence is focused on the communication with these persons and their ability to management their activities for an easy repayment, Koloman, (2008).

The respondents who are members of a farm organization are 169 people (80%) composed of 59 respondents with credit and 110 respondents without credit. The probability of farm organization members to receive credit is higher (36.64%) than non members of farm organization (25%). Generally, microfinance institution requires the formation of a group of borrowers and the supply of collective collateral before the reception of credit. The aim of this strategy is to held all members responsible for credit repayment regarding of the delay, Sanyal, P. (2009).

Table 13: the analysis of the characteristics of beneficiaries of credit

CHARACTERISTICS		PROBABILITY TO RECEIVE CREDIT
SEX	WOMEN	36.36
	MEN	33.33
EDUCATION	YES	39.22
	NO	32.45
MEMBER OF FARM ORGANISATION	YES	36.42
	NO	25

Source: survey in the region of Tchologo (2016)

We led a comparison between collective and compared individual credit beneficiaries. This comparison considers the collateral provided to get access to credit. The result shows that the average value of collective guarantee (251,875 F CFA) is slightly higher than that of personal guarantee (231,500 F CFA). This result shed light on the high amount of collateral required by microfinance institution, which is contrary to the objective of microfinance. Indeed, the objective of the creation of solidarity group is viewed as the solution to compensate the lack of material guarantee by the co-responsibility between members. That reduces cost of monitoring and the risk of repayment for microfinance institution. In return, group members benefit from the credit applicant cost reduction and a low interest rate to help them to improve their well being, Ghatak (1999).

The analysis through the probability to receive credit has shown a rational responses of microfinance institution in the case of confidence in literate people and member of an organised group to deal effectively with repayment risk. However, it is important to denounce the high collateral imposed on solidarity group and the exclusion of illiterate people in rural areas. That pushes microfinance institution to lose sight of the original objective of poverty reduction especially in rural areas.

4.5.2- Effect analysis of microcredit on farm income

The distribution of credit takes into account the agricultural activities that is observed in the **table 15**. The impact study is focused on the important crops practiced in the region. Therefore, we have shown cereal and cash crops.

We attempted to explain the reasons of this choice and verify the possible effect of microcredit on the increasing of farm income.

Table 14: farm crops and microcredit distribution

AGRICULTURAL ACTIVITIES	NUMBER OF RESPONDENTS	PERCENTAGE
CEREAL	46	66.67
TUBER AND ROOTS	7	10.14
CASH	32	46.38
VEGETABLE	4	5.80
FRUIT	1	1.45
TRADE	11	15.94

Source: survey in the region of Tchologo (2016)

This table shows the distribution of microcredit according to six (6) agricultural activities selected in the region of Tchologo.

The producers of cereal and cash crops represent the dominate people who have received credit with respectively 66.67% and 46.38%. But, the lowest distribution of credit is seen in the case of vegetable and fruit crops.

The impact study of microfinance on the income of farm activities allows to consider cereal crop and cash crop.

The choice of these crops can be justified by the important number people operating in these activities.

For cereal crop, we consider the revenue of respondents. But, there are some respondents without revenue because their production is intended to family consumption. Therefore, 153 people involved in cereal crops, about 93 (60.78%) people use for consumption of which their income is not evaluated.

The average income of all people operating in cereal crop as main activities is 480,100 F CFA.

When, we compare average income of beneficiaries and non beneficiaries of credit, it is observed that the income of beneficiaries of credit is higher (570,000 F CFA) than non beneficiaries (424,189 F CFA).

Through t-test, the comparison between these average incomes allows to show a difference. The value of t-test found is 1.112 and the p-value is 0.271. That explain that the difference is not significant, (table 16).

Table 15: Comparison of cereal crop average incomes

CEREAL CROP	MEAN INCOME	TOTAL RESPONDENTS
TOTAL	480100	60
CREDIT YES	570000	23
CREDIT NO	424187,2	37
T-test	1.112	
P-value	0.2271	

Source: survey in the region of Tchologo- Côte d'Ivoire (2016)

For cash crop, the average income is estimated at 960 600 F CFA. the comparison between average income of credit beneficiaries (1,173,871 F CFA) and non beneficiaries (810,340 F CFA) allows to set a great difference between the two average income. Thus, one observes that microcredit beneficiaries is 30.96% higher than that of non beneficiaries.

Regarding the p-value that is 0.0532, the difference is marginally significant. However, the fixing of theoretical p-value ($\alpha=10\%$), the difference between average income credit beneficiaries and non beneficiaries who practice of cash crop is significant and thus, shows a positive impact of microfinance on income of our respondents.

Table 16: Comparison of cash crop average incomes

CASH CROP	MEAN INCOME	TOTAL RESPONDENTS
TOTAL	960600	75
CREDIT YES	1173871	31
CREDIT NO	810340	44
t-test	1.965	
p-value	0.0532	

Source: survey in the region of Tchologo- Côte d'Ivoire (2016)

The comparison with the average annual per capita income in Côte d'Ivoire in 2012 according to JDN is estimated at 698 330 F CFA (1220 dollar), the average income of cash crops (1 675 dollar) is superior. The same comparison with poverty line in Côte d'Ivoire estimated at 269 075 F CFA (470 dollar), the average income of cash crops is more than three times higher, ENV (2015).

That must catch the attention of the State to give more priority to farmers of this crops to the extent it is an opportunity to increase effectively the income of poor farmers and improving their living conditions. However, the lack of farm means causes the difficulties for good practice of this activities on great surface areas.

One can note that the State is aware of the importance of this crops because cash crops on the whole contribute mainly to the increasing of the share of agricultural sector to GDP in Côte d'Ivoire. That is observed through the creation of the council of cotton and cashew nuts and the council of coffee and cocoa to support farmers in training, supply of farm factors and the commercialization in national and international level.

4.6- Conclusion

The research led in the region of Tchologo is focused on the analysis of socio-economic situation of rural people and their relation with UNACOOPEC-Ferké.

The observation on the social aspects of the survey allows to note the high size families and a population more or less ageing.

Farm activities are mainly practiced by illiterate people who represents the third-quarters of the respondents most of whom are also members of farm organization with the aim of having easy access to State aids and financing opportunities.

These people operate especially in the production of food crops and cash crops in which they ensure nutrition for their families and increase their meagre income.

However, the poor agricultural method through non mechanized method and the rain delays cause a great obstacle for farm yield growth.

These difficulties create the lack of confidence of UNACOOPEC-Ferké that requires the setting up of solidarity groups and high amount of collective guarantee. Thus, the conditions of access to credit of rural people become a major concern.

Furthermore, the analysis of some variables allows to compare beneficiaries and non beneficiaries of credit to catch some priorities of UNACOOPEC-Ferké in the credit process for applicants. It is viewed that the probability for women to obtain credit is superior than that of men. Likewise, literate people and members of farm organisation have easy access to credit than illiterate people and non members of farm organisation. That shows the importance that gives MFI to communication with its customers and an appropriate management of the activities to facilitate repayment.

Besides that, the significant t-test with the dominate crops (cereal and cash crops) in the region help to find significant result only for cash crops.

The great part of cereal production is intended to consumption of farmers' families and it is viewed as an important obstacle in the confidence between farmers and MFI to the extent that the increasing of production must affect the income of producers and facilitate the repayment of credit granted.

The high level of average income of cash crops is superior to national average income in Côte d'Ivoire. But, this crops needs more involvement of the State in the northern region of the country to be practiced by many people through the accessing to adequate farm needs to improve the performance of this crops. However, food crops need also the intervention of the State to be sufficient and available for households' consumption.

4.7- General conclusion

This research allowed to shed light on difficult relation between microfinance institutions and farmers. To better understand, the research has led to the comprehension of the poverty in developing countries on how poor deal with daily challenge and unforeseen situation. That provides information on their vulnerability and the management of their low assets.

In this sense, microfinance institutions throughout the legal framework attempt to support people with low income in order to contribute to poverty reduction in the world.

The case of the region of Tchologo located in north of Côte d'Ivoire helps to get view on the intervention of microfinance institutions and verify its capacity to reduce effectively poverty in rural areas through the improving of farm income.

The survey led in this region allowed to ask 202 people of which 28% of women and 72% of men. That is explain by fact that, several men operate on farm activities than women who are mainly in charge of housework.

The analysis of the data collected shows that the variation of incomes and expenditures depends of the size of farmland exploited by farmers and the access farm means. The case of cereal crops stresses that when the surface is large the income and expenditure increase. This means that, more activities, more yields and more income, while taking into account a good farm practice.

The analysis indicates also the difficulty of access to the credit of microfinance institutions that is due to the weakness of the farm organization. Farm groups are composed mainly of illiterate people and show the problem to follow the guideline set to achieve the objective of the group.

This situation leads MFI to give less priority to rural people in favor of urban people (traders and micro-companies). This the lack of confidence in the illiteracy level of farmers can be explained through the survey led in region of Tchologo where the probability for illiterate to receive credit is low (32.45%) than that of literate (39.22%).

Beside that, the lack of modern materials and the rural exodus of young people affect negatively the increasing of the production and farm income. This region has also an unstable rainfall during the crop seasons that cause the difficult irrigation of their plants.

To meet their farm needs, farmers use various financial sources as wage for companies' employees, farm and trade income. Others have also access to inputs on credit.

However, the agricultural average net incomes observed in the eight (8) sites of survey reveals the efforts of the farmers that deserves the attention UNACOOPEC-Ferké. thus, the average net income of the cereal crop is estimated at 293 681 F CFA on 467.5 hectares per year and cash crop presents an average net income of 611 867 F CFA practiced on 340 hectares per year. One must grant a great consideration to this business sector in rural areas through capacity building of farmers and the provision of direct or indirect financing to farmers. This requires the involvement of the State and its representatives in the region.

The intervention of the government will be useful in the relation between UNACOOPEC-Ferké and farmers in this region to the extent that the farm projects of the State or NGO have been a failure because an insufficient of training and follow up of farmers during crops season.

Indeed, government needs to lead its actions in the field of collaboration with farm organization to understand the real concerns of farmers and evaluate the possibility to make indirect financing through subsidizing inputs. The support for capacity strengthening of rural people focused on growing methods and the management of the rainwater can be viewed as a way to adopt a good farm practice with the aim to improve productivity.

In the region of Tchologo, UNACOOPEC-Ferké represents the most important microfinance institution Its contribution remains crucial for poverty reduction that is estimated at 65% in the region. But, this institutions have not appropriate service for rural areas and lack of proximity strategy to inform rural people on the opportunities that they can get through the service saving and credit.

The adaption of microcredit offers to rural farm must take into account the improving of credit access condition and repayment periods. This require a link credit duration and crop seasons and the reduction of various financial costs to foster rural people become customers. However, the small knowledge on rural activities of financial institution employees not favor the communication with farmers. These employees especially credit officer needs to make the difference between the profile of customers according to activities practiced in the region.

Furthermore, the development of the agribusiness in Côte d'Ivoire has allowed this country to be one of the leaders in the field of processing of the agricultural raw material in west Africa.

The development of industrial and village plantation presents an opportunity for farmers to improve their income through the supplying of raw materials to industries. This model of collaboration is a success in the country with the case of rubber, palm and cotton.

Regarding, the lack of confidence of microfinance institutions on the capacity of rural people to repay the credit, a direct collaboration between farmers and agro-industries that ensures the trade concern of farmers through the provision of farm products can deserve special attention of financial institutions. Thus, a deeper reflection on this issue can shed light on the improve of farm income in this region.

4.8- References

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ANNEX

Annex 1: table of respondents' profile

SURVEY SITES	NAMBONKAHA	LAFOPKOKAHA	KOUMBALA	SUCAF 2	TOGONIERE	FERKE	LARGATONVOGO	KORKANA
NUMBER OF RESPONDENTS	24	31	12	45	23	24	17	26
NUMBER OF MEN	24	18	4	30	22	14	17	17
NUMBER OF WOMEN	0	13	8	15	1	10	0	9
DOMINANTE AGE	31-45 YEARS	MORE THAN 45 YEARS	31-45 YEARS	31-45 YEARS	31-45 YEARS	31-45 YEARS	MORE THAN 45 YEARS	18-30 YEARS AND 31-45 YEARS
DOMINANT MARITAL STATUS								
AVERAGE FAMILY SIZE	11.07	7.09	7.92	8.04	7.43	8.58	12.88	16.1
FARM TRAINING OF FARMERS (%)	8.33	16.13	41.66	4.44	26.08	12.5	0	26.92
NUMBER OF UNACOOPEC MEMBER	10	10	3	18	0	11	12	6
PURCENTAGE OF UNACOOPEC MEMBER (%)	41.66	32.25	25	40	0	45.83	70.58	23.76
INFORMAL MICROFINANCE (%)	16.66% (1)	8.33% (1) and 29.16% (2)	0	11.11% (1)	13.04% (1)	12.5% (1) and 4.16% (3)	0	0

(1) Home network or friendship network of tontine

(2) Tontine

(3) other

Table of farm crop practiced by respondent

	SURVEY SITES	NAMBONKAHA	LAFOPKOKAHA	KOUMBALA	SUCAF 2	TOGONIERE	FERKE	LARGATONVOGO	KORKANA
CEREAL CROPS (NUMBER OF FARMERS)	MAIZE	19	21	7	23	9	5	14	13
	RICE	3	6	2	19	3	4	1	4
	GROUNDNUT	2	3	0	2	1	0	0	4
AVERAGE LANDHOLDING SIZE (HECTARES)		4.52	2.68	1.88	2.21	1.89	3.44	6.64	1.82
AVERAGE EXPENDITURES		291,739.13	160,931.034	71,666.66	173,242.85	85,307.69	265,555.55	395,000	71,315.78
AVERAGE INCOME		653,260.87	105,736	78,333.33	164,138.1	294,692.31	267,777.78	455,000	213,684.22
VEGETABLE CROPS (NUMBER OF FARMERS)	PEPPER	0	0	0	4		1	0	1
	OKRA	0	0	0	1	0	1	0	0
	EGGPLANT	0	0	0	5	4	0	0	1
	ONION	0	0	5	1	0	0	0	5
	TOMATO	0	0	0	0	2	0	0	1
AVERAGE LANDHOLDING SIZE (HECTARES)		0	0	0.6	0.83	0.35	1	0	0.45
AVERAGE EXPENDITURES		0	0	30,000	172,222.22	61,000	200,000	0	41,666.66
AVERAGE INCOME		0	0	20,000	367,777.78	139,000	50,000	0	103,333.34

	SURVEY SITES	NAMBONKAHA	LAFOPKOKAHA	KOUMBALA	SUCAF 2	TOGONIERE	FERKE	LARGATONVOGO	KORKANA
FRUIT CROPS(NUMBER OF FARMERS)	MANGO	0	0	1	0	0	1	0	4
AVERAGE LANDHOLDING SIZE (HECTARES)		0	0	6	0	0	5	0	2
AVERAGE EXPENDITURES		0	0	50,000	0	0	100,000	0	37,500
AVERAGE INCOME		0	0	250,000	0	0	500,000	0	62,500
TUBER AND ROOTS CROPS(NUMBER OF FARMERS)	POTATO	0	1	1	0	0	0	0	0
	CASSAVA	0	0	0	8	2	0	0	0
	YAM	0	0	3	0	2	0	0	2
AVERAGE EXPENDITURES		0	30,000	25,000	133,125	40,000	0	0	20,000
AVERAGE INCOME		0	90,000	71,666.66	378,875	CONSUMPTION	0	0	50,000
AVERAGE LANDHOLDING SIZE (HECTARES)		0	1	0.75	8	0.75	0	0	0.75
CASH CROPS(NUMBER OF FARMERS)	COTTON	22	18	1	0	2	2	15	6
	CASHEW	1	5	1	0	0	3	0	1
AVERAGE EXPENDITURES		421,086.95	285,952.38	469,000	0	265,000	370,000	469,000	130,000
AVERAGE INCOME		848,043.48	525,476.19	637,000.66	0	40,000	730,000	637,666.66	215,000
AVERAGE LANDHOLDING SIZE (HECTARES)		5	3.69	4.25	0	2	7	5.66	2.14
LIVESTOCK									

INTERVIEW GUIDE FOR PRODUCERS

This study is focused on the financing of the farmers within the framework of the struggle against poverty. These main objectives are the following :

- Evaluation of the supply and demand of the agricultural microcredit by putting the emphasis on the agricultural needs and the services proposed by the institutions of microfinance (IMFs)
- To study the tracks of strengthening of the agricultural sectors through an improvement of the financial capacity of the farmers

This interview guide established for producers will show us the current agricultural situation of the department of Ferkessédougou and the contribution of the UNACCOPEC-CI.

1	Date of investigation	
2	Name of interviewer	

1- SOCIODEMOGRAPHIC CHARACTERISTIC

N	Variables	Code
1.1	Age : (insert age) 1= 18-30 years , 2= 31-45 years, 3= more than 45 years	/___/
1.2	sex (insert code, male=1 or female=2)	/___/
1.3	Marital status: (insert code), 1=Married and monogamous, 2=Married and polygamous, 3=divorced, 4= widower, widow, 5= single	/___/
1.4	literate: (insert code), 1= yes, 2= no	/___/
1.5	Educational level: (insert code: Quran School=1, Primary school=2, secondary school, or more=3)	/___/
1.6	<p style="text-align: center;">What is the number of people in your household?</p> <p style="text-align: right;">Total general</p> <p style="text-align: right;">Total Men</p> <p style="text-align: right;">Total Women</p>	<p style="text-align: right;">/___/</p> <p style="text-align: right;">/___/</p> <p style="text-align: right;">/___/</p>
1.7	<p>have you received an agricultural training ? (insert code, 1= yes, 2=no),</p> <p>if yes (1= non-formal training, level of diploma CAP, 2= level BAC, and 4= more)</p>	<p style="text-align: right;">/___/</p> <p style="text-align: right;">/___/</p>
1.8	<p>are you members of an organized producers group? (1=yes or 2= No, if no go to 1.10)</p> <p>If yes , specify the nature of group</p> <p style="text-align: right;">Production cooperatives</p> <p style="text-align: right;">Cooperatives services</p> <p style="text-align: right;">Other</p>	<p style="text-align: right;">/___/</p> <p style="text-align: right;">/___/</p> <p style="text-align: right;">/___/</p>
1.9	<p>are you member of an financing institution (insert code, 1= yes, 2=no)</p> <p>If yes,</p> <p style="text-align: right;">1= mutual</p> <p style="text-align: right;">2= cooperatives of credit and saving,</p> <p style="text-align: right;">3= home network or friendship network of tontine,</p> <p style="text-align: right;">4= tontine network</p> <p style="text-align: right;">5= Others</p>	<p style="text-align: right;">/___/</p> <p style="text-align: right;">/___/</p> <p style="text-align: right;">/___/</p> <p style="text-align: right;">/___/</p> <p style="text-align: right;">/___/</p>

2- SOCIOECONOMIC CHARACTERISTIC

2.1	Can you quote some rural activities in order of importance? (1=gardening, 2=floriculture, 3= Tree planting, 4= livestock, 5=fishing, 6=fish farming, 7= rural product market, 8= other	/_____/
	Activity 1 (indicate activity)	/_____/
	Activity 2 (indicate activity)	/_____/
	Activity 3(indicate activity)	/_____/
2.2	How many years do you practice the oldest?? (indicate the number of years)	/_____/

2.3	Actual importance of activity :	
2.3.1	Cereal crop : Principal specie (s) _____ Area (ha) ----- Total annual income (F cfa) ----- Total annual expenditure (F cfa) -----	
2.3.2	Vegetable crop : Principal specie (s) _____ Area (ha) ----- Total annual income (F cfa) ----- Total annual expenditure (F cfa) -----	
2.3.3	Fruit crop : Principal specie (s) _____ Area (ha) ----- Total annual income (F cfa) ----- Total annual expenditure (F cfa) -----	
2.3.4	Tuber and root crop : Principal specie (s) _____ Area (ha) ----- Total annual income (F cfa) ----- Total annual expenditure (F cfa) -----	
2.3.5	Cash crop : Principal specie (s) _____ Area (ha) ----- Total annual income (F cfa) ----- Total annual expenditure (F cfa) -----	
2.3.6	Fishing : Quantity of fish sold/year (tonnes) Total annual income(F cfa) ----- Total annual expenditure (F cfa) ----- Montant total annuel des dépenses d'exploitation (fcfa) -----	
2.3.7	Livestock : Principal specie : _____ Livestock number ----- Total annual income (F cfa) ----- Total annual expenditure (F cfa) -----	
2.3.8	Commercialization: the products sold : _____ Quantity of product by year (tonnes) ----- Total annual income (F cfa) ----- Montant total annuel des dépenses d'exploitation (fcfa) -----	
2.3.9	What are the financial needs of your main agriculture activity ?	

	(Remind the activity): _____ 1.Amount of investment (installation cost) _____ 2. Annual land rent _____ 3. Annual amount access to water _____ 4. Purchase of equipment _____ 5. Purchase of raw material _____ 6. Purchase of inputs of production _____ 7. The use of workforce _____ 8. Training paid by oneself _____ 9. Constitution of rolling fund _____ 10. Transport _____ 13. Others _____	----- ----- ----- ----- ----- ----- ----- ----- ----- -----
2.5	How do you satisfy your needs?	
2.6	Do you own or have you the proprietary right on a parcel? (code Yes=1 or no=0) Can you use it as collateral ? (code Yes=1 or no=0)	/____/
2.7	Are you owner of other good material as collateral of loan? (code Yes=1 or no=0) If yes, specify _____	/____/

3- REQUEST OF CREDIT

3.1	Have you ever done the request of credit for your agricultural activities ? (code Yes=1 or no=0) (1=yes, 0= non) (if no go to 3.2; if yes go to 3.3)	/____/
3.2	If no request, of credit, what have been the reasons ? 1. Fear of failure (code Yes=1 or No=0) 2. Lack of the information on the possibilities of credit (code Yes=1 or No=0) 3. Short delay of repayment (code Yes=1 or No=0) 4. Lack collateral (code Yes=1 or No=0) 5. High interest rate (code Yes=1 or No=0) 6. Too much harassments before obtaining of the credit (code Yes=1 or No=0) 7. Previous bad experiences (code Yes=1 or No=0) 8. Don't want into debt (code Yes=1 or No=0) 9. Refusal or lack of authorization of husband (code Yes=1 or No=0) 10. Others reasons _____	/____/ /____/ /____/ /____/ /____/ /____/ /____/ /____/ /____/ /____/
3.3	1. If Yes, how much have you received the credit ? 2. If non received credit (despite the expression of the request), what have been the reasons ? (1) Project deemed non profitable (code Yes =1 or No = 0) (2) Lack of collateral (code Yes =1 or No = 0) (3) No deposit of saving (code Yes =1 or No = 0) (4) Previous failure payment (code Yes =1 or No = 0) (5) Difficulty to mobilize the personal saving (code Yes =1 or No = 0) (6) Others reasons (code Yes =1 or No = 0)	/____/ /____/ /____/ /____/ /____/ /____/

Pursue 3.4 - 3.7 only for the producers who have at least once reached the credit. If not, go directly to the section 4

3.4	<p>In the case of access to credit, what was the type?</p> <p style="padding-left: 40px;">Individual credit (code Yes =1 or No = 0) /_____/</p> <p style="padding-left: 80px;">If yes, number of time /_____/</p> <p style="padding-left: 40px;">Collective credit (code Yes =1 or no = 0) /_____/</p> <p style="padding-left: 80px;">If yes, number of time /_____/</p>	
3.5	<p>The information on the last credit (code Yes=1 or No=0):</p> <p style="padding-left: 40px;">a) Type of credit (code : 1= Individual credit or 2=Collective credit) /_____/</p> <p style="padding-left: 80px;">b) Annual interest rate (%) (code Yes=1, no=0) /_____/</p> <p style="padding-left: 80px;">c) Amount requested (code Yes=1, no=0) /_____/</p> <p style="padding-left: 80px;">d) Amount received (code Yes=1, no=0) /_____/</p> <p style="padding-left: 40px;">e) Repayment schedules (month) (code Yes=1, no=0) /_____/</p> <p style="padding-left: 80px;">f) Repayment term (month)(code Yes=1, no=0)) /_____/</p> <p style="padding-left: 80px;">g) Credit still unpaid ? (code Yes=1, no=0) /_____/</p> <p style="padding-left: 40px;">h) What guarantee have you provide ? (0= No guarantee, 1= Collective guarantee), 2= Prior savings (or Personal saving), 3= Material guarantee) /_____/</p> <p style="padding-left: 40px;">i) What was your degree of satisfaction with regard to this experience of credit (register code, 0 = not satisfied, 1 = more or less satisfied, 2 = satisfied, 3 = very satisfied) /_____/</p>	
3.6	<p>what activities the credit has financed? (code Yes=1 or No=0):</p> <p style="padding-left: 40px;">1.Amount of investment (installation cost) /_____/</p> <p style="padding-left: 80px;">2. Annual land rent /_____/</p> <p style="padding-left: 40px;">3.Annual amount access to water /_____/</p> <p style="padding-left: 80px;">4. Purchase of equipment /_____/</p> <p style="padding-left: 80px;">5. Purchase of raw material /_____/</p> <p style="padding-left: 40px;">6. Purchase of inputs of production /_____/</p> <p style="padding-left: 80px;">7. The use of workforce /_____/</p> <p style="padding-left: 80px;">8. Training paid by oneself /_____/</p> <p style="padding-left: 40px;">9. Constitution of rolling fund /_____/</p> <p style="padding-left: 80px;">10. Transport /_____/</p> <p style="padding-left: 80px;">11. other /_____/</p> <p>_____</p>	
3.7	<p>1. Did you once benefit from gifts or from subsidies to finance your agricultural activities? (code yes=1 or no=0) /_____/</p> <p>2. If yes, what is the date of the last time ? (write the year) /_____/</p> <p>3. What is the amount? (Amount) /_____/</p>	

4- OPINION ON AGRICULTURAL CREDIT

5.1	<p>What are your observations on the offer system of credit for farmer ? (Answer 1=Yes or 0=No)</p> <p>1. sufficient amount of credit /____/</p> <p>2. good repayment schedule /____/</p> <p>3. reasonable interest rate /____/</p> <p>4. clear or transparent selection of credit beneficiaries /____/</p> <p>5. reasonable deadline of file study /____/</p> <p>7. unenforceable collateral /____/</p> <p>8. good information on the credit procedure /____/</p> <p>9. a few format for get credit /____/</p> <p>10. negotiation in the case of credit default (1=yes, 0=No) /____/</p> <p>11. easy credit access for women /____/</p> <p>12. offer of training /____/</p> <p>13. good reception of producer /____/</p> <p>15. others _____</p>	
5.2	<p>suggestions for improving credit access to farmer</p> <hr/> <hr/> <hr/>	