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Microcredit as a Tool for Empowering Women and Eradicating Poverty and Extreme Hunger in Comitán region (Chiapas)

- Diploma thesis -

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Acknowledgements

I would like to express my sincere gratitude to my supervisor Ing. Zuzana Křístková, Ph.D. for her valuable advice and professional assistance and guidance throughout my work. I am also very grateful to Maria Antonieta Flores who gave the author permission to mention her case within this thesis. Last but not least, I would like to thank to my family and partner as a whole for their faith and support during my Master studies abroad.

Declaration of integrity

Herein I declare that I am the sole author of this Master thesis. Furthermore, I declare that all of the information sources used in this thesis are acknowledged and listed in the references at the end of the thesis.

In Prague March 24, 2014 _____

Mikroúvěr jako nástroj pro posílení postavení žen a vymýcení chudoby a hladu v regionu Comitan (Chiapas)

Shrnutí

Mikroúvěrové hnutí, které začalo v Bangladéši se rychle rozšířilo po celém světě. V mnoha případech bylo prokázáno překonání chudoby, stejně jako zlepšení postavení žen v domácnostech a společnosti na základě zmocnění. Kromě toho pozitivní výsledky těchto programů zahrnují zlepšení v domácím vzdělávání a zajišťování potravin pro děti. Nicméně bylo zjištěno, že sektoru mikrofinancování se nepodařilo dosáhnout nejchudších oblastí, jako např. Mexika. Kromě toho, nezkušenost v tomto odvětví výústila ve vyšší náklady na řízení, vyšší úroky a v nízkou udržitelnost.

Ke studiu výsledků těchto programů analyzuje tento dokument využití mikroúvěrů v oblasti Comitán de Domínguez ve státě Chiapas v Mexiku, a to pomocí průzkumů, které jsou dále statisticky analyzovány. Výsledky ukazují, že především ženy se zavazují k těmto programům nezávisle na jejich věku, rodinném stavu nebo počtu dětí. Kromě toho domácí vzdělání nemá vliv na efektivní/neefektivní rozdělování výdajů. Přesto vlastnictví úvěrů pohání lidi k tomu, aby znovu investovat své příjmy do malých podniků, spotřeby potravin, dluhů a služeb na chod domácnosti, stejně jako do zdraví.

Mikroúvěroví klienti v Comitánu nemají úspory i přes kreditní vlastnictví. Použití neformálního zdroje financí stále funguje současně s mikroúvěry, zejména k doplnění příjmu uživatelů. Navíc většina lidí, kteří používají mikroúvěry, vnímají zlepšení své situace, a to zejména ti, kteří mají účast na více než 5 let.

Klíčková slova

Zmírnění, Chiapas, Comitán, posílení, Mexiko, mikroúvěry, mikrofinancování instituce, chudoba, ženy, hlad, SPSS, kontingenční tabulky, chí-kvadrát, analýza dotazník.

Microcredit as a Tool for Empowering Women and Eradicating Poverty and Extreme Hunger in Comitán region (Chiapas)

Abstract

The microcredit movement which started in Bangladesh, has rapidly spread over the world. In many cases, it has proven to overcome poverty as well as improve the position of women in their households and society by empowerment. In addition, the positive outcomes of such programmes include improvement on household education and food security for children. However, it has been found that the microfinance sector has failed to reach the poorest areas of countries like Mexico. Moreover, the inexperience of this sector results in higher operative costs, higher interests and low sustainability.

To study the outcomes of such programmes, this paper analyses the use of microcredits in the region of Comitán de Domínguez in the state of Chiapas, Mexico with the use of surveys that are further statistically analysed.

The results show that mainly women undertake these programmes independently on their age, marital status or number of children. Moreover, the household education does not influence on efficient/inefficient distribution of expenditures. Although the credit ownership drives people to reinvest their incomes in the small business, food consumption, debts and household services payments as well as health.

Microcredit clients in Comitán do not have savings despite of the credit ownership. The use of informal source of finance is still active simultaneously with microcredits, mainly to complement their income. In addition, most of the people using microcredits perceived an improvement on their situation, principally those participating for more than 5 years.

Key words

Alleviation, Chiapas, Comitán, Empowerment, Mexico, Microcredits, Microfinance institutions, Poverty, Women, Hunger, SPSS, Contingency tables, Chi-square, Questionnaire analysis

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1 Introduction

The United Mexican States, with nearly 121 million inhabitants becomes the second largest economy in Latin America according to the World Bank (2012) with a Gross Development Product (GDP) growth of 3.9% in the year 2012 (World Bank, 2013). However, the level of poverty is still significant. By 2010 the poverty in Mexico represented approximately 46%. As a consequence of the poverty, more than 20% of children between 0-2 years old are affected with stunting (height/age) and underweight (weight/age), principally in southern areas of Mexico such as Veracruz, Guerrero, Oaxaca and Chiapas (CONEVAL, 2012a. pp.28).

In order to impulse development around the world and help the weakest countries, the United Nations (UN) established The Millennium Development Goals (MDG) in the year 2000 (United Nations, 2011). The United Nations realized that the development and growth of every country would only be achieved by following certain goals such as food security, health, education among others.

The empowerment of women is also one of the goals for development. The entering of women in the labour market has slowly increased by 3.7% in the last 14 years (United Nations, 2011) and it is still improving. However, these goals are not easy to be reached without the help of such national and international institutions to the governments in several areas.

Evidently, developing countries find more obstacles in fulfilling these goals; not mentioning the less developed called "Third World Countries" that struggle by far more. In these cases more alternatives have to be created to help the inhabitants to improve their working methods, knowledge, abilities and economic practices to impulse the development of the countries.

The creation of microcredits by Muhammad Yunus with the help of the Grameen Bank in Bangladesh is a very interesting example of alternatives that improve people's management of resources and foster them as entrepreneurs. This proposal had successful results that boosted the economy in Bangladesh and changed the situation of this country. This system was also brought to Mexico. However, the credits to the private sector collapsed in Mexico as a consequence of the "Tequila Crisis". This situation left no other choice but the use of saving banks. However,

later on, commercial companies started to give smaller credits directly to the people, bringing an upswing to loans and microcredits in Mexico that enabled the people to satisfy their needs as well as improve their small business.

The first section of this thesis describes the introduction of microcredits by Muhammad Yunus in Bangladesh in order to have a background of the purpose of the service. It also gives a broad view of the microcredit sector in Mexico, including the biggest Microfinance institutions (MFIs), regulation of MFIs, their sustainability as well as the impact of the sector. Followed by a more specific description of the work of the institutions in Comitán de Domínguez (Chiapas). In addition, the topics of poverty and empowerment in Mexico and Comitán are also described at the end of the section, as they help determining and comparing the impact of microcredits in users' living comfort.

The second part presents the analysis of the results obtained by surveys conducted in Comitán de Domínguez. The surveys made to microcredits users in such area together with interviews to the personnel of MFIs and economic figures of the Comitán, eases the analysis of microcredit impact which is the purpose of this thesis.

The last part presented as discussion includes the findings of other authors that have conducted further researches on the topic, compared with the author's results. The discussion principally focuses on poverty, empowerment and measurement of the effects of microcredits.

2 Objective of Thesis and Methodology

The main objective of this thesis is to study the impact of microcredits in Comitán de Dominguez (Chiapas), based on the assumption that these microcredits work as a tool to reach these specific Millennium Development Goals: eradicating extreme poverty and empowering women in this selected area.

In order to analyse the effects of microcredits, the following steps were followed:

First, the study of microcredits system since its very beginnings with the Grameen Bank as well as its implementation in Mexico was carried out. To make a more narrow research the area was bounded into Chiapas State in the specific region of Comitán de Domínguez, to which the author may refer simply as Comitán.

Second, personal visits to some of the microfinance institutions working in Comitan were performed, as well as interviews with Mr. De Hoyos Parra, managing director of Pro Desarrollo and Mr. Hes, from MyELEN, were also part of the field research to complement the information in the first and second steps. The aim of the interviews to the institutions was to find out how they operate, how accessible their services are and how much information they are willing to provide.

Third, the questionnaire survey was carried out by personally interviewing a sample group that may or may not use microcredits in the selected.

Statistical methods such as descriptive statistics, contingency tables and Chi-square test were applied using SPSS software in order to test assumptions regarding the relations that influences people to use or not use microcredits .

The analysis used the following criteria:

- A degree of freedom $\alpha = 0.05$
- H_0 = no statistically significant relation on selected categorical variables.
- Categories of age, gender, expenditures, length of participation, source, amount and type of credit were considered. In addition, to show negative responses the author adopted values of zero and for positive responses the value of 1.

In this way it was possible to determine if P value > α or P value < α. Therefore, when:

- P value > α = H_0 is not rejected → relationship between variables is not statistically significant
- P value < α = H_0 is rejected → relationship between variables is statistically significant

2.1 Description of the Questionnaire

The survey was conducted during the month of July, 2013 in the centre of Comitán de Domínguez, the State of Chiapas, in Mexico. It included open and closed questions as well as multiple choice questions. Having in mind that the population may be illiterate to some extent, the questions were designed as simple as possible to understand and answer. Moreover, the author personally conducted the interviews to facilitate the communication and understanding of questions and answers in order to receive more reliable information.

It is important to mention that the population polled was a random selection located in the main market and the main square of Comitán, regardless the sex or occupation. Yet selected to be over 18 years old since it is the legal age in Mexico.

The size of the selected sample was 100 people that were polled. However, 15 questionnaires had to be dismissed from the analysis due to incomplete and non/reliable information.

The survey was design to find out relevant information in order to reject or not the assumptions of the present thesis:

1. *Assumption*: Mainly women undertake microcredits instead of men.
2. *Assumption:* Age, marital status and number of children influence the use of microcredits.
3. *Assumption*: Household education influence people to undertake microcredit programmes.
4. *Assumption*: The amount of expenditures before and during the credit plays as an indicator to the level of poverty: A microcredit client is expected to increase its income which is reflected in the increase of expenditure.

5. *Assumption*: Household education is believed to explain to a certain point the decisions taken by people: how to distribute their incomes. Households with lower education are expected to manage their economic resources in inconvenient ways that threaten improvements.
6. *Assumption*: Credit ownership changes the distribution of later expenditures.
7. *Assumption:* Microcredit clients do not have the need to undertake tandas or pledge their belongings in pawnshops and vice versa.
8. *Assumption:* Microcredit ownership impacts the perception on microcredit programmes results in a positive manner.
9. *Assumption*: The length of participation in microcredit programmes influences a good perception on results. The longer the participation, the better results.
10. *Assumption*: The length of participation in microcredit programmes influences the amount of the credit. The longer time of participation brings eligibility to higher credits.
11. *Assumption:* The source of credit also has an effect on the perception of results. There is a better perception when the source of the credit is a MFI.

3 Literature Review

3.1 Muhammad Yunus and the microcredits

After the independence of Bangladesh in 1971, the country suffered serious crisis. Shocked by the situation experienced by the Professor Muhammad Yunus himself; as a research project, he decided to give small loans from his own money to a group of people in some villages in Bangladesh. After this, he realised that as a consequence of the insecurity in borrowers jobs, people needed to borrow small amounts of money to pay in shorter time with lower interest rates.

For these reasons Muhammad Yunus founded a bank for the poor in 1983. Grameen is a Bengali word for Village and this new bank was named after the villages: Grameen Bank. It was not until this time that the microcredit services introduced by him started changing the lives of the people with the lowest income in Bangladesh and soon in the entire world.

By October 2011, Grameen Bank had about 8.3 million borrowers (mostly women). Lending around 800 million dollars per year, these microcredits have reached 97% of the villages in Bangladesh. Without any limitation of activities, these lending can be agricultural, rural, cooperatives, credit unions or credits for consumers, and many more (Grameen Bank, 2011).

3.1.1 Definition of microcredit

First of all it is important to define "microcredit programmes":

"Microcredit programmes are small loans to very poor people for self-employment projects that generate income, allowing then to care for themselves and their families".

(GDRC, 2013).

However, other definitions also mention:

- That these small loans can also be used for different purposes such as health, education, farming, fishery and other primary activities, for micro-enterprise development.
- That are repaid in short time.

- That they often have little or no collateral and are given in most cases through a group lending, not individually; nevertheless individual credits are also possible.
- That both rural and urban areas are included

3.1.2 Classification of microcredits

Professor Yunus also proposes a classification of microcredit: traditional informal credit, activity based (with conventional or specialised banks), rural credit with specialised banks, cooperative microcredit, consumer microcredit, Grameen Credit and NGO microcredits among others (Yunus, 2003a).

Notice that Grameen credits are classified with their own category due to their special features. Such features are the promotion of credits as human right with the purpose to overpass poverty by creating self-employment. Since they are based on trust, there is neither collateral nor legal procedures. The interest rate remains below but close to the market interest rate in order to maintain sustainability. All programs provided by Grameen Bank include skills development and training in different areas such as health, nutrition and family planning, in order to improve the productive capacities of the poor (Khandker, 1998).

3.1.3 Characteristics of microcredits

The functioning of microcredits comprises several aspects in order to be effective, sustainable and helpful. The core components of loans: size, term, repayment terms, lending methodology, collateral or security, pricing (World Bank, 2013). A brief summary of each component and its options are described in Table 1.

Regarding the size of the credits the amount can vary from USD 5 to USD100 depending on the needs of the client, the credit history and ability to repay the loans. Microcredit clients often get the possibility to receive higher loans over the time if they have a clean credit history.

The terms for which these loans are given also depend on the final use. For instance, if the credit is for agricultural use and breeding cattle, then the term is longer since the processes of planting and harvesting take at least one year. Unlike credits for basic health or other purposes that presume short term.

Table 1: Components of loans

COMPONENT	OPTIONS
Size	Micro (from US $5 – US $100)
Term of loan	Depending of the purpose (3 months – 1 year)
Repayment terms	Weekly, biweekly, monthly, 3 months, yearly
Lending methodology	Group lending (Grameen, solidarity groups, village banks) , individual, Islamic lending,
Collateral	Group guarantees, personal guarantees, compulsory savings, reputation, frequent client visits
Pricing	Fees, nominal interest rate, penalties for late payments, other service charges

Source: own construction with information of the World Bank (2013).

With no doubt, repayment terms of one credit affect the accessibility of loans to other clients: present repayments serve to finance other credits. When these credits are repaid they will also serve to give new credits and so on. Such terms are generally matched to the clients' cash flows and the ability to pay. They can be weakly, biweekly, monthly, every 3 months, or yearly as the Table 1 mentions above. Repayment terms also include a grace period between the receipt of the credit and the first repayment.

The risk of such credits is also affected by the repayment terms. More frequent payments serve to reduce credit risk but in turn can increase the transaction costs (Ledgerwood et al., 2013).

These are reasons for the MFIs to introduce innovative tools to reduce the risk of microcredits. In many cases savings and insurance funds play important role on financial intermediation. Moreover, Hes[1] (2013) points out that another option for reducing such risk is the payment of interest that support the sustainability of the MFI and enables financing more people.

[1] Interview in January, 2013 with Tomaš Hes, founder of MyELE.com project, Czech Republic.

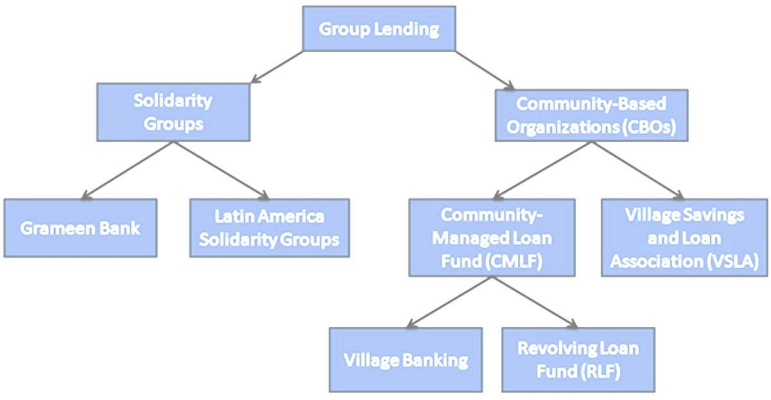
As for the methodology, it can be group lending, individual lending, Islamic lending, and many more. The effectiveness of the first methodology relies on the reduction of transaction costs and microcredit risk when successful borrowers can pay the credit on behalf of less successful borrowers on the same group that fail to repay. Group lending also enables access to microcredits for people that would not be able to receive one on their own.

A good example of this methodology are Grameen credits where borrowers organised in groups of 5 people. Six groups out of all are federated into a centre of 30 people that serve as a secondary guarantee towards the MFI. Whereas other solidarity groups are gathered on groups of 3-10 people that guarantee one another.

Village banking and solidarity groups may be easily mixed (see Figure 1). The difference between one another is that unlike solidarity groups, the village banks are formed by 50 people that lend money to its members and where one member's savings can be loaned to another member. Its approach is the independence of the borrower group by developing internal financing management by creating an "own mini-bank" like institution that is owned by the poor (Brandt et al., 2011). Such methodology was implemented by FINCA and has been spread worldwide.

Individual lending is more complicated and less used in MFIs. It requires a further analysis of the borrower's eligibility that includes gender, reputation, income if applicable, cash flow and collaterals. When the borrower has no credit scoring or history, information like gas bills, electricity or water, rental payments or remittances are used to analyse the eligibility.

Figure 1: Group lending schemes



Source: Kuts (2011).

On the other hand, the so called Islamic lending do not charge any fixed rate or returns on transactions since the Islamic law forbids any gain from lending money (Ledgerwood et al.,2013).

However the methodology is not only about the individual or group approach. It also comprises the targeting of groups regarding activity, social or economic status, the microcredit delivery system selected by each MFI and many other methodologies.

For instance, the method the Grameen Bank follows starts with a survey of the social background, a visit to the villages to know the borrowers, then establishes the priorities for action to the borrowers and gives a credit according the ability to pay of the client. The borrowers lean on solidarity groups.

Another approach of the Grameen Bank is the investment on human resources by training and developing people's skills to be productive and sustainable (Grameen Bank, 2011).

The collateral in this method represents an asset engaged or pledged by the borrower to the lenders (the MFI) to secure the repayment of a loan and can be repossessed by the lender in case of failure of the borrower to repay the credit (GDRC, 2013).

The most common collateral substitute is peer pressure. As microcredits are usually lent to a group of borrowers, every member has the pressure from the rest to comply with the obligations. It turns to be a group guarantee where members guarantee one another's loan. When the MFI stops receiving the repayments, the borrowers are unable to access a new credit. For this reason, the Grameen institutions form groups in order to create a fund (a village bank) and contribute to it. In the case a member fails to repay, this fund can be used to fulfil the obligations towards the lender. However, the borrower of the guarantee fund is also obliged to pay this fund back.

The pricing of microcredits are presented in different ways. Some of the MFIs require a very small amount of money as an initial fee, whereas other institutions may apply penalties for late payment or charge small interests.

Having mentioned the main characteristics of a microcredit, it seem that the Microfinance Institutions have much work to do. Nevertheless, Muhammad Yunus[2] (2013b) makes it look much simpler: "…I *just went to the villages and started lending money without knowing if the people would pay me back*…".

3.1.4 Funding of MFIs

The year 2005 was designated by the United Nations as the Year of Microcredit in order to support the growth of this sector. UN set several goals to be reached during that year such as increasing the awareness of microcredits among the people to alleviate poverty, developing innovative strategies that integrate microcredits into financial systems, encouraging partnerships to increase the supporters and donors, among others (United Nations, 2004).

In general terms microfinance funding is concentrated by regions. According to Khandker (1998), 76% of the total loans are disbursed in Asia, 21% in Latin America and 3% in Africa. The share of donor funding also varies regionally: 55% of the funds are provided to Latin America, 47% to Asia and 39% to Africa.

Moreover, several institutions such as the U.S. Agency for International Development (USAID), Canadian International Development Agency (CIDA), National Program of Financing for Micro-entrepreneur (PRONAFIM) in Mexico the Ministry of Commerce in Colombia, Joint Action to Support Microfinance Institutions in Europe (JASMINE) among others are playing an important role in the support and development of microcredit institutions around the world.

Nonetheless, in the conference of Yunus (2013b), he mentioned that Grameen Bank does not accept any funding from the Bengali Government or any other international institutions in order to avoid dependence. He also remarked that the

[2] Yunus, M. (2013b) Conferencia Magistral con el Premio Nobel de la Paz, Dr. Muhammad Yunus: *Social business can solve human problems – Experience in Bangladesh and other countries,* July 18, 2013, Centro Fox, Leon, Mexico.

rest of MFIs and microcredit banks in other countries should not be funded by their governments either but by other means.

It is important to mention that misinformation about microcredits often creates confusion and scepticism. This situation led Yunus to propose three options of funding: a National Wholesale Fund, an International Wholesale Fund and Built-Operate-Transfer (BOT) contract (Yunus, 2003a). The first one refers to the creation of a National Wholesale Fund where the Government and the World Bank invest their money to make it available for the NGOs. Pakistan, Bangladesh, Philippines and Nepal are some cases of success of the wholesale fund.

The second, an international fund that Yunus called Grameen Trust (created in 1989) helped other countries to start Grameen programmes in their own country. The International Wholesale Fund is supported daily by many donors and helps around 113 organisations in 34 different countries.

The Built-Operate-Transfer (BOT) approach is part of the Grameen Trust that sends their staff to create new microcredit programmes in other countries and train local people to operate them. BOT projects have gone to Kosovo and Myanmar.

Nowadays the No.1 microfinance institution in the world according to Swibel (2007) is Association for Social Advancement (ASA), established in Bangladesh. Followed by Bandhan in India and Banco do Nordeste in Brazil. Among the top 50 MFI's, 7 institutions are located in India and other 7 in Bangladesh.

The development of such Microcredit Institutions has proved that poor people are good payers, especially women. For that, Yunus mentions in his conference (Yunus, 2013b) the reason for Grameen Bank to target to women is the feeling of trust.

In the villages of Bangladesh the main role is taken by men; women stay at home and take care of the family while men work, study and manage the money. When a woman is given the opportunity to manage a small amount of money it means someone trusts her for this task. Therefore this woman will be responsible and punctual with the repayment not to break the trust given. Women have reached a rate of repayment of 95% (Valdez, 2006).

From the mid 90´s the microfinance sector has expanded around the world helping millions of households. Far more with the introduction of the United Nations Millennium Development Goals (MDGs) there have been even more efforts to reach 100 million households trapped in poverty.

3.2 The system of microcredits in Mexico

From the 90´s after the appropriation of the banks by the Mexican government one decade before, banks were privatised and some microcredit institutions began to operate in Mexico. Some of them were aimed for rural development, while some others focused on savings, health or microbusiness.

After the privatisation of the banks the service of lending to the private sector increased. However, other macroeconomic reasons; consequences of the liberalization of markets, the implementation of NAFTA and speculation of Mexican currency for foreign investments brought the devaluation of the Mexican Peso (MXN) in December 1994. The highest inflation the country could had, followed the previous issues. The crisis was known as "Crisis del Tequila" (Tequila Crisis), resulting on financial factors such as high external debt, a bank system with low capitalisation and high debts, an extremely liquid monetary environment due to overexpansion of credits, and lack of regulation for liberalisation of capital (Dabat & Toledo, 1999). Credits to the private sector decreased from 78% to 22% of the bank assets from 1994 to the year 2000 (Marulanda Consultores & DAI México, 2011). Therefore people in Mexico had the only option of a traditional informal way for savings called "Tanda", friends or family for borrowing money. In fact, Campos (1998) realises that people in the countryside tend to save by buying animals, grains and seeds or material for construction.

In response of that, commercial enterprises started to lend money to people creating their own financial companies and MFIs. This is the case of Banco Compartamos or Banco Azteca, the pioneers of MFIs in Mexico during the 90´s and early 2000. With a big market demand and almost inexistent offer, these institutions became very successful. They charged a high interest rate due to a lack of regulation.

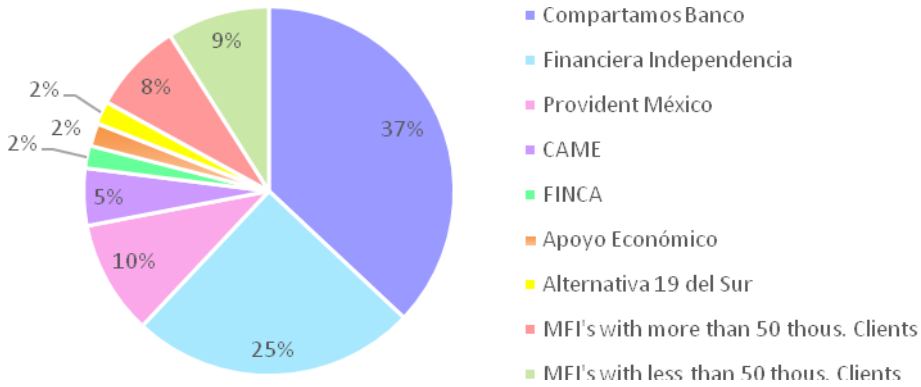
From this year the microfinance sector has evolve fast with the participation of NGOs, cooperatives, credit unions, Civil Society Organisations (CSO), Multiple Purpose Financial Institutions (SOFOMES) and more.

Bringing financial services to all inhabitants in Mexico is a challenge. The coverage of such services is not only about the access to microcredits and financial inclusion, but also about quality of financial products that suits best to each client. Yet, not forgetting the sustainability of the MFI's that also plays an important role in the development of the financial sector.

An overview of the microfinance profile of Mexico made by the Mexican National Committee on Microfinance and presented in Year of Microcredit (2005) shows that in Mexico exist near than 32 commercial financial institutions that provide service to 25% of the population in urban areas. A number of 330 Credit Unions, 75 MFIs and several Microfinance Networks. However, all these institutions reach in a very low rate the rural regions of the country.

In Mexico the largest MFIs are the seven institutions presented in Figure 2. These institutions represent the 83% of the microfinance market in the country (Pro Desarrollo & Mix Market, 2011) whilst the rest of the market is occupied by more than 50 MFIs. In 2007 Banco Compartamos became the first microcredit bank in Latin America.

Figure 2: Market distribution of MFIs in Mexico



Source: Pro Desarrollo & Mix market (2011)

Compartamos and FINCA have been in the top of the list of MFI since 2004 being the most profitable with Adjusted Return on Assets (AROA) of 16,5% (Valdez, 2006).

Moreover, one of the latest report of the microfinance sector (Trujillo, 2013) provides the index of inclusion of the microfinance sector in the economy that is counted as the total of credit to the private sector over the GDP. Microfinance in Mexico achieved an index of 27.7% in the financial sector depth. Panama reached the highest inclusion of microfinance sector in the economy with 89.6%. On the other hand, the inclusion of this sector in Argentina was evidently the lowest, reaching only 18.5%, slightly lower than Haiti. The microcredit portfolio represents the 0.2% of the GDP in Mexico. These microcredits are proved to reach 25% of the population with the highest interest rates in Latin America and are followed by Argentina.

Supported by The Ford Foundation, Pro Desarrollo underwent a process of creation in 1997. In the last 16 years it created a national network of MFIs in Mexico in order to promote standardisation and better practices for microfinance institutions and training in microfinance services. It comprises 85 member organisations with 1522 offices, giving microcredits and other microfinance services to approximately 4.3 million Mexicans from which 85% are women and 53% live in rural areas. Out of the microcredits given 35% are individual credits and 65% in groups (Pro Desarrollo & Mix Market, 2012). By 2011 the national network informed that its credit portfolio amounted MXN 28,902,963,031 million with average credits given for MXN 5,701.00.

Pro Desarrollo together with Mix Market; leader provider of information of microfinance industry and created by the Consultative Group to Assist the Poor (CGAP), analyse and compare the member organisations regarding the factors or categories presented in Table 2 and make a yearly report of the microfinance sector in order to measure the development and growth of the microfinance sector in Mexico.

A quick overview to the operational activity of MFIs reporting to Pro Desarrollo (Table 3) shows that the rate of institutions joining this network doubled from one

year to the other. However, considering a constant growth scenario, the number of clients by 2012 should have been about 170,000 more.

Table 2: Categories of comparison of MFIs

Age of MFI	**New: 0 - 4 years** **Young: 5 – 8 years** **Mature: + 8 years**
Scale	Small: portfolio in USD < 4 million Medium: portfolio in USD 4 – 15 million Big: portfolio in USD > 15 million
Methodology	Village banking Solidarity groups Individual
Average loans per borrower	Low: < MXN 3, 500 Medium: MXN 3,500 – 7,000 High: > MXN 7,000
Regulation	Comisión Nacional Bancaria y de Valores (National Banking and Securities Comission)
Sustainability	Financially sustainable > 100% Non financially sustainable
Area	Northern: Baja California Norte/Sur, Chihuahua, Coahuila, Durango, Nayarit, Nuevo León, Tamaulipas, Sinaloa, Sonora, San Luis Potosí, Zacatecas Central: Aguascalientes, Colima, Estado de México, Guanajuato, Hidalgo, Jalisco, Michoacán, Morelos, Puebla, Querétaro, Tlaxcala, D.F Southern: Campeche, Chiapas, Guerrero, Oaxaca, Quintana Roo, Tabasco, Yucatán, Veracruz

Source: Pro Desarrollo & Mix Market (2012)

Having a closer look to the quality of the portfolio and the measurement of the delinquency index; it is evident that the measurement of delay of 90 days is inefficient since the real due repayment is 30 days. As a result, there are 30 days

more where the unpaid fees are included as a debt; yet, not taking into account the capital in risk.

Moreover, out of the total of institutions reporting to Pro Desarrollo, the analysis (Figure 3) shows that most of the MFI's are young organisations with 5-8 years of operation, representing 32 institutions. This number is followed by mature institutions with 8 or more years of operations (25) and finally the newest organisations account 16 MFIs of the total in the present analysis. However, although the newest institutions have the lowest share, they are fast growing all over the country.

Table 3: Overview of operations of MFIs reporting to Pro Desarrollo

Operational data	2010	2011	2012
No. of MFIs	62	67	77
No. of clients	5,401,921	6,391,045	6,541,035
No. of offices	1,913	2,366	2,722
Balance	**2010**	**2011**	**2012**
Total assets (USD)	31,184,742,020	37,795,474,855	42,522,205,658
Net credit portfolio (USD)	24,543,802,981	28,902,963,030	34,036,620,189
Total liabilities (USD)	19,468,894,117	24,529,280,705	28,352,550,992
Equity (USD)	11,715,847,904	13,266,194,150	15,169,654,666
Net result (USD)	2,017,442,444	1,713,545,143	2,405,928,361
Financial Indicators	**2010**	**2011**	**2012**
Delinquency index	1.65%	3.18%	3.33%
Hedging	89.520%	92.89%	81.63%
Return on equity ROE	4.72%	8.07%	5.56%
Return on Assets ROA	2.42%	2.53%	2.44%

Source: Pro Desarrollo & Mix Market (2012)

Figure 3: Age (years) & Size (mill. usd) of MFI and share (average) of women in MFI reporting to Pro Desarrollo:

Source: own construction with data from Pro Desarrollo & Mix Market (2012)

Since the microfinance sector in Mexico is still in development process, the scale of MFIs is mainly small. The largest institutions are mentioned in Figure 2. These MFI drive the microfinance sector having portfolios larger than 7 million MXN.

According to the MFI report (Pro Desarrollo & Mix Market, 2012), 60% of all branches of MFI's in the country are located in the poorest places in Mexico with a Human Development Index (HDI) lower than 0.793. Table 4 shows the states and districts with the highest amount of branches of the institutions reporting to the Mexican MFIS network.

Table 4: Highest allocation of MFI branches in Mexico

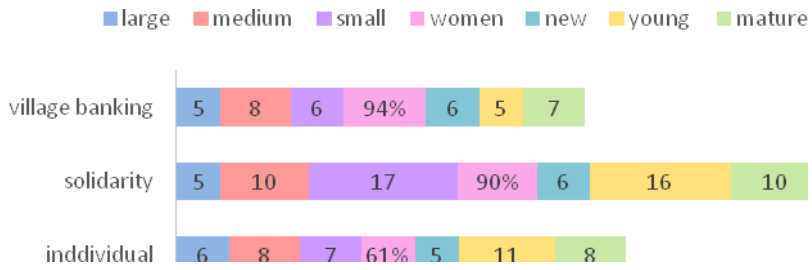
STATE	DISTRICT	No. OF BRANCHES
Chiapas	Tuxtla Gutierrez	27
Mexico State	Toluca	17
Chiapas	Tonalá	17
Chiapas	Comitán	16
Puebla	Puebla	15
Guerrero	Cuautla	14
Hidalgo	Pachuca	14
Veracruz	Veracruz	14
Yucatán	Mérida	13
Oaxaca	Oaxaca	13

Source: Pro Desarrollo & Mix-Market (2011)

3.2.1 Methodologies of MFIs in Mexico

As shown in Figure 4 the methodology for Mexican MFIs is generally by solidarity groups. Nevertheless, village banking methodology includes the highest share of women.

Figure 4: Analysis of MFIs methodology (number of MFIs)



Source: own construction with data from Pro Desarrollo & Mis Market (2012)

**Data representing women is percentage over total clients*

In the first section of this chapter the classification that Yunus considers appropriate to summarise the types of credits was briefly mentioned. Given that, it

is important to apply such classification in the Mexican context in Table 5. By doing so, it is found that such classification can successfully be applied widely.

Table 5: Classification of microcredits proposed by Yunus applied in Mexico

CLASSIFICATION	EXAMPLE IN MEXICO
Traditional informal microcredit	Moneylenders, loans from friends and relatives
Based on traditional informal groups	Tandas, Pawnbrokers
Activity based (with conventional or specialised banks)	Agricultural credit, livestock, fishery, handcraft credits
Rural credit with specialised banks	Banco Compartamos, FINRURAL
Cooperative microcredit	Credit unions, SOFIPA
Consumer microcredit	Elektra-Banco Azteca, Walmart, Bancoppel
Bank-NGO partnership microcredit	-
Grameen Credit(solidarity group), village banking	FINCA, Grameen Trust Chiapas
NGO micro-credits	CAME, Al Sol
Non-NGO / non-collateralised microcredit	-
Government microcredit	FOMMUR, FINAFIM, PRONAMFIM, NAFIN, FIRA

Source: own construction based on the classification in Grameen Bank (2011).

Informal methods of lending and savings are often the only option that rural people in Mexico have. Such informal instruments are mostly used by women lacking of education, with incomes lower than 800 MXN and living in areas with less than 2500 inhabitants (Campos, 1998).

Traditional informal microcredits in Mexico are mainly performed by moneylenders in farm markets and other market places. The amounts lent may vary, although they are commonly very low, enough to buy raw materials for people's commerce (e.g. seeds or vegetables). The payback is usually in a daily basis. Another informal lending is between relatives, being health and household the main reasons.

Informal groups include *Tandas* and pawnbrokers. *Tandas* are rotating savings and credit associations (ROSCA). They are formed by neighbours, friends and relatives or between people who knows one another, as they rely on mutual trust. Each participant of the *Tanda* pay its share as agreed, ranging between 500-1,000 MXN. The order of rotation of savings is chosen in a lottery basis with a common length on one year. Not only does *Tandas* offer access to credits, but also opportunities for saving. In fact, CNN (CNN, 2011) informs that half of the Mexican population is able to save. Only 10% does it by formal methods.

The market of pawnbrokers in Mexico has increased within the last years. By the end of last decade, Marulanda Consultores & DAI (2001) counted around 65 institutions with 5000 branches in the country. Moreover, ANACE (2013) states that the most important pawnbrokers are Montepio and Prendamex. The latter includes already 133 franchisees. Pawnshops give easy access to credit services without further transaction costs and requisites. Their services also provide a certain guarantee that microcredits lack of.

Banco Compartamos is one of the institutions that supports credits for handcrafts, pottery and other similar activities. On the other hand, Financiera Rural (FINRURAL) is probably the widest credit institution that supports agrarian activities. FINRURAL is the result of the creation of the National Agricultural Credit Bank in 1926 (FINRURAL, 2013). Its credits are aimed to support livestock, fishery and other agricultural activities. In 2011 FINRURAL allocated 23, 957 million MXN to credit services (FINRURAL, 2011), 76% of the total credits assisted forestry and agricultural activities and 24% to other sectors that contribute to rural development.

Sociedad Financiera del Pacífico (SOFIPA) is relevant to exemplify the legal body of cooperative societies and credit unions for microcredits in Mexico. It was created in 2004 with the main objective of offering credit services in the state of Oaxaca. It comprises financial services such as microcredits targeted to women, savings, micro-insurance, investments and remittances. SOFIPA also works under the village banking method lending an average of $292.3 per borrower to 21,283 borrowers in 2012 (Mix Market, 2013). Last year it reported a remarkable self-sufficiency of 104.71%.

Consumer credits in this country are mainly driven by comercial groups such as Elektra (Banco Azteca), Coppel (Bancopel) and Walmart to mention some. All are salary based, standardised and targeted to consumption. Whilst microcredits focus on creating activities and income, consumer credits focus on consumer debts. Consumer credits use incentives like return on interest or discounts for in time payback. In ResponsAbility (2008) is clearly observed that such credits target low salaried/poor working class. However, if these commercial groups offer an excessive amount of credits, insolvent poor clients could end up in over-indebtedness that would bring the sector in risk.

Village banking has a methodology of collective disbursement and investment. This represents its main feature. For this reason the World Bank considers this methodology to possess all the characteristics needed for a successful anti-poverty tool (Valdez, 2006). For instance, FINCA is an international institution originally established in Bolivia in 1984. By 1997 FINCA was also established in Mexico and other countries of Latin America. Currently 40% of its portfolio is spread in this region.

As well as FINCA, Grameen Trust Chiapas works under the same methodology. It has operated for 12 years already across Chiapas, Tabasco, Jalisco and Aguascalientes. Its loan portfolio in 2012 reached about 6,794,221 MXN (Pro Desarrollo, 2012). In contrast to the rest of Grameen MFIs, Grameen Trust Chiapas included microcredits not only for women, but also for men (Armendáriz & Roome, 2008). The drawback of village banking is the high cost per amount lent. It is the most expensive methodology. The operation costs of FINCA were 56.52% of its total costs in 2009 (Marulanda Consultores & DAI, 2011).

An important microcredit NGO is Consejo de Asistencia al Microemprendedor (CAME). With 18 years operating in the country, it has reached 277,482 clients in urban areas. CAME offers individual credits as well as village banking. As an NGO, it is not allowed to work with savings.

Last but not least are the government microcredits. One of the government's initiative to facilitate the access to credits was made by SEDESOL (Ministry of Social Development). This initiative included the promotion of solidarity savings and the introduction of the microfinance institution Santa Fe de Guanajuato. It was

implemented by the ex-President Vicente Fox - at that time Governor of the State of Guanajuato- together with Professor Yunus in the year 1996; starting with 40 microcredits to 65 solidarity groups in the pilot project (Conde, 2000).

Another governmental initiative is PRONAFIM. This is the National Program for Financing Micro entrepreneurs and was created in 2001 in order to finance and help the development of the poor and their microenterprises in Mexico (Secretaría de Economía, 2013a). PRONAFIM manages of two different instruments to spread federal funds from the national budget to support the poor: FOMMUR (Microfinance Fund for Rural Women) and FINAFIM (National Trust to finance Micro entrepreneurs). The latter served as a fund for credits to support other MFIs with more than one year of operations and with delinquency rates on 90 days not higher than 5%. The highest amounts for lending were between 20,000 MXN and 30,000 MXN (Secretaría de Economía 2013b, 2013c, 2013d).

Another fund that supported MFIs was FIRA (Funds for Agriculture) under control of the Bank of Mexico. Such fund allocates microcredits with the help of other intermediary banks. Last but not least; NAFIN (Nacional Financiera), another development banking institution, focuses on small and medium companies. NAFIN is also the main funder for Banco Compartamos.

The role of the funds made by the Mexican government (FINAFIM, FOMUN and FIRA) has been certainly important during the crisis. They support around 60% of Mexican MFIs (MicroRate, 2009), followed by 28% funded by other commercial banks and 6% mainly funded by donors.

3.2.2 Impact of microcredits in Mexico

In order to evaluate the impact of the microcredits not only in the users but also in the society it is necessary to take in account several factors that are modified with the presence or lack of microfinance. For instance, the social sphere, empowerment of women, financial and economic status, education and development of skills and attitudes towards the future, are important factors to evaluate.

Certainly the impact may vary between microcredit clients who have had early or late access to the service. It is believed that there are higher impacts for long-term

users. Nevertheless, not much research on the impact of microcredits on poverty has been done in Mexico (Barboza & Trejos, 2009).

The National Autonomous University of Mexico (UNAM) made an evaluation of the impact of national programs operating under the Ministry of Economy in Mexico. The authors of such study describe 3 types of impact of microfinance (Del Pozo & Arteaga, 2003, pp. 23):

- Economic impact: regarding the effect of the microcredit in people's incomes and financial resources. It also includes the degree of savings, investment in own businesses and sustainability which brings improvements in education, health and nutrition of following generations.
- Social impact: evaluated through the ability of the micro-entrepreneurs to generate new jobs in their regions. This type of impact is also measured by the development of human resources, i.e. the skills that microcredit users learn after being involved with microfinance institutions
- Empowerment impact: how financial independence and decision making power are developed mostly in focused on women. The introduction of women participation in social and economic activities that increases their self-esteem and foster the importance of women in the family and the society.

3.2.3 Regulation of MFIs in Mexico

By 1993 many Mexican financial institutions worked under the legal body of Limited Purpose Financial Institutions (Sociedades de Objeto Limitado-SOFOLES) with the ability to offer credit services, leasing and factoring. However, later on the government allowed private institutions to give the same services as SOFOLES, causing a structural brake in the financial system in Mexico. Since then a new body was created: the Multiple Purpose Financial Institutions (Sociedades de Objeto Múltiple-SOFOMES). Most SOFOMES are currently not regulated by the National Banking and Securities Commission (see Table 6), yet they must follow certain rules under other organisations (Juarez, 2013).

In 2001 the Popular Savings and Credit Law (Ley del Ahorro y Crédito Popular) was created in order to regulate all the institutions of the micro financial sector.

Such law established the rules for all MFIs, NGOs, banks, cooperatives and other private institutions for a fair functioning of their saving and credit services (Congreso de la Union, 2001).

Under the same law a new legal bodies were created. Such legal bodies would need less capital compared to commercial banks and would not be registered as cooperatives. These were called the Popular Financial Institutions (Sociedades Financieras Populares-SOFIPO). Under this legal body many of the non-regulated financial institutions were able to enter the regulated system.

Nowadays more legislation has been introduced to regulate the microfinance sector to complement the above mentioned: the Bank of Mexico Law, the National Banking and Securities Commission, the Organic Law of the National Savings and Financial Services Bank created by BANSEFI and the National Program for Financing the Micro entrepreneur (PRONAFIM) to mention the most representative.

Moreover, Pro Desarrollo (2012) shows that most of the MFIs in Mexico reporting to the network are non-regulated by the National Banking and Securities Commission whilst they are only supervised by other legislation. These MFIs are young institutions with an average of 6 years. The numbers in Table 7 raise the belief that such institutions are smaller and less experienced; having less clients and higher delinquency rate. However, the share of women participating is considerable.

It is important to have in mind that the information provided in the table above does not refer to all institutions in Mexico but only those reporting to Pro Desarrollo. In Trujillo (2013) the number of regulated institutions sums up to 13 (adding FIRA, FOMMUR & FINAFIM), whereas the non-regulated increase to 83 institutions.

Table 6: Regulation of microfinance institutions

INSTITUTION	LEGAL BODY	PROFIT	REGULATED
Banks	Limited Co.	Yes	Yes
SOFIPO	Limited Co.	Yes	Yes
Cooperatives	Cooperative	No	Yes
SOFOMES	Limited Co.	Yes	Yes/No
Savings	Hybrid	No	Supervised non-regulated
Credit Unions	Limited Co.	No	Supervised non-regulated
SOFINCO	Limited Co.	No	Yes
Private Assistance Institutions	IAP	No	No

Source: Marulanda & DAI (2011); Pro Desarrollo (2012)

Table 7: Basic figures of regulated and non-regulated MFIs

	Regulated	Non-regulated
Number of MFI	10	67
Years of operation	11	6
All service clients	72,881	12,957
Active credit clients	50,626	11,476
% women	88%	93%
Delinquency > 90 days	2.6%	3.5%

*Source: Pro Desarrollo (2012) * Data in median*

3.2.4 Funding and sustainability of MFIs in Mexico

The regulation of each institution may influence their funding methods. Nevertheless, Conde (2000) presents generally the funding of some institutions to be from different sources. One of them are the fees paid by the borrowers when starting a contract with the institution. Another source of funding is the donation of international foundations. Some others are usually the public institutions funding, government funds, commercial banks, private organisations, the interest rates of the credits given by the MFI (ROI), Value Added Tax (VAT) and fees for late payback. Furthermore, in some cases the Inter-American Development Bank (IDB) is also a source of funding.

In order to measure sustainability of the MFIs in Mexico, Pro Desarrollo and Mix Market propose that a sustainable institution ought to have financial self-sufficiency percentage higher than 100%. In the year 2012 the youngest institutions, mainly with 7 years of operation (see Table 8) proved to be the more sustainable, reaching 113.2% of financial self-sufficiency. Most of the institutions that are non-sustainable showed 86.1% for the same indicator (Pro Desarrollo & Mix Market, 2012).

Table 8: Sustainability of MFIs in Mexico

	Sustainable	Non-sustainable
Number of MFI	47	30
Years of operation	7	8
All service clients	17,990	16,736
Active credit clients	14,042	14,683
% women	89%	93%
Delinquency > 90 days	3.4%	3.3%

*Source: Pro Desarrollo & Mix Market (2012) *Data in median*

3.3 Overview of Chiapas & Comitán.

In Mexico, 10 States concentrate 74.7% of extreme poverty in the country (INEGI, 2013a). Whereas the States of Guerrero, Oaxaca and Chiapas concentrate 25% of the Mexicans in extreme poverty (Valdez, 2006), the latter accounts the highest proportion with 14.1 % from the overall extreme poverty in Mexico(INEGI, 2013a). Furthermore, 32.8% of the total poor population in Chiapas (78.4%) is in extreme poverty (CONEVAL, 2012a). For this reason, the present paper focuses on the state of Chiapas as the object of research; more specifically the district of Comitán de Domínguez.

Chiapas is located on the South-east of Mexico and it is surrounded by Oaxaca, Tabasco, the Pacific Ocean and Guatemala. It represents the 8th largest state of Mexico and the 3.8% of the whole Mexican territory and it accommodates 12 of the 62 ethnicities officially recognised in the country according the statistics of the Government of Chiapas (Gobierno de Chiapas, 2013).

The situation in this State has not been easy. Since the political and social liberation movement that took place in this State in 1994 by EZLN (Ejército Zapatista de Liberación Nacional), Chiapas has suffered its consequences of constant political conflicts and distrust towards the government. The main reasons of the liberation movement were exploitation from the government to rural inhabitants, land and labour as well as the human rights of indigenous people and respect to their customs. The injustice situation together with the entry of the NAFTA made the army rise against the government (Woodworth & Hiatt, 2003). In response, the Mexican government ordered bombing the region, causing several deaths.

Today, the feeling of impotence of the indigenous groups can still be seen, especially in the regions of the Lacandon Jungle where the districts of Las Margaritas (20 minutes from Comitán), the mountain area of San Cristobal, Altamirano, Ocosingo and Palenque.

The district of Comitán represented 1.4% of Chiapas territory in the year 2000. In is located in the border region with Guatemala (Figure 5) and its Surface is 978 km^2 (INAFED, 2013). The last statistics 2010 showed a total population of 141,013 inhabitants. The dialects spoken in the region are mainly Tojolabal, Tzeltzal and Tzotzil; although others like Zapoteco and Maya are also spoken in a lower proportion (INEGI, 2002). Out of the total population, women represent 52% and men 48%of the population (INEGI, 2013b). Most of the male population in such district are 23 years old, whilst most on the female inhabitants are 25.

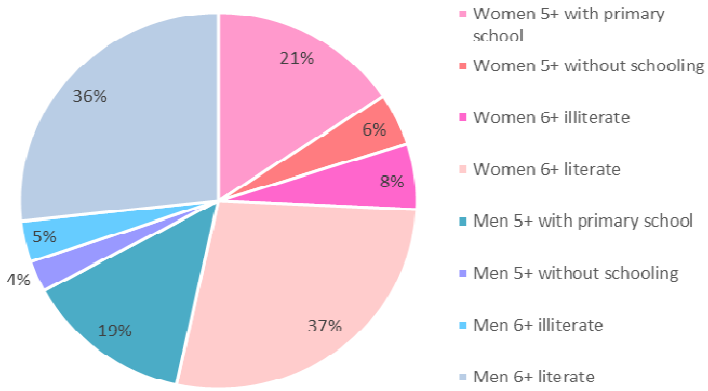
Figure 5: Geographical location of Comitán

Source; own construction

The education is evidently deficient. In 2010 about 10,800 women older than 5 years in Comitán are illiterate and 6,742 men correspond to the same category (see Figure

7). Moreover, 8,552 women over 5 years did not have schooling and a slight lower number of 5,049 were men who did not attend to school either.

Figure 6: Proportion of population with/without schooling and illiterate/literate (2010)



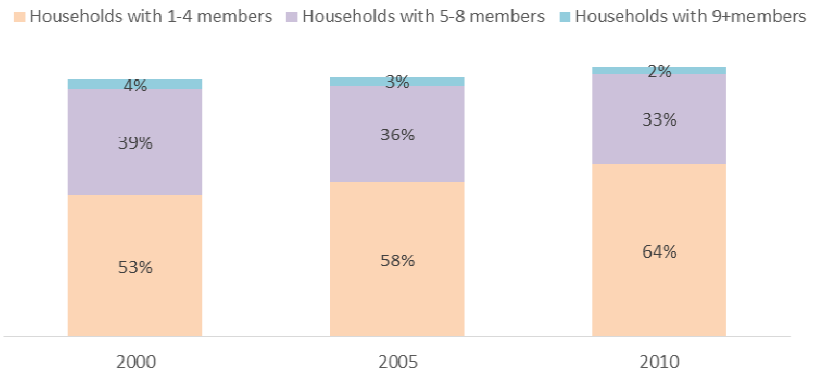
Source: own construction with data from INEGI (2013b) & UNICEF(2013).

**The percentages correspond to the share of total population in Comitán*

The above mentioned positions Chiapas with the highest level of illiteracy (17.9% out of total Mexican population), followed by Guerrero (16.8%) and Oaxaca (16.4%) (De la Vega et al., 2011).

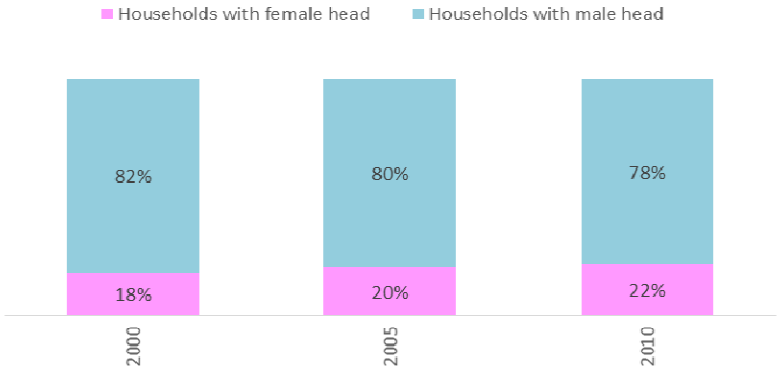
The households are mainly driven by a male head and the average size of families in Comitán is 4.1 (see Figure 7and Figure 8). Yet, a high number of families have more than 4 members and a small proportion even show a family composition of 9 or more members. A possible reason for this phenomenon is the lack of education mainly in previous generations that increases natality. Another reason may be the economic situation in the country. In fact, the number of children born was higher in the years with economic stability and sharply decreased in the years of economic crisis. For instance, in 2002, 4,777 children were born. On the other hand, in 2008 (when the global economic crisis) the number of children born decreased almost 50% to 2,546 (INEGI, 2013b).

Figure 7: Family size in Comitán



*Source: own construction with data from INEGI (2013b). *Data from 2010*

Figure 8: Head of households in Comitán



*Source: own construction with data from INEGI (2013b). *Data from 2010*

Moreover, the economically active population in Comitán in the year 2010 – people 12 years old and over who were working or looking for a job- amounted 57,854 inhabitants. 67.27% were male and 32.73% female. Whereas 46,433 inhabitants were economically inactive – people 12 years old and over who are pensioners, students who help in the house work or others with physic/mental limitations- from this selection, 79% were women and 22% men (INAFED, 2013).

3.4 Microfinance Institutions in Chiapas & Comitán

The financial practices differ from one State to others as a result of accessibility/inaccessibility to financial services. For instance, in great part of Chiapas the cost common form of savings are livestock breeding which generates

low liquidity i.e. little revenues for a term of approximately 8 months. Furthermore, such savings are designated in 36% to emergencies of illness and decease of a member of the family, 19.7% for reinvestment in their economic activity, 16.4% in profit sharing and 16.4% for buying livestock for savings (Durán et al., 2006). Nevertheless, MFIs have made the effort to reach this area and invite people to use microcredits, but the current offer of microfinance services are not enough to meet the needs of the whole region.

As for the financial inclusion of Comitán, in 2007 about 1559 families were benefited from housing credit programmes. In 2010, 224 subsidiaries of commercial banks existed in Chiapas and 16 in Comitán, whilst 29 subsidiaries of development banks from the National Programme for Financing Development (PRONAFIDE) were in Chiapas and only 1 in Comitán (INEGI, 2013b). Moreover, Comitán is the fourth city with higher number of branches (16 branches) of MFIs reporting to Pro Desarrollo after Tuxtla (Chiapas) with 27, Toluca (Mexico State) with 17 and Tonalá (Chiapas) with 17 branches (Pro Desarrollo & Mix Market, 2011).

Along this chapter, the MFIs in Mexico reporting to the biggest microcredit network in Mexico have been presented. The institutions in Comitán that work together with Pro Desarrollo are presented in Table 9. Moreover, other important MFIs that do not report to the network of Pro Desarrollo are CREDIPYME, Unicreich, FINSOL, among other consumer microcredit institutions such as Elektra, Banco Azteca and Coppel.

In addition, the Nantik Lum Foundation started in 2003 a microfinance and handcraft, seedling and harvest workshops/training program in Chiapas (specifically in the Lacandon Jungle).

Up to the year 2006 this foundation helped 27 groups with a total of 460 indigenous women who represent other 2,530 relatives. The women participating in the program increased their savings and participated in community's decisions in 45.2%, whereas 93.5% were able to participate in economic decisions in their households. Moreover, 66.1% of them believe to be eligible for a microcredit in some institution. In contrast, 25.8% still ask for permission to their husbands or fathers to go out from home (Durán et al., 2006).

Table 9: Selection of MFI in Chiapas by size and age

MFI CHIAPAS MFI COMITAN MFI NOT IN PRODESARROLLO

LARGE	PRESTA SIMPLE	ALTERNATIVA, APOYO ECONOMICO, FINANCIAMIENTO PROGRESEMOS, INVIRTIENDO, SIEMPRE CRECIENDO, EQUIPA-T, TE CREEMOS	BANCO COMPARTAMOS, BANCO FORJADORES, CAME, CREDIEQUIPOS, FINCA, FINANCIERA INDEPENDENCIA (consolidated with FINSOL), FINCOMUN, PROVIDENT, UNICREICH, BANSEFI, PRONAFIM, FINANCIERA RURAL,
MEDIUM	ALCANCE FINANCIERA, FINLABOR, FINCLUSION, ITACA CAPITAL, PROMOTORA SI, FINANCIERA CONTIGO	APOYO INTEGRAL, CREDICLUB, DON APOYO, FINCRECEMOS, MAS KAPITAL (KAPITAL MUJER), PRESTAMOS PARA CRECER, PRETMEX, SOMIC, SOLFI, UNIMEX	ALSOL, APROS, PROMUJER, CONSERVA, DAASA, FINAMIGO, CCREDEX, SOFIPA, SOLUCION ASEA, FRAC, GRAMEEN TRUST CHIAPAS
SMALL	CENTEOTL, CONFIA, FIPABIDE, FORTALEZA MI FUTURO, GRAMEEN DE LA FRONTERA, IDEAS CORPORATIVO, KU-BO FINANCIERO, MZ FINANCIAL, PROEXITO, RENTAMIGO	PROAPOYO, ASEFIMEX, CONSOL, EMPREDESARIAL, FINANCEN, GRUPO PROSPEREMOS, LOGRA FINANCIAMIENTOS, SEFIA, CREDITUYO, SIEMBRA, SOLUCIONES CABALES, SOLUCIONES REALES, SOLUCIONES OPORTUNIDADES, SU FIRMA, TU CREDITO	AMEXTRA, CON SER, FINANCIERA CIA, COCDEP, CREDIAVANCE, FUNHAVI, OPORTUNIDAD
	NEW	**YOUNG**	**MATURE**

Source: own construction with data of Pro Desarrollo & Mix Market (2011) & Sección Amarilla (2013).

Such credit management skills not only come from the clients, but also from the initial training and constant monitoring given by the institution. In this context, Barboza and Barreto (2006) believe that peer mentoring (teach borrowers to manage funds and develop other skills) is more effective than peer monitoring (sanctions against non-payers).

Furthermore, they define peer mentoring as the effects generated by group interaction i.e. weekly meetings, with other members of the group with higher chances of success, which at the same time increases the others' success. However, the more numerous is the group, the lower is the effect of peer mentoring and proved by better repayment rates. For instance, TE CREEMOS risk portfolio higher than 30 days equals 4.17% and for more than 90 days equals 0.94%. Compared to that, INVIRTIENDO risk portfolio >30 days is 4.64% and 1.44% for >90 days (see Figure 27).

Furthermore, the patterns of loan repayment were analysed in a MFI in Chiapas (San Cristobal) that was originally affiliated to Grameen Bank (Barboza & Trejos, 2009). For that, they differentiate active vs. inactive loans as well as systematic (several members of the group fail to repay at the same time) vs. strategic defaults (individual decision of failure to repay). Whereas the activity of such credits is attributed to learning-by-doing and peer mentoring, the inactivity reason proposed is the full repayment of the credit and drop out of the programme (1) usually

individuals realise of the high delinquency probability of the group. 2) The individual perception of having a lower probability of success compared to the rest of the group leads to a full repayment and drop out of the programme).

In addition, the comparison between rural and urban microcredits showed that urban women perform better repayment rates than rural women despite of the lower interest rate of the latter. This worse performance of rural participants is due to lower access to market information and high costs to reach the market. In fact, the first loans for rural women tend to be worse than in the forthcoming credits. For the researched MFI in Chiapas, 26.25% of first rural microcredits have a high risk of repayment failure, for the second year the risk increases to 36.02% and for the third year finally decreases to 20.37% (Barboza & Trejos, 2009). In Figure 27 is shown the better performance in the risk portfolio of CONSERVA compared to the rest of the institutions since it serves to a higher share of urban borrowers.

3.5 Poverty in Mexico

Coudouel et al. (2002) define poverty as whether the people have sufficient resources to meet their needs every day. Another approach measures poverty by the percentage of population living with less than USD $1.25 or USD $2 a day at international prices from 2005 (World Bank, 2014). Moreover, UNESCO (2014) states that absolute poverty measures are not connected with quality of life, failing to recognise the cultural and social needs of the people.

To define poverty, CONEVAL (2013a) considers three scopes. The lack of any of these indicators represents poverty:

- Economic welfare, regarding the access to goods and services through incomes.
- Social rights and the opportunity of inclusion in social development, including access to social security, health, education and nutrition.
- Territorial context: it refers to geographic and cultural characteristics.

In every country the poorest areas usually lack of freedom of choice. Therefore, empowerment is also little or non-existent. Inhabitants in such regions have no decision power, negotiation power, participation or any influence in the decisions that affect their living. For that reason, the financial sector has introduced

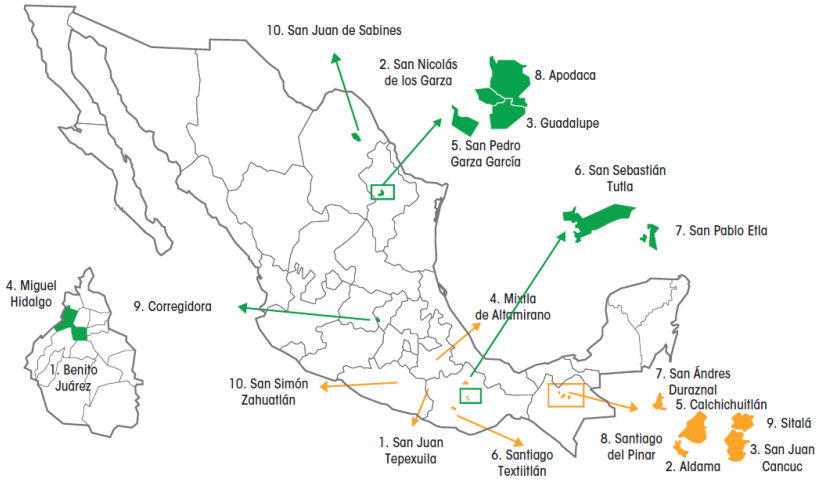
microfinance services to help empowering people around the world. With no doubts, microfinance has proved to be a way for economic development in countries by reaching come of the MDGs.

The United Mexican States reached a population of 120.8 million people in 2013. Up to the year 2010, only 10% represented the upper social class, 15-20% belonged to the middle class, 50% lived in poverty and 20-25% were considered lying in extreme poverty, living with 1.25 USD per day or less according to the World Bank (2013). Nevertheless, extreme poverty decreased from 13 million people in 2010 to 11.5 million people in 2012 (INEGI, 2013a).

Evidently, the income inequality is one of the major issues for the development of the country. Mexico is usually segmented as: rich vs. poor, north vs. south and urban vs. rural (Woodworth & Hiatt, 2003). The North of Mexico stands with 19% of the national poverty, 19% in Centre and 4% in Mexico City (Valdez, 2006). In addition, Barboza & Trejos (2009) mention the difference of wealth between the north and the south of the country during the 90's which increased in the north whilst at the same time decreased in the south (see Figure 9). Figure 28 and Figure 29 also prove the early statements to be correct when the highest growth is located in the northern region and the lowest GDP is found in Chiapas. In this matter, Sen (1997) makes an interesting observation when mentioning that other factors like race, ethnicity gender, age, traditions and regional location act as poverty clustering mechanisms, showing correlations with poverty.

The unemployment rate in Mexico stands for 5.3% for the year 2011. Unfortunately this ratio has substantially increased since the year 2006 when the unemployment represented 3.2% before the World crisis. Within 5 years unemployment in Mexico grew by 2.1% (World Bank, 2013).

Figure 9: Districts/municipalities with lower (green) and higher (orange) share of poverty in Mexico in 2010



Source: CONEVAL (2012)

By 2006, out of the female labour force 3.5% was unemployed. In 2011 this share reached 5.2%; an increase of 1.7% in the last 5 years. Out of the male labour force 3% is reflected in the year 2006 increasing to 5.3% in 5 years. This means although unemployment has higher share nowadays, it has not been against women. On the contrary, the share of unemployed men increased 2%, slightly higher than the share of unemployed women as a result of the introduction and expansion of MFIs in Mexico that have helped women to overcome poverty by creating self-employment and decreased the population in hunger from about 5% to 2.7% (the MDG target is set to 2.4%) (United Nations, 2011). Unfortunately the finance system has not yet reached the most outcast areas with the conviction that poor are not able to save money or payback. Many commercial banks have remained lending to the private sector with better economic and financial status that make people "credit-worthy".

3.6 Poverty in Chiapas & Comitán

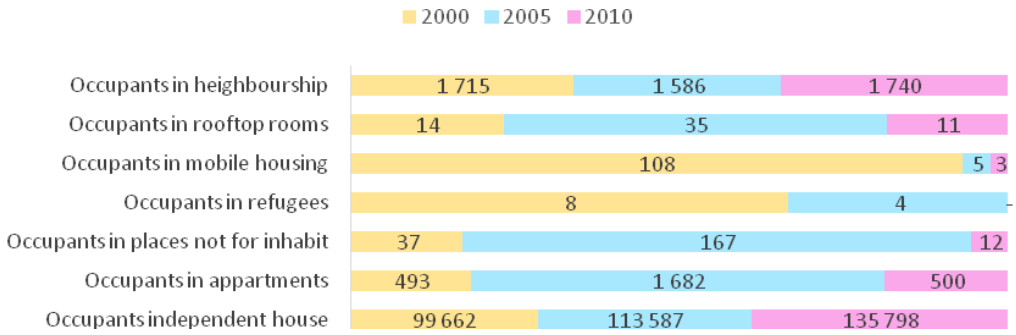
It is evident that the States with the highest poverty present the highest levels of inequality. As mentioned earlier these states are Guerrero, Oaxaca and Chiapas with general poverty rates of 67.4%, 67.2% and 78.4% respectively out of the total population in each region in the year 2010 (CONEVAL, 2012a). Furthermore, out of the total poor population in Chiapas, 32.8% lives in extreme poverty and 45.6% in moderate poverty (Figure 30 and Figure 31). Such general rates of poverty

decreased in 2012 to 74.7% for Chiapas and to 61.9% for Oaxaca, unlike Guerrero that increased to 69.7% (INEGI, 2013a).

The state of Chiapas presented the highest number (6) of the poorest municipalities (Santiago del Pinar, San Andres Duraznal, Calchichuitlán, Aldama, Sitalá and San Juan Cancuc) (see Figure 9) where most of their population do not have access to social security, half do not have access to water, electricity or gas; around the 20% without access to health and less than 5% with malnutrition and without education according to CONEVAL (2012a).

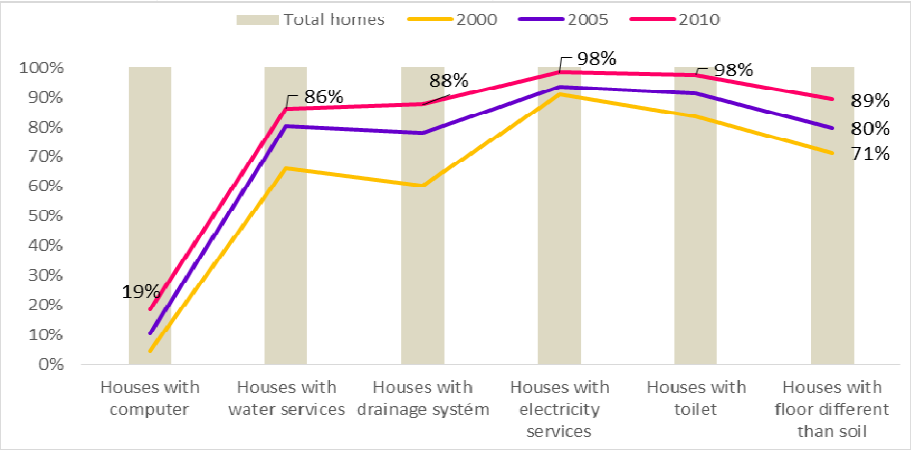
Moreover, Chiapas is characterised by its ethnic diversity and economic inequality compared to the States aforementioned. Out of the 118 districts in Chiapas, 44 are considered as seriously high outcast and 65 districts are high outcast (Durán et al., 2006). According to De la Vega et al. (2011) the outcast index in Chiapas was 2.318 in 2010. In a scale of 100, Chiapas accounted 84.12 points. In contrast, Comitán presents an outcast index of -0.39 for the same year. The scale of 100 positions Comitán in the level 23.17 which represents a medium degree of outcast (INAFED, 2013) (see Figure 32). Such index was measured with the data in Figure 7 as well as with the following indicators in and Figure 11:

Figure 10: Number of persons per type of house in Comitán in 2010



Source: own construction with data from INEGI (2013b)

Figure 11: Access to services by household in Comitán



Source: own construction with data from INEGI (2013b).

The high level of indigenous groups in Chiapas who preserve their traditional ways of livelihood result in pauperisation of such communities as their manners are barriers to economic growth (Sen, 1997). For that reason, microfinance gives opportunities to the poorest (including indigenous groups) to step out from the cycle of poverty. By a small amount of money lent, people have the possibility of make income generating activities and with that, improve their livings.

3.7 Empowerment of women in Mexico & Chiapas

First of all, it is important to define what empowerment is. According to World Bank (2011) empowerment is defined as "*the process of enhancing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes.*" Narayan (2002) also identified it as an increase of resources and abilities of the poor to participate in processes and institutions that have an influence in their lives. It also establishes 4 milestones of empowerment that are: access to information, inclusion for decision making, social and political responsibility, and the ability of organise in local groups.

In a similar way, the already mentioned study conducted by the National Autonomous University of Mexico recognises 5 dimensions for empowerment: economic, social, individual, familiar and citizen role (Del Pozo & Arteaga, 2003). Whereas the economic empowerment attempts the fair access and control of financial resources to live in good condition; the social empowerment seeks the increase of participation of both men and women in the decision making of social

groups with a common interest and institutions. It is closely related to the empowerment of citizen role, yet instead is focused more broadly to public policies and legal rights in Regions, Municipalities, States and Country as well as the access to information.

The familiar empowerment can be studied as a branch of social empowerment, however in a smaller social group. It fosters the fair participation of every member of the family in the important decisions. The individual empowerment is where the process of empowerment starts. It involves the improvement of self-esteem and the ability to set and reach personal goals.

In order to reach one of the MDGs, microfinance institutions as well as many other institutions orient this empowerment towards women. In fact, the proof is the ability of wives to bring and control resources for their households together with their husbands, decide for contraception methods, receive education, decide the best education for their children, among others. Yet one of the most important indicator is the proactive attitude towards their future.

The process of empowerment, starts with gaining some kind of power in things people could not have. There has to be a change of consciousness since power comes with responsibility. The gain of power usually increases self-esteem and brings a feeling to look for more and better things. This change of consciousness is a personal transformation that brings an auto-empowerment. Cattaneo & Chapman (2010) propose a similar process of empowerment that is further described in Figure 33.

Mexican women have struggled for many years to voice their issues concerning violence against them and their exclusion from social, economic and political decisions. It was not until 1971 when the first women group was constituted: MAS (Women in Solidarity Action), followed by other groups to voice women's demands that led to the legalisation of contraception in 1974. In the same year, amendments to the Mexican Constitution promoted equality between the two genders. The next decade was also characterised by further movements not only in the capital city but also in other states like Chiapas, Puebla and Oaxaca (Ortiz-Ortega & Barquet, 2010).

Furthermore, additional projects to empower women are international organisations such as Partners In Health, The Hunger Project or Nantik Lum. Moreover, national local organisations are also fostering empowerment of women in Chiapas through education campaigns, workshops and collective groups like Mujeres y Maíz Criollo (Women and Creole Maize), Centro de Investigaciones Económicas y Políticas de Acción Comunitaria (CIEPAC), Centro de Investigación y Acción de la Mujer Latinoamericana (CIAM), Colectivo de Mujeres, Fortaleza de la Mujer Maya, Colectivo Lunatik and many more.

Although several organisations work to empower women, Mexico reached only the 68th rank out of 136 places in the Global Gender Gap Index, in which the score 1 means equality. Mexico performed with a score of 0.6917 in 2013. This situation does not represent a won battle against inequality, but it certainly is an improvement on the recognition of women in Mexico (in 2006, Mexico had a score of 0.6462). Yet, it is still behind some Latin American countries like Cuba (0.7540), Costa Rica (0.7241), Argentina (0.7195), Colombia (0.7171) or Panama (0.7164) (WEF, 2013).

Introducing the idea of empowerment in some regions of Chiapas such as San Cristobal, Comitán, Zinacantán, Ocosingo or San Juan Chamula; where indigenous traditions still predominate, is not an easy task. The ancient Mayan culture inculcated the beliefs of superiority of men over women not also in the household, but in the overall society. Introducing different values in such an ancient culture may take time until the younger generations embrace them as part of their culture. In fact, it has been observed that in the branches of MFIs with highest indigenous population, the decision of big expenditures or investments are mainly taken by men (i.e. house construction, livestock purchase, control over loans, incomes or savings, among others) and women do not participate in the decision-making (Armendáriz & Roome, 2008; Pitt et al., 2003).

Through the last decade, San Cristobal and Comitán have made outstanding improvements in the inclusion of women in social and economic spheres. MFIs together with collective groups and support projects have reached several women that now understand their rights and put in practice their empowerment. Moreover, the government of Chiapas has created a Ministry for Development and

Empowerment of Women (Secretaría para el Desarrollo y Empoderamiento de las Mujeres). The support given by the programmes of the Ministry include seed endowments for harvesting, chicken dowries for breeding, trainings for agriculture and artisans and information related to gender equality.

In addition, studies have been conducted with the intent of measuring the empowerment of women brought by MFIs. Interestingly, Armendáriz & Roome (2008) mention that exclusion of men from microcredit programs in Chiapas may build distrust towards their wives and tension in the households as a consequence of jealousy from changing roles in household contributions. These believes bring the necessity to include men in microcredit programs in Chiapas in order to foster and maintain empowerment in women.

4 Results

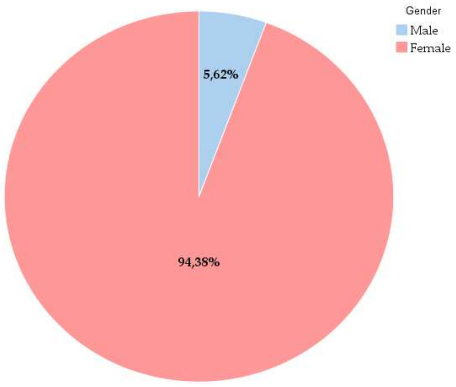
As already mentioned, the information gathered with the help of surveys was qualitative rather than quantitative. For that reason, it was recommended the use of descriptive statistics analysis i.e. chi-squared test. After conducting the analysis of the questionnaires, the results are presented in the following sub-chapters.

4.1 Influence of gender, age, marital status, children and education over the decision to undertake microcredits.

***Assumption*: Mainly women undertake microcredits instead of men.**

Result: Indeed the female gender is more likely to undertake microcredit programmes. The Figure 12 shows that 94.35% of the surveyed people were women, whilst only 5.6% were men. Out of the total women surveyed, 77.3% were microcredit clients. The chi-squared test value is 8.108 with a significance of 0.004 < α (Figure 34); which indicates that the female gender has a significant effect when it comes to the use of microcredits in Comitán.

Figure 12: Gender of sample surveyed



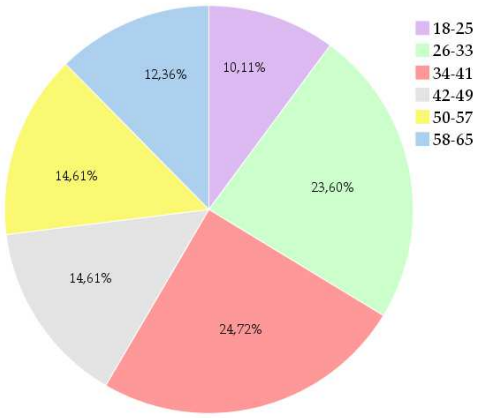
Source: Survey conducted by the author

***Assumption:* Age, marital status and number of children influence the use of microcredits.**

Result: Out of the total subjects polled, 24.72% were between 34-41 years old and 23.6% between 26-33 years old (Figure 13). The chi-square test in Figure 35 shows a value of 6.946 with a significance of 0.225 > α that suggests H_0= *variables not related*

is not rejected. Therefore, there is no influence of the age over the microcredit ownership in the selected area.

Figure 13: Age of subjects surveyed



Source: Survey conducted by the author

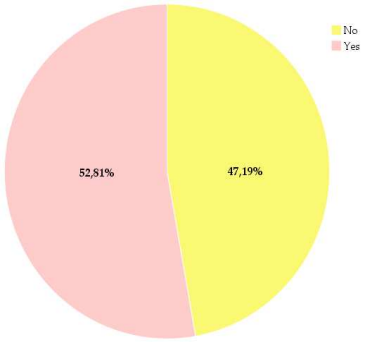
Moreover, 66.29% of the respondents are married. The analysis results in a chi-square value of 0.806 with a significance of 0.369 > α; rejecting the assumption of marital status influencing the decision of having microcredits in Comitán (see Figure 35 and Figure 36). In addition, people that have children represents 86.5% and 74% of the people with children are microcredit users. The chi-square test presents a value of 4.224 with low significance of 0.040 < α that suggests that the fact of having children drives people to be microcredit users. However, there is not a strong relation between these two variables (see Figure 37). As for the number of children, the chi-squared test value is 6.378 with significance of 0.605 > α that clearly rejects any effect over the credit ownership of the people surveyed (see Figure 38).

***Assumption*: Household education influence people to undertake microcredit programmes.**

Result: 52.8% of the surveyed subjects consider that education is important. They have received education to some extent and their children attend to school. On the other hand, a large share of 47.19% have received little or no education and their children do not attend school (see Figure 14). The chi-square test value in Figure 39 is 0.309 with significance of 0.578 > α which does not reject the hypothesis of

independency between these variables. People use microcredits with or without household education.

Figure 14: Education in household of surveyed subjects



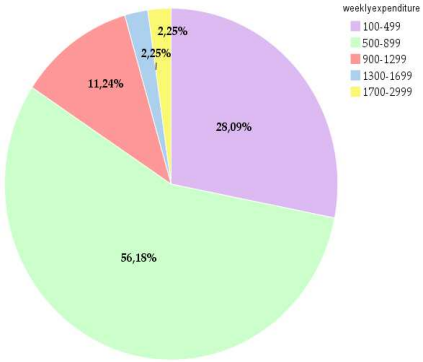
Source: Survey conducted by the author

4.2 Differences of expenditures before and after the credit and their distribution.

***Assumption*: The amount of expenditures before and during the credit plays as an indicator to the level of poverty: A microcredit client is expected to increase its income which is reflected in the increase of expenditure.**

Result: It was found that more than half of the respondents spends $500-$899 MXN per week. Nearly 30% have expenditures of $100-$499 MXN. Only 11.24% spend between $500 and $1,299 MXN per week and very few people have higher expenditures (see Figure 15).

Figure 15: Weekly expenditures of subjects surveyed



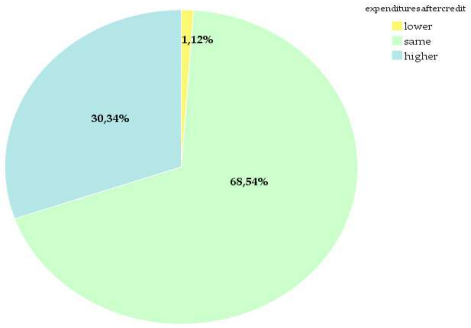
Source: Survey conducted by the author

Out of the total respondents, 68.54% of the respondents maintain the same level of expenditures with disregard of credit ownership (see Figure 16) and 57.57% of

credit owners do not change the level of expenditures. Only 30.34% of the total sample increase their expenditures (40.9% of the credit owners increase their expenditure) and 1.12% decreased the level of expenditures. With this, the assumption stating that microcredit owners increase their expenditures is rejected.

However, the chi-squared value of 14.236 with a significance of 0.001 < α suggests that credit ownership has a significant influence over the afterwards expenditures (see Figure 40 and Figure 41).

Figure 16: Level of expenditures after contracting microcrcedits



Source: Survey conducted by the author

***Assumption*: Household education is believed to explain to a certain point the decisions taken by people: how to distribute their incomes. Households with lower education are expected to manage their economic resources in inconvenient ways such as no savings, no distribution of the income to education and neither to improve food consumption and health; that may threaten improvements.**

Result in Reinvestment: Only 52.8% of the sample includes education in their households. 63.82% of the respondents with education reinvested their income on their small business. The descriptive statistical analysis in Figure 42 shows a chi-squared value of 0.416 with significance of 0.519 > α suggesting that education has no effect on the decision of reinvesting incomes on peoples' businesses.

Education: A share of 68% of households with education do not send their children to school. Such percentage includes sons/daughters who are older and have already finished a technical education or middle education. 32% do provide schooling for their children. The chi-squared value in Figure 43 is 10.583 with

significance of 0.001 < α that shows a relationship of household education and schooling provision to their children.

Food consumption: 65.95% of households with education dedicated part of their expenditures to foodstuff, 34.05% did not spend the income generated after credit of foodstuff. A higher share of 45.23% were households without education who did not spend such income in foodstuff. The chi-squared value is 1.165 with significance of 0.280 > α that rejects the assumption of relationship between household education and expenditure on food consumption (see Figure 44).

Debt payment: 64.04% of the sample surveyed did not use the income generated from small business created with microcredits to pay debts. Only 40.42% of households with education used such income to pay debts and 31% of households without education did the same. The chi-squared value (Figure 45) showed 0.864 with significance of 0.353 > α that indicates independency between these variables.

Household services: 46.8% of the households with education did not use income generated to pay household services such as electricity, gas and water. Whilst the rest did the opposite. The chi-squared value of 0.864 with significance 0.353 > α (Figure 46) shows that household education has no effect over the use of income to pay household services.

House building: Only 15.7% of the total subjects dedicated part of the income generated to build a house regardless on the household education. The chi-squared value of 0.125 with significance 0.723 > α rejects the relation between education and use of income generated to build a house (Figure 47).

Savings: Only 17.97% had some sort of savings. The chi-squared test value (Figure 48) resulted in 0.62 with significance of 0.804 > α, Therefore, the test shows there is no effect of household education on the ability to save.

Health: 33.70% of the surveyed people dedicated part of their income to the health area including medicines, medical consults, contraception among others. The statistical analysis (Figure 49) suggests once more that education did not have any influence over health practices.

Other purposes: The statistical test (Figure 50) showed that there is no dependence between household education and income expenditures on other purposes such as entertainment.

***Assumption*: Credit ownership changes the distribution of later expenditures.**

Result in Reinvestment: 78.78% of the credit owners reinvested their income on their small business. The statistical analysis shows a highly significant effect of credit ownership over the reinvestment in small family businesses (Figure 51).

S*chooling*: Only 22.72% of credit owners send their children to school. Such result reinforces the statistical analysis (Figure 52) that rejects any effect of microcredit ownership over the decision of providing education to their children. One factor that lowers the share of school attendance is that about 21% of the respondents have children with ages 24-39 who do not attend school anymore but some of them did in the past. Furthermore, during the conduction of the questionnaires, several people expressed that their children do not attend school since they help their parents on the family business.

Food consumption: 72.72% of credit owners spend their income on foodstuff. In addition, there is a strong effect of credit ownership and income expenditures on food (Figure 53).

Debt payment: 45.45% of people who own a microcredit in Comitán are able to pay their debts. In addition, there is a relation between credit ownership and the ability to pay debts, as the chi-squared test suggests (Figure 54).

Household services: The respondents pointed out that when having a microcredit that allows the creation of small businesses, the payment of household services such as water, gas and electricity as well as other debts, becomes easier than before. The chi-squared test (Figure 55) shows an influence of credit ownership on household services payment.

House building: 21.2% of credit owners dedicated their income to build a house. However, the statistics suggest independency between these two variables (Figure 56).

Savings: Only 19.7% of respondents who own a credit were able to have savings. The chi-square value significance (Figure 57) reinforces the inexistent effect of credit ownership over savings in Comitán.

Health: The chi-squared test value 11.954 with significance $0.001 < \alpha$ shows that microcredit owners are able to spend more on health (Figure 58).

Other purposes: The statistics (Figure 59) show no influence of microcredit ownership on expenditures for other purposes like entertainment.

Assumption: **Microcredit clients do not have the need to undertake tandas or pledge their belongings in pawnshops and vice versa.**

Result: 61.3% of tanda users are also microcredit owners. Therefore, there is no influence of tandas over microcredit ownership as shown in the chi-squared test (Figure 60). Moreover, 92% of pawnshop clients are microcredit owners. Once more the chi-squared test suggests no influence of pawns over microcredit ownership (Figure 61).

In addition, 28.8% of the respondents who own a microcredit also participate in tandas whilst 71.2% who own a credit do not participate in tandas anymore. Such behaviour raises the belief that microcredits have the possibility to cover the financial needs of their customers, driving them away from tandas. Nevertheless, the chi-squared test result (Figure 62) states that microcredits have no effect on the decision to use tandas. Similarly, there is no relation between microcredit ownership and the pledge of belongings (Figure 63). Although 81.8% of credit owners are not pawnshop clients.

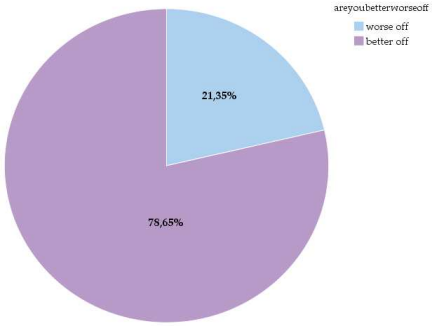
4.3 Impact of different factors in users' perceptions and results.

Assumption: **Microcredit ownership impacts the perception on microcredit programmes results in a positive manner.**

Result: 84.8% of the respondents who own a microcredit in Comitán consider that the credit helper them to overcome their poverty situation. The chi-squared test value of 21.165 with significance $0.000 < \alpha$ supports the authors' belief that microcredit owners have a better perception on the programme results (Figure 64).

In addition, 90.9% of credit owners belief they are better off with the help of microcredits. This is also supported by the result of the chi-squared test value of 22.852 with significance 0.000 < α, (Figure 65) which suggests effects of credit ownership over this consideration. Figure 17 shows the share of the total respondents whose perception is to be better off or worse off. 15% of credit owners who consider the use of microcredits did not help them to overcome their poverty situation.

Figure 17: Subjects' perception on microcredit results

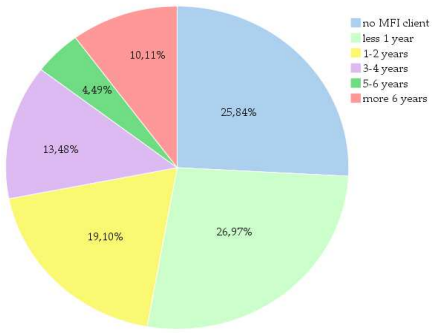


Source: Survey conducted by the author

***Assumption*: The length of participation in microcredit programmes influences a good perception on results. The longer the participation, the better results.**

Result: Figure 18 shows that 25.84% are not clients of a microfinance institution, 26.97% have been under microcredit programmes for one year or less, followed by 19.1% who have been microcredit clients for more than one year but less than two. A slightly lower share of people have a microcredit for 3-4 years (13.46%) and 10.11% have participated in microcredit programmes for more than 6 years.

Figure 18: Length of subjects' participation in microcredits

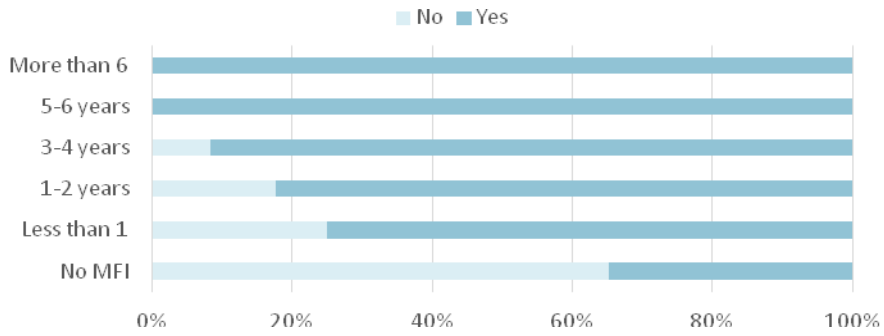


Source: Survey conducted by the author

Moreover, the chi-squared test value has proved the length of participation to influence the perception on people whether they overcame a situation of poverty or not. With a chi-squared value (Figure 66 and Figure 67) of 24.124 and significance $0.000 < \alpha$.

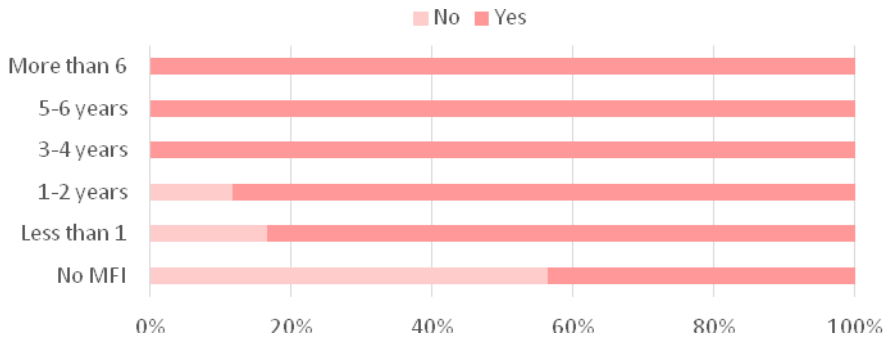
It can be seen in Figure 19 that 100% of the respondents who participated the longest consider the microcredit programme helped them to overcome a situation of poverty, whereas 75% of those who have less time participating had the same consideration. Furthermore, people who were not clients of any MFI presented the least positive results. Non microcredit participants somehow overcame their situation due to the use tandas (12 respondents) and pawns (1 respondent) that have helped them with their situation.

Figure 19: Cases of success in overcoming poverty according to the length of participation



Source: Survey conducted by the author

Figure 20: Cases where respondents are better off according to the length of participation



Source: Survey conducted by the author

In addition, 56% of the respondents who do not use microcredit but other informal forms of finance consider they are not any better off with tandas or pawns. The number of positive results in clients for 3-4 years increased to 100% (Figure 20),

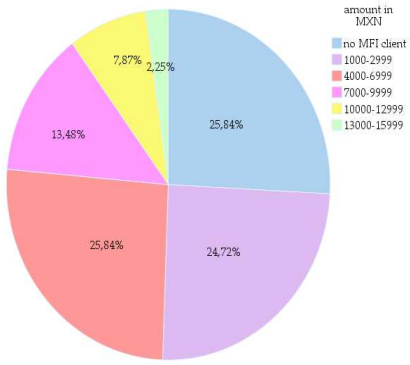
suggesting that although they have not overcame poverty with the use of microcredits, they perceived an improvement in their situation.

***Assumption*: The length pf participation in microcredit programmes influences the amount of the credit. The longer time of participation brings eligibility to higher credits.**

Result: Microcredits between $4,000 - $6,999 MXN represented the highest share (25.84%) as Figure 21 presents; followed by the smallest microcredits between $1,000 - $2,999 MXN. The highest amount of credit only represented 2.25% of the total.

Moreover, the chi-squared test value of 147.62 with significance $0.000 < \alpha$ strongly suggests a relation between the amount of credit received and the length of participation in MFIs (see Figure 68).

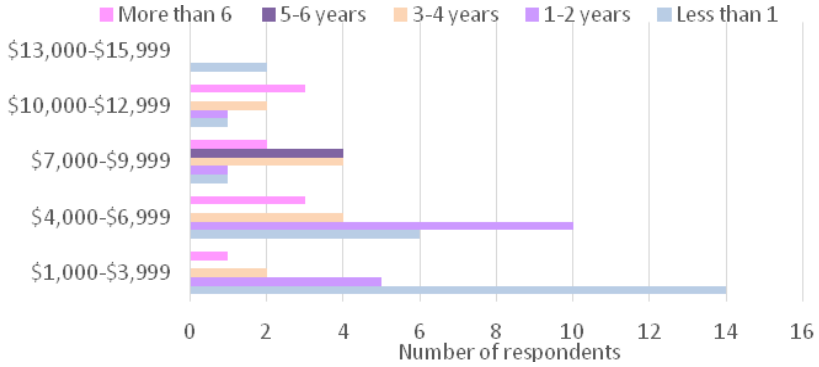
Figure 21: Amount of credit received in MXN



Source: Survey conducted by the author

To analyse the result more deeply, Figure 22 shows the amount of respondents that own certain amounts of credits according to the length they have participated with MFIs. Evidently supported by the chi-squared test, people with less than one year of participation tend to have the lowest amounts of credits whilst people participating 5-6 years are able to receive credits for $7,000 - $9,000 MXN. Interestingly, people with more than 6 years of participation own indistinctively credits of almost any amount and only 2 new participants were able to receive financing of $13,000 MXN.

Figure 22: Relation of length of participation and amount of microcredits in MXN



Source: Survey conducted by the author

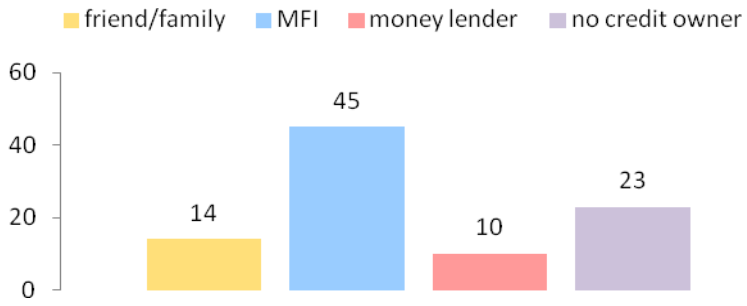
***Assumption:* The source of credit also has an effect on the perception of results. There is a better perception when the source of the credit is a MFI.**

Result: From the total surveyed subjects, it can be seen in Figure 23 that 23 people were not credit owners and 69 respondents did have a microcredit. Microfinance institutions are clearly the main source of credits in Comitán, followed by friends and family. Credits with money lenders are the less popular source of credits. The reason the surveyed people stated for this is the lack of safety and credibility towards the lender, short repayment terms (usually daily payback) and high collateral.

Friends/Family: The chi-squared test value 3.609 with significance 0.057 > α rejects any relation between this source of microcredit and the perception of overcoming a situation of poverty. Neither is there influence of this source of the perception of being better/worse off for the respondents. The chi-squared test value 1.99 with significance 0.158 > α rejects the assumption (see Figure 69).

Money lenders: As well as for the case of friends or family as source of financing, money lenders do not have any effect on the outcome for the respondents. The value of the statistical analysis 0.791 with significance of 0.374 > α states independency between this source of credits and the perception of overcoming a situation of poverty (Figure 70 and Figure 71). In addition, the value 0.864 with significance > α also results in a rejection of any relationship between this source and the respondents being better off.

Figure 23: Subjects' credit ownership



Source: Survey conducted by the author

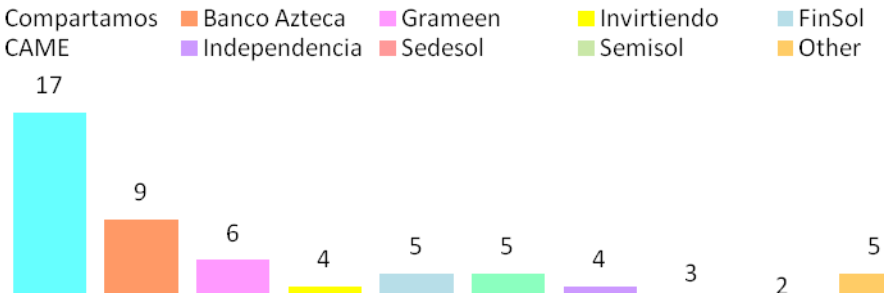
Microfinance Institutions: Unlike the two previous source of microcredits, MFIs do have an effect on the outcomes for the respondents. The statistical analysis with a value of 12.99 with significance $0.000 < \alpha$ strongly suggest that MFIs influence of the perception of the respondents to have overcome a situation of poverty. Moreover, the value 8.415 with significance $0.004 < \alpha$ also states an effect of these institutions over the respondents to be better off (see Figure 72 and Figure 73).

Furthermore, the preferred MFIs by the respondents are shown in Figure 24. The number of clients of microfinance institutions in the previous chart do not coincide with the total of clients in the institutions below. This is because 15 borrowers are clients of two MFIs at the same time in order to receive higher amounts of money and different services. Neither the following chart coincides with the total of respondents. This is because 3 of them selected 2 different means of financing.

Banco Compartamos resulted in the most common institution in Comitán for microcredits. This result is consistent with the previous information in the literature review that states this institution owns the highest share in the microfinance market in Mexico. The most popular microfinance institution is followed by the consumer credit provider Banco Azteca and the MFI Grameen Trust Chiapas. Among all the respondents, the most common methodology utilised was the solidarity group. Few undertook individual microcredits and almost no one was part of a village banking microfinance method.

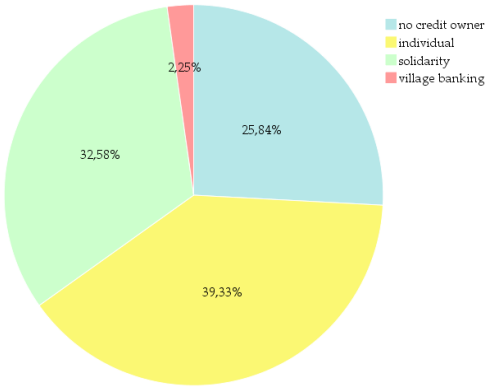
Moreover, there is a higher share of individual loans and a lower share of solidarity groups (32.58%) (see Figure 25). Only 2.25% are under a village banking programme.

Figure 24: MFIs contracted by the subjects



Source: Survey conducted by the author

Figure 25: Share of microcredit ownership by type of credit



Source: Survey conducted by the author

4.4 Qualitative case study of a selected respondent

While conducting the survey in Comitán, few women were keen to explaining further details of their cases when owning microcredits. The author chose specifically the case of Maria Antonieta Flores Gordillo as the most significant example of improvements brought by the microfinance programme.

Mrs. Flores is 62 years old and lives in the surrounding areas of Comitán. She is married and has 5 descendants who are between 29 and 35 years old and do not live any more in Mrs. Flores house. Two of them attended the secondary school, three of them attended the technique school and only one did bachelor studies.

Mrs. Flores has been a client of Grameen Trust Chiapas for 10 years and for 6 years of Semisol at the same time. She points out that the cost of undertaking the programmes was $100 MXN for each and that Grameen Trust asked her 10% of the

loan to be taken as savings in order to get the credit. Each individual credit lasted 6 months with monthly repayment basis and the amounts started from $5,000 and through the years increased to $10,000 MXN. Her weekly expenditures are about $500 MXN.

She started working the credit by herself since her husband had strong alcohol issues. Mrs. Flores, who lived at that time in a small rented studio, started buying beans and rice at the food distribution centre in Comitán (Central de abastos) and found a place in the main market to sell the crops. Through the years she was able to buy more supplies such as cacao and coffee. Slowly, Mrs. Flores started growing her business in the food market. She mentions that every morning she woke up at 4:30 am and ask a truck that was also going to the distribution centre for a lift on the trunk of the pick up truck. After buying the products she needed, she asked a taxi to take her to the food market in the centre of Comitán.

Antonieta Flores also mentions that she had to be very careful to hide the money from her husband: "*Tenía que esconder el dinero porque mi esposo siempre lo agarraba para irse de alcohólico…"* ("I had to hide the money because my husband was always taking it to drink…"). She usually did it in the kitchen, but for any reason her husband ended up finding it and wasting it in alcohol and cigarettes. Mrs. Flores had to change the hiding place constantly in order to keep her husband away from it.

After taking careful measures, she kept growing her business and was able to buy material to build a small house made of bricks and cement which included a small garden. *"…Estoy muy orgullosa porque con harto trabajo construí mi casa propia; chiquita, pero es mía…"* ("…I am very proud because with a lot of work I built my own house; small, but mine…").

Then she bought one rooster and three hens that kept in the garden and used them to get eggs and sell them and also for own consumption. She has now 2 people who help her in the business and she does not have to wake up that early anymore and go to the distribution centre, since her helpers can do it now.

Mrs. Flores also mentioned that her husband ended up with brain issues after a fall when being drunk. Therefore, she now has to use part of her loan for his medicines.

When the author asked her if her household expenditures were higher or lower when she had a credit, she answered they were the same; she got used to a certain amount and type of food and she does not need to eat higher amounts of food. She points out that taking care of her husband now is an extra expenditure but it is compensated with the fact that her children are grown up and do not live with her anymore.

The case of Maria Antonieta Flores regarding her expenditures is more about redistribution rather than and increment or decrease. The income generated is used for reinvesting in the business i.e. buying more coffee, cacao, beans, rice and for her employees. She is also able to save money for further necessities.

Mrs. Flores believes that without the microcredits she received she would not have been able to solve her poverty issues and that she is now better off. She also believes that people can be very irresponsible and that is the reason for her not to use tandas. She does not pledges belongings in pawnbrokers.

After some time, she encouraged her daughter and Mrs. Flores cousin to undertake a microcredit programme. The author was advised to interview both of them. When approaching Maria Antonieta's daughter, she denied owning any kind of credit and the author insisted no more. When approaching Maria Antonieta's cousin, (Mr. Flores) he kindly responded to the survey and stated he was also a client of Grameen Trust Chiapas for a long period of time. However, he was not able to grow his small business in the same way as his cousin.

5 Discussion

5.1 Poverty

Several authors suggest that the microfinance sector is a useful tool to counter poverty, bringing as consequence the empowerment not only of women but of the poor people in general. Interestingly, Barboza & Barreto (2006) find that microloans in San Cristobal, Chiapas are mainly devoted to commerce activities instead of pottery or other handcrafts or even agriculture. These findings can be compared with the results from the neighbour city described in this paper, where the activities were mainly commerce of vegetables, fruits and other crops.

On the other hand, Littlefield et al. (2003) recognise that access to the services of MFIs result in nutrition and health improvements, as they step away from poverty. Such outcomes have been found to be more intense in long term microfinance users. However, the case of Comitán does not coincide with the previous findings. Evidently, people in Comitán do not follow an education towards health and disease prevention as the results showed that education of the household did not have any effect on income distributed to this area. However, **credit ownership did have a positive influence over health matters. The respondents who owned a credit appeared to be able to spend more on health issues.**

Other countries like Bangladesh, India, Ghana or Indonesia have increased theirincomes due to microcredit programmes, Mexico and other Latin American countries have experimented similar effects. For instance, Armendáriz & Roome (2008) mention the effect of a certain program in Mexico (Oportunidades) resulted in a decrease of poverty and increase of school enrolment. **Unfortunately, the present results showed no influence of microcredit ownership over schooling for children**. People in Comitán still take their children to help parents with their small businesses.

Woodworth & Hiatt (2003) found that over the years, incomes increased in microcredit users in Mexico; however, in Ecuador the result was the contrary. Such increment of income suggested by the literature review is inconsistent with the result of the author's analysis, where it is found that although the income increases, the expenditures remain the same. For that reason, the author considers such

influence is towards an unchanged expenditure level that is only re-distributed differently, rather than increased or decreased; and the extra money is used to reinvest.

Other attempts to measure the impact of microcredits on food security, health, housing, education, empowerment and social capital; showed that ex-clients of MFIs scored the highest for education, empowerment and social capital, whereas current borrowers scored higher for food security, health and housing (Hiatt & Woodworth, 2006). This statement supports the finding on this paper showing that 72.72% of current credit owners in Comitán dedicate an important part of their income in food and that there is an effect of credit ownership and expenditures on food.

The results of this paper show that **people with longer participation could receive higher amounts lent and their perception on results was positive**. People participating for 5 or more years considered that microcredits made them better off and helped them to overcome poverty. This observations confirm earlier statements of the literature review that higher benefits come with longer participation in microcredit programmes. In fact, it is very likely that those positive results come from learning by association, (Barboza & Barreto, 2006) which is a spillover of longer participation in microcredit programmes. In addition, the enrolment of Mr. Flores (Maria Antonieta's cousin) to Grameen Trust Chiapas is the spillover effect of his cousin that has undertaken microcredits for 10 years.

Further studies in FINCA-Peru (Karlan & Valdivia, 2011) show the bias of better results when overcoming poverty from the microcredit users who received training from the MFI to manage their economic resources i.e. keep track of their bills, reducing costs, separate money for savings and more. It is possible that families in Comitán have in mind that saving is a good financial practice. Yet, their insufficient income does not allow doing so. Some of the MFIs visited did have a financial training programme for new users. During the surveys, a high amount of respondents pointed out their desire to save money for future drawbacks. However, the weekly payback of the microcredits together with household costs and other payments took over all their income, creating the impossibility to save. Moreover, saving money could be related with education in the household that

allows managing their money in more efficient manners (such as savings, reinvestment, health and education). Nevertheless, the results in this paper showed no effect of education over the ability to save.

Regarding the general outcome of microcredit programmes, **9% of the respondents of the author's survey felt microcredits made them worse off**. These respondents expressed that the high amount of interest of the credits and other high costs, played an important role in the "failure" of their credit. In relation to this, Barboza & Barreto (2006) recognise that in some cases, asymmetric information i.e. the members of the borrowing group possess information from one another of failures to repay or any other issues that the MFI may not have, is the reason of failure in MFI market structure and incentives for clients. Interestingly, those who were clients of Banco Compartamos, Banco Azteca, Grameen Trust Chiapas and CAME were the microcredit owners with a negative perception.

It is possible that in Comitán exists a strong issue of availability of information. When the author personally tried to ask the institutions for further information about their credits and performance, the personnel in Compartamos and Financiera Independencia refused to give more information and appeared sceptic towards the author's purpose. A possible reason of the failure of credits with family lenders may be the social burden implicit in case of the impossibility to pay back on time. Furthermore, several subjects who were not microcredit clients had also a negative perception on microcredit programmes, one reason for them not to contract one.

Another common response to the survey was the risk aversion. People rather stay away from the risk of debt microcredits come with. In this matter, Karlan et al. (2009) discuss that risk aversion can decrease by the joint liability in group lending which pushes risk aversion borrower to take more risks due to the intra-communication of the group. It is possible that Mr. Flores would not have taken a credit before due to the risks it may represent. However, after Maria Antonieta received a loan and seeing her positive outcomes, Mr. Flores was led to take a risk he would not have taken himself otherwise.

5.2 Empowerment

Microcredits are believed to bring confidence in women to pursue gender equality. To support this belief, reports form Philippines show that the number of women playing as the head of their households has increased over the years (Cheston & Kuhn, 2002). For instance, 94.35% of the respondents in Comitán owning a credit were women and 33.7% were single women. More than half of these single women were single mothers who are the heads of their households.

Moreover, further studies in Bangladesh have proved that credits have important effects on empowerment variables such as autonomy when purchasing food and other household goods. In addition, microcredits increased several variables of empowerment such as women's control over their loans and income, their participation on social activities and elections, birth control and mobility (Pitt et.al. 2003). The case of Maria Antonieta Flores is very relevant in this paper to exemplify what other researchers have found. She makes decisions over any expenditure of the household. **Maria Antonieta came with the decision to build a house and had control over her loan and further incomes**, even though her husband represented a difficulty.

Moreover, parallel projects in Bolivia, Brazil Colombia and Guatemala showed that the programmes offered by MFIs incremented women's self-esteem and participation in public spheres for 75% of the female users. Whereas for 84% of women the education and nutrition to their children also improved (Del Pozo & Arteaga, 2003).

5.3 Issues of measurement

Although several people have studied this topic, it is not easy to measure the impact of microcredits on poor households. Littlefield et al. (2003) acknowledge that few studies fail to find a positive effect brought by such programmes. In addition, it is unlikely to know with certainty whether the improvements in microcredit users are a result of the MFIs programmes or simply those people were about to improve even without participating as microcredit clients. De Hoyos[3] (2013) also agrees with the difficulty of measurement of microcredit influence.

[3] Interview in June 3, 2013 with Francisco de Hoyos Parra, Managing director of Pro Desarrollo.

Microcredits can be the solution to poverty and gender inequality. Yet, the personal virtues also play an important role in better outcomes of microcredits.

For this reason it is probably impossible to measure with accuracy to what extent microfinance can reach some of the MDGs and which other factors determine the success. For instance, this paper failed to prove that education influence a better distribution of expenditures that can bring better outcomes or that microcredits drive people away from informal sources of finance. Therefore, results of microcredits may be overestimated since tandas or pawns can also contribute to better outcomes.

On the other hand, Khandker (1998) believes that the only way to determine total effects of microcredit programmes is by evaluating impacts in the whole country economy and by identifying the benefits to both participants and non-participants. The present paper only evaluated results of participants and only few responses of few non-participants. Therefore, it is not possible to compare the benefits on this approach. This calls for further research in Comitán including users and non-users of microcredits.

In addition, the agreement of Armendáriz & Roome (2008) from an observation of Pitt & Khandker's (1998) work is available in Figure 26.

Figure 26: Potential of microfinance in poverty reduction

> *"For example, Pitt and Khandker address the bias that might arise because the individuals who self-selected into programs may be the least poor and more entrepreneurial members of their community. This bias would lead to an overestimate of the overall potential of microfinance on poverty reduction."*

Source: Armendáriz & Roome (2008).

The study in this paper found that 56.18% of the respondents of the survey have a weekly expenditure of $500-$899 MXN which means they live with $5.3-$9.6 USD per day. This amount is over the poverty level of livelihood that the World Bank has adopted ($2 USD a day) and extreme poverty ($1.5 USD). Therefore, these respondents fall into the moderate poverty and income vulnerability threshold in Figure 30 and Figure 31, 28.09% of the respondents who live with $100-$499 MXN

are classified as extremely poor. The group with expenditures between $900-$1,299 MXN fall in the classification of vulnerable people with social limitations, which represents 11.24% of the respondents. Only 4.5% are considered no poor or vulnerable.

Having mentioned the results and their classification, the author agrees with the previous observation, since 72% of the self-selected people in microcredits were the least poor and this bias may show better results on microcredits. This paper could have been focused principally to the extreme poor. However, these people are mainly indigenous who do not speak Spanish but other dialects; in order to analyse their situation a translator would be needed. Yet, it is still necessary to make further studies with extreme poors in this region to eliminate the existing bias and find more reliable results.

Moreover, the issue of measuring the impact of such programs is the exclusion of other externalities mainly attributes of participating or non-participating households i.e. abilities, health or preferences that affect the participation in microcredit programs and its outcomes (Pitt & Khandker, 1998). For instance, the spillover effect of Maria Antonieta's example over her cousin could only reach a certain level of outcome. **The positive results in the case of Mr. Flores seemed to be lower**: his expenditures were certainly lower than those by Maria Antonieta. In addition, his business was smaller and did not have any employees, which supports the previous statement of Pitt & Khandker (1998) that externalities such as personal virtues, abilities and preferences make the difference to better or worse results. Also, **it suggests that women can manage their credits in more efficient manners that bring better outcome**s as mentioned in the literature review.

Another constraint Sen (1997) mentions is that anti-poverty programmes become inefficient when bureaucratic and corrupt institutions and politicians manage the funds and even more when the legislation discriminates the poor. Clearly, the whole state of Chiapas has faced discrimination of indigenous groups by the government itself. Current microcredit programmes will not be efficient until these people receive recognition and total support from the Mexican government and its legislation.

Another issue to measure the efficiency of microcredits is the asymmetric information between the MFI and the borrowers. Barboza & Trejos (2009) take into account that clients may complain of bad performance of the system of the MFI and failure of the loans they receive. However, the institution can hardly verify the veracity of the problems. It is more likely that members of the borrowing group know the real reasons of failure from one of the borrowers. Hence, the asymmetric information creates gaps on the functioning of the microfinance sector.

6 Conclusion

In the present paper, a survey was made to people in the centre of Comitán to know whether they were microcredit clients or not. Moreover, the questionnaire searched for relevant information that was statistically analysed in order to confirm or reject the assumptions of the author.

A positive aspect is that this analysis found that there is a relation between microcredits, empowerment of women in Comitán and improvement of poverty situation. It was also found that empowerment of people help them developing other skills and also raise awareness of the opportunities available to overcome poverty, creating a cycle of improvement. As a result of empowerment, people feel capable to be more involved in economic practices that can increase their incomes, such increase of income increases self-esteem that make people more involved, and so on. Moreover, the more empowerment gained, the more advantages can be taken form microcredits to overcome poverty.

The analysis confirmed some of the initial assumptions such as the fact that women; especially those with children, are more likely to undertake microcredits. In addition, it was confirmed that households with education are more likely to provide schooling for their children, at least to some extent. The assumption of the redistribution of income to reinvestment, health, debts and services payment was also confirmed, as well as the hypothesis stating that microcredit ownership; principally those with longer participation in microcredit programmes, result in better outcomes and better perception of such credits.

A negative aspect is that it was found a lack of empowerment in women living in Comitán and other regions of Chiapas that might be related with the limitations from the government towards the indigenous people and their human rights that started decades ago and still, those inhabitants live the remaining consequences of such suppression. When there is no equity of indigenous before the law, even less equity of gender is among themselves.

In addition, the indigenous culture that predominates in this area is their inheritance dating back from centuries and still is very relevant nowadays. Unfortunately, some traditions collapse with the current beliefs to overcome

poverty. Changing the culture of indigenous groups in Chiapas to undertake different manners that improve the quality of life is not an easy task and may take decades. Up to date, the youngest generations have accepted the change and now share different beliefs that can improve their situation of poverty. Nonetheless, a total change from traditionalist mentality to a modern one will not have place until the youngest generations become the oldest.

The lack of information is also an issue. People in Comitán still consider microcredits with institutions can do more harm than good and they rather use traditional informal source of loans like tandas, whilst other people consider they have no need of microcredits. These narrow ideas of conformity with they currently poverty status, religious misunderstood ideas stating that is their destiny, and the ignorance towards further possibilities for improvement are also a constraint on the failure of microcredit programmes to overcome poverty.

Another negative aspect is the rejection of several assumptions that propose households with education are more likely to distribute their income in health, savings or reinvestment. Moreover, the assumption that microcredit users quit tandas and pawns was also rejected.

This study also found that in Comitán, microcredit users do not increase expenditures but rather distribute them differently. Another interesting finding is that expenditures on food do not necessarily increase since people do not eat more or consume their own production. Either way, microcredits have proven to improve some people's living. However, this paper also shows that there are still some challenges that the microfinance sector in México has to overcome.

Financial education: With no doubts, the microfinance sector in Mexico needs further development and improvement. Although some institutions have started campaigns on financial education for kids and adults, they have not reached yet the people who need it the most, who are usually segregated indigenous groups.

Asymmetric information: Another challenge is derived from the lack of confidence: Users or potential users are afraid to be unable to repay the credit and rather stay as they are. Many others believe there is always a "catch" in these programs because some of them sound "too good to be true". However, MFIs do not know

with certainty the origin of those fears because in many occasions, clients do not give that information.

Risk avoidance: The level of risk avoidance is certainly much higher in poor societies: any loss would represent a big loss. However, not only do clients try to avoid risks, but also the microfinance institutions. The risk of indebtedness in the Mexican microfinance sector is an actual concern linked sustainability of the institutions.

Sustainability: it is a key challenge to overcome in the microfinance sector. As it was mentioned in the last chapter, many of the MFIs like NAFIN, PRONAFIM or FIRA among others are being funded by the government until now. While some others are funded by donors and own revenues. Nevertheless, the world financial crisis, together with the inexperience of the microfinance sector in Mexico, results in insufficient grow and sustainability of the MFIs. In addition, the high tolerance to delinquency rates and delayed payments may overestimate the profitability of the institutions.

Diversification: They lack of an appropriate diversified portfolio on MFIs that includes products and services that suit to each type of client that can improve productivity (e.g. higher amounts lent, longer lasting credits, special credits for housing, school, health, among others) has driven many clients to often use different services from several institutions to fulfil their needs. However, these practices result more expensive for both users and institutions. On one hand, without diversification, users must pay not one but more microfinance services. On the other hand, diversification increases transaction costs for MFIs.

Gender inequality: Still nowadays the *machoism* is a challenge to overcome in several countries and many regions of Mexico. Although MFIs and international organisations in search of the MDGs try to empower women; their efforts have not reached some outcast areas where men take possession of the money their wives receive from the loans. As a result, there is no improvement in the participation of women in household's decisions or the society.

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8 List of Acronyms

AROA	Adjusted Return on Asets
BANSEFI	For its acronym in Spanish: National Savings and Financial Services Bank
BOT	Built-Operate-Transfer
CAME	For its acronym in Spanish: Counsel Assistance for Microentreprenuers
CIAM	For its acronym in Spanish: Centre of Research and Action of the Latin American Woman
CIEPAC	For its acronym in Spanish: Centre of Economic Research and Politic Community Action
CIDA	Canadian International Development Agency
CGAP	Consultancy Group to Assist the Poor
CONEVAL	For its acronym in Spanish: National Council Evaluation of Social Development Policy
CSO	Civil Society Organisations
EZLN	For its acronym in Spanish: Zapatista Army of National Liberation
FINAFIM	For its acronym in Spanish: National Trust to Finance Micro entrepreneurs
FINRURAL	For its acronym in Spanish: Rural Financial
FIRA	For its acronym in Spanish: Funds for Agriculture
FOMMUR	For its acronym in Spanish: Microfinance Fund for Rural Women
GDP	Gross Domestic Product
GNI	Gross National Income
IDB	Inter-American Development Bank
JASMINE	Joint Action to Support Microfinance Institutions in Europe
MDG	Millennium Development Goals
MIX	Microfinance Information Exchange
MFG	Millennium Development Goals
MFI	Microfinance Institution
MXN	Mexican Peso
NAFTA	North American Free Trade Agreement
PRONAFIDE	For its acronym in Spanish: National Programme for Financing Development
PRONAFIM	For its acronym in Spanish: National Program for Financing the Micro

	entrepreneur
ROSCA	Rotating Savings and Credit Association
SOFIPA	For its acronym in Spanish: the Pacific Financial Society
SOFIPO	For its acronym in Spanish: Popular Financial Institution
SOFOLES	For its acronym in Spanish: Limited Purpose Financial Institution
SOFOMES	For its acronym in Spanish: Multiple Purpose Financial Institution
UN	United Nations
UNAM	For its acronym in Spanish: National Autonomous University of Mexico
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VAT	Value Added Tax

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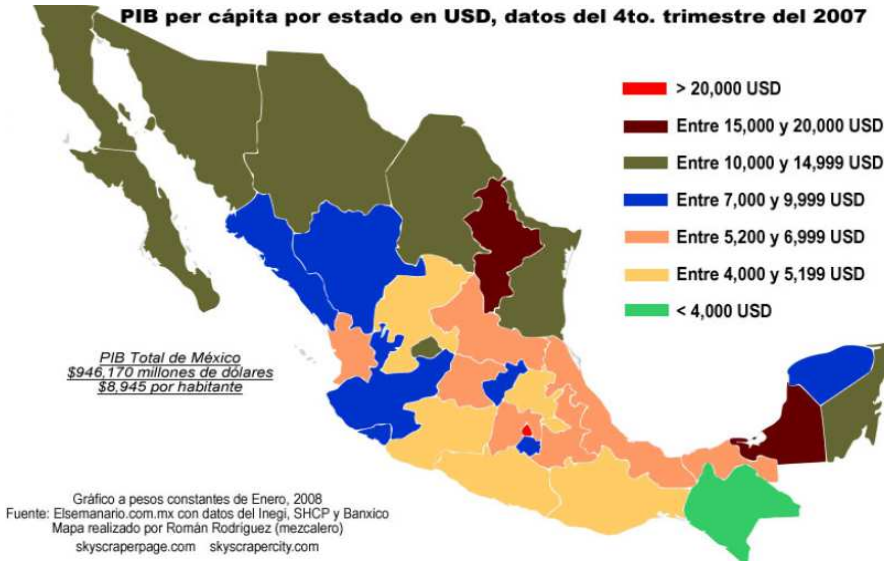
Figure 27: Overview of MFI in Comitán providing solidarity microcredits

INDICATOR	CONSERVA	FINSOL	Apoyo Integral	TE CREEMOS	SOLUCIONES Y OPORTUNIDADES	INVIRTIENDO
Size of group	10-25 women.	4-6 people	4-10 people	12 people: 10 women, 2 men	5 people	6 people: 5 women, 1 man
Repayment dates	weekly	weekly, biweekly.	biweekly / rural solidarity: weekly, biweekly	weekly	weekly, biweekly	weekly, biweekly
Amounts of credits	1,000-4,000 MXN	2,000-5,000 MXN	2,000-30,000 MXN / rural solidarity 1,000-25,000 MXN	2,000-5,000 MXN	2,000-5,000 MXN	min 1,000 MXN
Length of credit	4-6 months	4-5 months	2-6 months /rural solidarity 3-6 months	4 months	4-6 months	4-6 months
Interest rates (over total amount of credit)	4.5% monthly	3-5% monthly	7%monthly / rural solidarity 8%	4.5% monthly	4.3% monthly	4% monthly
Requisites and documents	Small business for 6 months. Not living in same household. Copy of: ID, proof of address, CURP, initial deposit of overall 10% of credit. Weekly meetings	Exclusive small business people for 1 year. No family in same group.Proof of business activity: invoices, property, etc. Copy of: ID, CURP, proof of address. No initial deposit required	Small business for 6 months. Possible acceptance of family within the same group-conditions apply. Copy of: ID, CURP, proof of address, birth certificate.	No credit history needed. Available training for managing the credit. Weekly meetings3 copies of ID, 1 copy of CURP, 1copy of proof of address.	Copy of: ID, birth sertigicate, CURP, proof od address. Payment 10% of the credit as guarantee-refundable or applicable or last payment. 100% guarantee for larger credits.	No previous business needed. Life insurance available to clients. Copy of: ID, CURP, proof of address
Region	Chiapas, Tabasco	Chiapas	Chiapas	Chiapas, Distrito Federal, Guanajuato	Chiapas, Yucatán	Chiapas, Tabasco, Campeche, Oaxaca
Rural population	40%	Not Available	0	70%	75%	98%
Urban population	60%	Not Available	100%	30%	25%	2%
Women	100%	Not Available	86%	66%	65%	95%
Average amount lent	$ 3,479.94	Not Available	$ 5,899.88	$ 5,171.65	$ 6,811.19	$ 4,943.58
Total portfolio	$ 143,171,554.00	Not Available	$ 66,403,129.00	$ 395,015,685.00	$ 13,717,732.94	$ 257,881,804.00
Clients	41,142	Not Available	11,255	76,381	2,014	52,165
Risk portfolio > 30 days	2.33%	14.55% ^	12.98%	4.17%	Not Available	4.64%
Risk portfolio >90 days	1.7%	5.04% ^	11.3%	0.94%	Not Available	1.44%

Source: Data from Pro Desarrollo(2012) , Mix Market (2013), Interviews in MFI (2013). Data until 2012
^Data corresponding to Financiera Independencia owning FINSOL

Figure 28: GDP per capita by state in 2007 (in USD)

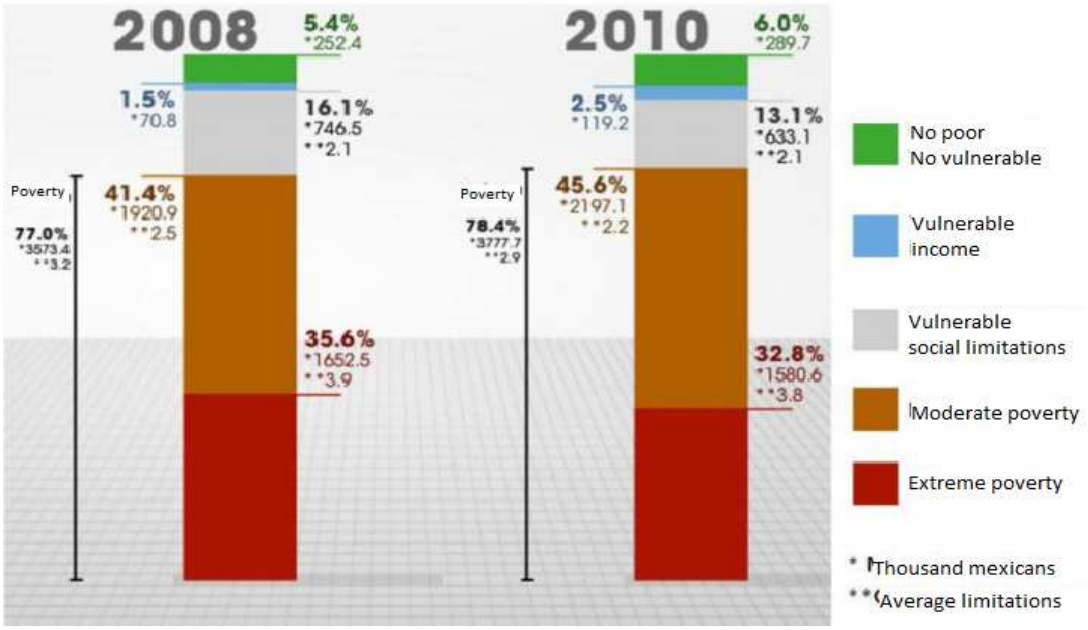


Source: US Embassy-Mexico (2010).

Figure 29: Growth of GDP in 2012 (in constant values)

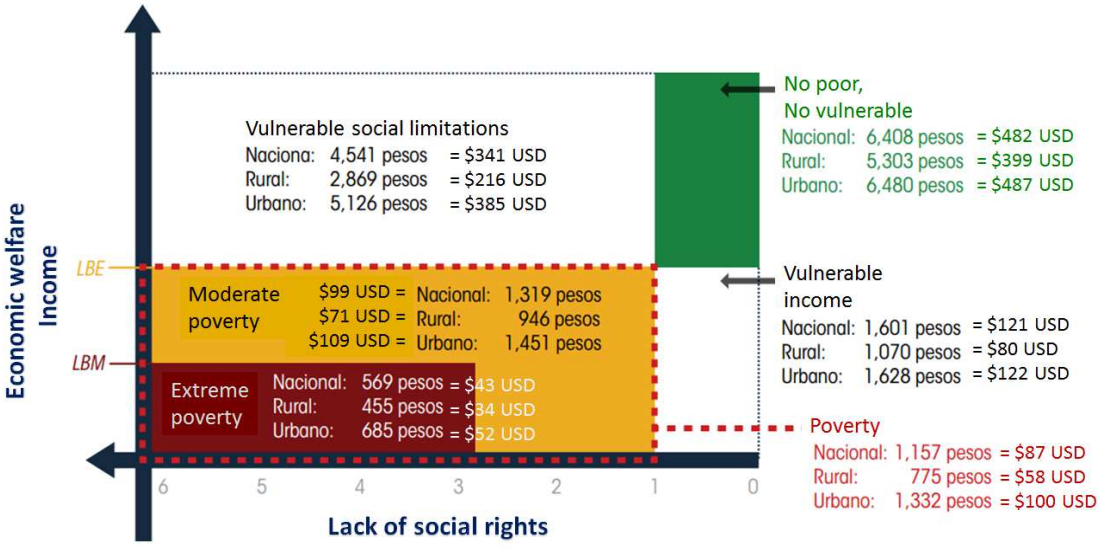
Source: INEGI (2013b).

Figure 30: Measuring poverty in Chiapas (2008-2010)



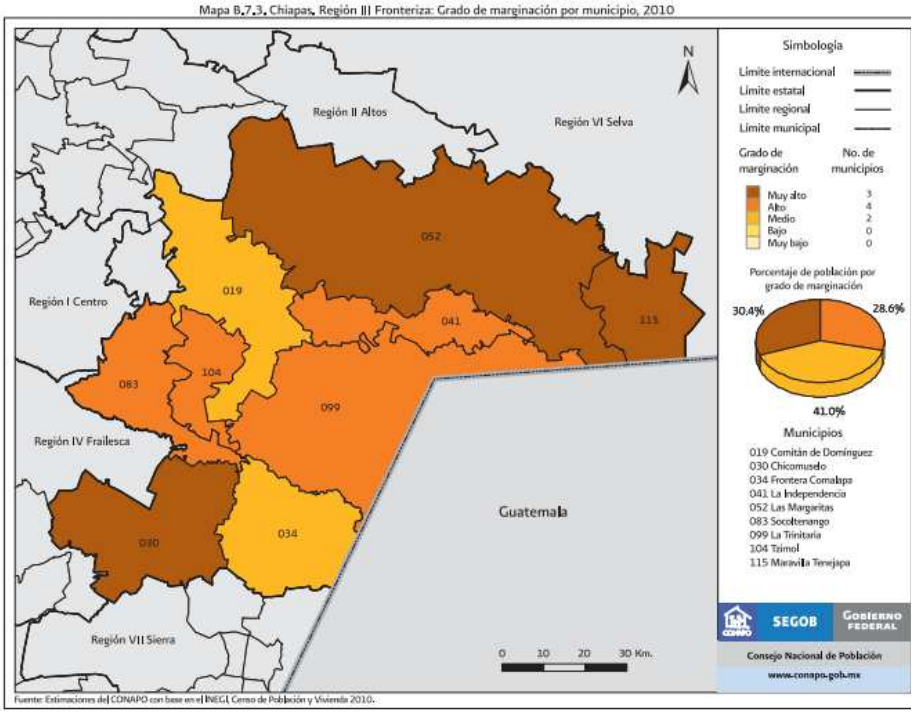
Source: CONEVAL (2012b).

Figure 31: Measuring poverty in Mexico by monthly income per capita, vulnerability and location



Source: adaptation from CONEVAL (2013b).

Figure 32: Outcast index in Comitan, Chiapas in 2010



Source: CONAPO (2012).

Figure 33: Components of empowerment process model and questions for application at personal and program levels

Component	What individual helpers should assess	What programs should assess
Personally meaningful, power-oriented goals	What kind of power is this person seeking? What makes this goal personally meaningful? How are more short-term goals related to overarching goals?	To what extent do clients tend to have a clear idea of their goals when they request services? What mechanisms do we have to assess how our services might relate to client goals? What is the range of typical client goals? What goals is our program designed to assist with?
Self-efficacy	Does this person believe she or he can reach her or his goal? What factors contribute to this person's sense of self-efficacy, including the history of his or her attempts to reach this goal, and practical considerations?	What mechanisms do we have in place to learn about clients' beliefs and the context of those beliefs?
Knowledge	What does this person know about what is required to reach his or her goal? What can I teach the client about what is needed to reach his or her goals? What can I learn about the client's environment and history that will increase my knowledge about what is needed to reach his or her goals? How do the power dynamics relevant to this goal operate in this person's life?	What do clients need to know, and how can the clients we tend to see best learn? What resources do clients need, and what is their access to those resources? How can we enhance their access to these resources? What mechanisms do we have in place to ensure that we learn about obstacles and opportunities in each client's environment? What mechanisms do we have in place to consider power dynamics related to clients' goals?
Competence	Does this person have the skills to do what is required? Do I understand the history of this person's attempts to gain such skills? Are there obstacles to gaining skills that I can help to address?	What do clients need to be able to do, and how can the clients we see best build these skills? What resources are needed to support their skill building? How can we increase access to these resources? What mechanisms do we have in place to learn about obstacles to and opportunities for skill building in each client's environment?
Action	Is this person taking action to pursue his or her goal? What is the context of any choices this person has made in the actions she or he is taking?	What are the pros and cons of taking action? Are there ways we could shift the balance? What mechanisms do we have in place to assess how pros and cons vary depending on clients' context?
Impact	What happened as a result of this person's action? What factors influenced the impact? How will these events influence this person's continuing iterations through the other components of the process?	What is the impact of actions we encourage, or that clients tend to take? What is the impact on our client, on our program, and on others? What in the environment affects that impact? Are there ways we could influence the response to clients' actions?

Source: Cattaneo & Chapman (2010).

Figure 34: Gender influence over credit ownership, contingency table (left) and Chi-square test (right)

Gender * creditowner Crosstabulation

			creditowner		Total
			No	Yes	
Gender	Male	Count	4	1	5
		Expected Count	1,3	3,7	5,0
	Female	Count	19	65	84
		Expected Count	21,7	62,3	84,0
Total		Count	23	66	89
		Expected Count	23,0	66,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,108[a]	1	,004		
Continuity Correction[b]	5,390	1	,020		
Likelihood Ratio	6,888	1	,009		
Fisher's Exact Test				,015	,015
Linear-by-Linear Association	8,017	1	,005		
N of Valid Cases	89				

a. 2 cells (50,0%) have expected count less than 5. The minimum expected count is 1,29.

b. Computed only for a 2x2 table

Figure 35: Age influence over credit ownership, contingency table (left) and Chi-square test (right)

Agecategory * creditowner Crosstabulation

			creditowner		Total
			No	Yes	
Agecategory	18-25	Count	3	6	9
		Expected Count	2,3	6,7	9,0
	26-33	Count	8	13	21
		Expected Count	5,4	15,6	21,0
	34-41	Count	5	17	22
		Expected Count	5,7	16,3	22,0
	42-49	Count	1	12	13
		Expected Count	3,4	9,6	13,0
	50-57	Count	5	8	13
		Expected Count	3,4	9,6	13,0
	58-65	Count	1	10	11
		Expected Count	2,8	8,2	11,0
Total		Count	23	66	89
		Expected Count	23,0	66,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,946[a]	5	,225
Likelihood Ratio	7,684	5	,175
Linear-by-Linear Association	1,797	1	,180
N of Valid Cases	89		

a. 4 cells (33,3%) have expected count less than 5. The minimum expected count is 2,33.

Figure 36: Marital status influence over credit ownership, contingency table (left) and Chi-square test (right)

Status * creditowner Crosstabulation

			creditowner		
			No	Yes	Total
Status	single	Count	6	24	30
		Expected Count	7,8	22,2	30,0
	married	Count	17	42	59
		Expected Count	15,2	43,8	59,0
Total		Count	23	66	89
		Expected Count	23,0	66,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,806[a]	1	,369		
Continuity Correction[b]	,412	1	,521		
Likelihood Ratio	,830	1	,362		
Fisher's Exact Test				,448	,264
Linear-by-Linear Association	,797	1	,372		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 7,75.

b. Computed only for a 2x2 table

Figure 37: having children drive people to undertake microcredits, contingency table (left) and Chi-square test (right)

Children * creditowner Crosstabulation

			creditowner		
			No	Yes	Total
Children	No	Count	6	6	12
		Expected Count	3,1	8,9	12,0
	Yes	Count	17	60	77
		Expected Count	19,9	57,1	77,0
Total		Count	23	66	89
		Expected Count	23,0	66,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,224[a]	1	,040		
Continuity Correction[b]	2,892	1	,089		
Likelihood Ratio	3,779	1	,052		
Fisher's Exact Test				,070	,050
Linear-by-Linear Association	4,176	1	,041		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,10.

b. Computed only for a 2x2 table

Figure 38: Number of children influencing credit ownership, contingency table (left) and Chi-square test (right)

Numberchildren * creditowner Crosstabulation

			creditowner		
			No	Yes	Total
Numberchildren	0	Count	6	6	12
		Expected Count	3,1	8,9	12,0
	1	Count	5	13	18
		Expected Count	4,7	13,3	18,0
	2	Count	7	20	27
		Expected Count	7,0	20,0	27,0
	3	Count	3	13	16
		Expected Count	4,1	11,9	16,0
	4	Count	1	4	5
		Expected Count	1,3	3,7	5,0
	5	Count	1	4	5
		Expected Count	1,3	3,7	5,0
	6	Count	0	1	1
		Expected Count	,3	,7	1,0
	7	Count	0	4	4
		Expected Count	1,0	3,0	4,0
	9	Count	0	1	1
		Expected Count	,3	,7	1,0
Total		Count	23	66	89
		Expected Count	23,0	66,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,378[a]	8	,605
Likelihood Ratio	7,451	8	,489
Linear-by-Linear Association	4,797	1	,029
N of Valid Cases	89		

a. 13 cells (72,2%) have expected count less than 5. The minimum expected count is ,26.

Figure 39: Household education influences people to undertake microccredits, contingency table (left) and Chi-square test (right)

school * creditowner Crosstabulation

			creditowner		
			No	Yes	Total
school	No	Count	12	30	42
		Expected Count	10,9	31,1	42,0
	Yes	Count	11	36	47
		Expected Count	12,1	34,9	47,0
Total		Count	23	66	89
		Expected Count	23,0	66,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,309[a]	1	,578		
Continuity Correction[b]	,098	1	,754		
Likelihood Ratio	,309	1	,579		
Fisher's Exact Test				,633	,376
Linear-by-Linear Association	,306	1	,580		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 10,85.

b. Computed only for a 2x2 table

Figure 40: Expenditures of households influence credit ownership, contingency table (left) and Chi-square test (right)

weeklyexpenditure * creditowner Crosstabulation

			creditowner		
			No	Yes	Total
weeklyexpenditure	100-499	Count	7	18	25
		Expected Count	6,5	18,5	25,0
	500-899	Count	9	41	50
		Expected Count	12,9	37,1	50,0
	900-1299	Count	3	7	10
		Expected Count	2,6	7,4	10,0
	1300-1699	Count	2	0	2
		Expected Count	,5	1,5	2,0
	1700-2999	Count	2	0	2
		Expected Count	,5	1,5	2,0
Total		Count	23	66	89
		Expected Count	23,0	66,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13,234[a]	4	,010
Likelihood Ratio	12,706	4	,013
Linear-by-Linear Association	4,518	1	,034
N of Valid Cases	89		

a. 5 cells (50,0%) have expected count less than 5. The minimum expected count is ,52.

Figure 41: Credit ownership influence over later expenditures, contingency table (left) and Chi-square test (right)

creditowner * expendituresaftercredit Crosstabulation

			expendituresaftercredit			
			lower	same	higher	Total
creditowner	No	Count	0	23	0	23
		Expected Count	,3	15,8	7,0	23,0
	Yes	Count	1	38	27	66
		Expected Count	,7	45,2	20,0	66,0
Total		Count	1	61	27	89
		Expected Count	1,0	61,0	27,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14,236[a]	2	,001
Likelihood Ratio	20,873	2	,000
Linear-by-Linear Association	11,416	1	,001
N of Valid Cases	89		

a. 2 cells (33,3%) have expected count less than 5. The minimum expected count is ,26.

Figure 42: Household education influence over the distribution of later expenditures on reinvestment, contingency table (left) and Chi-square test (right)

Crosstab

			reinvest		
			No	Yes	Total
school	No	Count	18	24	42
		Expected Count	16,5	25,5	42,0
	Yes	Count	17	30	47
		Expected Count	18,5	28,5	47,0
Total		Count	35	54	89
		Expected Count	35,0	54,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,416[a]	1	,519		
Continuity Correction[b]	,183	1	,669		
Likelihood Ratio	,416	1	,519		
Fisher's Exact Test				,664	,334
Linear-by-Linear Association	,411	1	,521		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 16,52.

b. Computed only for a 2x2 table

Figure 43: Household education influence over the distribution of later expenditures on schooling, contingency table (left) and Chi-square test (right)

Crosstab

			schooling		
			No	Yes	Total
school	No	Count	40	2	42
		Expected Count	34,0	8,0	42,0
	Yes	Count	32	15	47
		Expected Count	38,0	9,0	47,0
Total		Count	72	17	89
		Expected Count	72,0	17,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10,583[a]	1	,001		
Continuity Correction[b]	8,898	1	,003		
Likelihood Ratio	11,862	1	,001		
Fisher's Exact Test				,001	,001
Linear-by-Linear Association	10,464	1	,001		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,02.

b. Computed only for a 2x2 table

Figure 44: Household education influence over the distribution of later expenditures on food, contingency table (left) and Chi-square test (right)

Crosstab

			food		
			No	Yes	Total
school	No	Count	19	23	42
		Expected Count	16,5	25,5	42,0
	Yes	Count	16	31	47
		Expected Count	18,5	28,5	47,0
Total		Count	35	54	89
		Expected Count	35,0	54,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,165[a]	1	,280		
Continuity Correction[b]	,743	1	,389		
Likelihood Ratio	1,166	1	,280		
Fisher's Exact Test				,385	,194
Linear-by-Linear Association	1,152	1	,283		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 16,52.

b. Computed only for a 2x2 table

Figure 45: Household education influence over the distribution of later expenditures on debt payment, contingency table (left) and Chi-square test (right)

Crosstab

			debtpayment		
			No	Yes	Total
school	No	Count	29	13	42
		Expected Count	26,9	15,1	42,0
	Yes	Count	28	19	47
		Expected Count	30,1	16,9	47,0
Total		Count	57	32	89
		Expected Count	57,0	32,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,864[a]	1	,353		
Continuity Correction[b]	,502	1	,479		
Likelihood Ratio	,868	1	,351		
Fisher's Exact Test				,384	,240
Linear-by-Linear Association	,855	1	,355		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 15,10.

b. Computed only for a 2x2 table

Figure 46: Household education influence over the distribution of later expenditures on household services, contingency table (left) and Chi-square test (right)

Crosstab

			householdserviceselectricitywateretc		
			No	Yes	Total
school	No	Count	24	18	42
		Expected Count	21,7	20,3	42,0
	Yes	Count	22	25	47
		Expected Count	24,3	22,7	47,0
Total		Count	46	43	89
		Expected Count	46,0	43,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,949[a]	1	,330		
Continuity Correction[b]	,580	1	,446		
Likelihood Ratio	,951	1	,330		
Fisher's Exact Test				,397	,223
Linear-by-Linear Association	,938	1	,333		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 20,29.

b. Computed only for a 2x2 table

Figure 47: Household education influence over the distribution of later expenditures on house building, contingency table (left) and Chi-square test (right)

Crosstab

			buildahouse		
			No	Yes	Total
school	No	Count	36	6	42
		Expected Count	35,4	6,6	42,0
	Yes	Count	39	8	47
		Expected Count	39,6	7,4	47,0
Total		Count	75	14	89
		Expected Count	75,0	14,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,125[a]	1	,723		
Continuity Correction[b]	,004	1	,950		
Likelihood Ratio	,126	1	,723		
Fisher's Exact Test				,778	,477
Linear-by-Linear Association	,124	1	,725		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 6,61.

b. Computed only for a 2x2 table

Figure 48: Household education influence over the distribution of later expenditures on saving, contingency table (left) and Chi-square test (right)

Crosstab

			savings		
			No	Yes	Total
school	No	Count	34	8	42
		Expected Count	34,4	7,6	42,0
	Yes	Count	39	8	47
		Expected Count	38,6	8,4	47,0
Total		Count	73	16	89
		Expected Count	73,0	16,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,062[a]	1	,804		
Continuity Correction[b]	,000	1	1,000		
Likelihood Ratio	,062	1	,804		
Fisher's Exact Test				1,000	,510
Linear-by-Linear Association	,061	1	,805		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 7,55.

b. Computed only for a 2x2 table

Figure 49: Household education influence over the distribution of later expenditures on health, contingency table (left) and Chi-square test (right)

Crosstab

			health		
			No	Yes	Total
school	No	Count	26	16	42
		Expected Count	27,8	14,2	42,0
	Yes	Count	33	14	47
		Expected Count	31,2	15,8	47,0
Total		Count	59	30	89
		Expected Count	59,0	30,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,685[a]	1	,408		
Continuity Correction[b]	,364	1	,546		
Likelihood Ratio	,685	1	,408		
Fisher's Exact Test				,502	,273
Linear-by-Linear Association	,677	1	,410		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 14,16.

b. Computed only for a 2x2 table

Figure 50: : Household education influence over the distribution of later expenditures on other purposes, contingency table (left) and Chi-square test (right)

Crosstab

			otherentertainment		
			No	Yes	Total
school	No	Count	33	9	42
		Expected Count	34,4	7,6	42,0
	Yes	Count	40	7	47
		Expected Count	38,6	8,4	47,0
Total		Count	73	16	89
		Expected Count	73,0	16,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,642[a]	1	,423		
Continuity Correction[b]	,276	1	,600		
Likelihood Ratio	,642	1	,423		
Fisher's Exact Test				,581	,299
Linear-by-Linear Association	,635	1	,425		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 7,55.

b. Computed only for a 2x2 table

Figure 51: Credit ownership influence over distribution of later expenditures on reinvestment, contingency table (left) and Chi-square test (right)

Crosstab

			reinvest		
			No	Yes	Total
creditowner	No	Count	21	2	23
		Expected Count	9,0	14,0	23,0
	Yes	Count	14	52	66
		Expected Count	26,0	40,0	66,0
Total		Count	35	54	89
		Expected Count	35,0	54,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	35,119[a]	1	,000		
Continuity Correction[b]	32,243	1	,000		
Likelihood Ratio	37,491	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	34,724	1	,000		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 9,04.

b. Computed only for a 2x2 table

Figure 52: Credit ownership influence over distribution of later expenditures on schooling, contingency table (left) and Chi-square test (right)

Crosstab

			schooling		Total
			No	Yes	
creditowner	No	Count	21	2	23
		Expected Count	18,6	4,4	23,0
	Yes	Count	51	15	66
		Expected Count	53,4	12,6	66,0
Total		Count	72	17	89
		Expected Count	72,0	17,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2,173[a]	1	,140		
Continuity Correction[b]	1,360	1	,244		
Likelihood Ratio	2,471	1	,116		
Fisher's Exact Test				,219	,119
Linear-by-Linear Association	2,149	1	,143		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 4,39.

b. Computed only for a 2x2 table

Figure 53: Credit ownership influence over distribution of later expenditures on food, contingency table (left) and Chi-square test (right)

Crosstab

			food		Total
			No	Yes	
creditowner	No	Count	17	6	23
		Expected Count	9,0	14,0	23,0
	Yes	Count	18	48	66
		Expected Count	26,0	40,0	66,0
Total		Count	35	54	89
		Expected Count	35,0	54,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	15,550[a]	1	,000		
Continuity Correction[b]	13,656	1	,000		
Likelihood Ratio	15,545	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	15,375	1	,000		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 9,04.

b. Computed only for a 2x2 table

Figure 54: Credit ownership influence over distribution of later expenditures on debt payment, contingency table (left) and Chi-square test (right)

Crosstab

			debtpayment		
			No	Yes	Total
creditowner	No	Count	21	2	23
		Expected Count	14,7	8,3	23,0
	Yes	Count	36	30	66
		Expected Count	42,3	23,7	66,0
Total		Count	57	32	89
		Expected Count	57,0	32,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10,008[a]	1	,002		
Continuity Correction[b]	8,476	1	,004		
Likelihood Ratio	11,723	1	,001		
Fisher's Exact Test				,002	,001
Linear-by-Linear Association	9,896	1	,002		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,27.

b. Computed only for a 2x2 table

Figure 55: : Credit ownership influence over distribution of later expenditures on household services, contingency table (left) and Chi-square test (right)

Crosstab

			householdserviceselectricitywateretc		
			No	Yes	Total
creditowner	No	Count	18	5	23
		Expected Count	11,9	11,1	23,0
	Yes	Count	28	38	66
		Expected Count	34,1	31,9	66,0
Total		Count	46	43	89
		Expected Count	46,0	43,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,772[a]	1	,003		
Continuity Correction[b]	7,395	1	,007		
Likelihood Ratio	9,220	1	,002		
Fisher's Exact Test				,004	,003
Linear-by-Linear Association	8,673	1	,003		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 11,11.

b. Computed only for a 2x2 table

Figure 56: Credit ownership influence over distribution of later expenditures on house building, contingency table (left) and Chi-square test (right)

Crosstab

			buildahouse		
			No	Yes	Total
creditowner	No	Count	23	0	23
		Expected Count	19,4	3,6	23,0
	Yes	Count	52	14	66
		Expected Count	55,6	10,4	66,0
Total		Count	75	14	89
		Expected Count	75,0	14,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,789[a]	1	,016		
Continuity Correction[b]	4,300	1	,038		
Likelihood Ratio	9,249	1	,002		
Fisher's Exact Test				,017	,010
Linear-by-Linear Association	5,724	1	,017		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,62.

b. Computed only for a 2x2 table

Figure 57: Credit ownership influence over distribution of later expenditures on savings, contingency table (left) and Chi-square test (right)

Crosstab

			savings		
			No	Yes	Total
creditowner	No	Count	20	3	23
		Expected Count	18,9	4,1	23,0
	Yes	Count	53	13	66
		Expected Count	54,1	11,9	66,0
Total		Count	73	16	89
		Expected Count	73,0	16,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,512[a]	1	,474		
Continuity Correction[b]	,160	1	,689		
Likelihood Ratio	,541	1	,462		
Fisher's Exact Test				,753	,356
Linear-by-Linear Association	,506	1	,477		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 4,13.

b. Computed only for a 2x2 table

Figure 58: Credit ownership influence over distribution of later expenditures on health, contingency table (left) and Chi-square test (right)

Crosstab

			health		
			No	Yes	Total
creditowner	No	Count	22	1	23
		Expected Count	15,2	7,8	23,0
	Yes	Count	37	29	66
		Expected Count	43,8	22,2	66,0
Total		Count	59	30	89
		Expected Count	59,0	30,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11,964[a]	1	,001		
Continuity Correction[b]	10,258	1	,001		
Likelihood Ratio	15,006	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	11,830	1	,001		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 7,75.

b. Computed only for a 2x2 table

Figure 59: Credit ownership influence over distribution of later expenditures on other purposes, contingency table (left) and Chi-square test (right)

Crosstab

			otherentertainment		
			No	Yes	Total
creditowner	No	Count	20	3	23
		Expected Count	18,9	4,1	23,0
	Yes	Count	53	13	66
		Expected Count	54,1	11,9	66,0
Total		Count	73	16	89
		Expected Count	73,0	16,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,512[a]	1	,474		
Continuity Correction[b]	,160	1	,689		
Likelihood Ratio	,541	1	,462		
Fisher's Exact Test				,753	,356
Linear-by-Linear Association	,506	1	,477		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 4,13.

b. Computed only for a 2x2 table

Figure 60: Tanda influence over credit ownership, contingency table (left) and Chi-square test (right)

tandas * creditowner Crosstabulation

			creditowner		
			No	Yes	Total
tandas	No	Count	11	47	58
		Expected Count	15,0	43,0	58,0
	Yes	Count	12	19	31
		Expected Count	8,0	23,0	31,0
Total		Count	23	66	89
		Expected Count	23,0	66,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,109[a]	1	,043		
Continuity Correction[b]	3,144	1	,076		
Likelihood Ratio	3,986	1	,046		
Fisher's Exact Test				,074	,040
Linear-by-Linear Association	4,063	1	,044		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,01.

b. Computed only for a 2x2 table

Figure 61: Pawns influence over credit ownership, contingency table (left) and Chi-square test (right)

pawns * creditowner Crosstabulation

			creditowner		
			No	Yes	Total
pawns	No	Count	22	54	76
		Expected Count	19,6	56,4	76,0
	Yes	Count	1	12	13
		Expected Count	3,4	9,6	13,0
Total		Count	23	66	89
		Expected Count	23,0	66,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2,617[a]	1	,106		
Continuity Correction[b]	1,625	1	,202		
Likelihood Ratio	3,204	1	,073		
Fisher's Exact Test				,170	,095
Linear-by-Linear Association	2,588	1	,108		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,36.

b. Computed only for a 2x2 table

Figure 62: Credit ownership influence over the use of tandas, contingency table (left) and Chi-square test (right)

creditowner * tandas Crosstabulation

			tandas		
			No	Yes	Total
creditowner	No	Count	11	12	23
		Expected Count	15,0	8,0	23,0
	Yes	Count	47	19	66
		Expected Count	43,0	23,0	66,0
Total		Count	58	31	89
		Expected Count	58,0	31,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,109[a]	1	,043		
Continuity Correction[b]	3,144	1	,076		
Likelihood Ratio	3,986	1	,046		
Fisher's Exact Test				,074	,040
Linear-by-Linear Association	4,063	1	,044		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,01.

b. Computed only for a 2x2 table

Figure 63: Credit ownership influence over the use of pawns, contingency table (left) and Chi-square test (right)

creditowner * pawns Crosstabulation

			pawns		
			No	Yes	Total
creditowner	No	Count	22	1	23
		Expected Count	19,6	3,4	23,0
	Yes	Count	54	12	66
		Expected Count	56,4	9,6	66,0
Total		Count	76	13	89
		Expected Count	76,0	13,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2,617[a]	1	,106		
Continuity Correction[b]	1,625	1	,202		
Likelihood Ratio	3,204	1	,073		
Fisher's Exact Test				,170	,095
Linear-by-Linear Association	2,588	1	,108		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,36.

b. Computed only for a 2x2 table

Figure 64: Credit ownership influence on overcoming poverty situation, contingency table (left) and Chi-square test (right)

Crosstab

			microcreditovercameyoursituation		
			No	Yes	Total
creditowner	No	Count	15	8	23
		Expected Count	6,5	16,5	23,0
	Yes	Count	10	56	66
		Expected Count	18,5	47,5	66,0
Total		Count	25	64	89
		Expected Count	25,0	64,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	21,165[a]	1	,000		
Continuity Correction[b]	18,759	1	,000		
Likelihood Ratio	19,833	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	20,928	1	,000		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 6,46.

b. Computed only for a 2x2 table

Figure 65: Credit ownership influence on perception being better off, contingency table (left) and Chi-square test (right)

Crosstab

			areyoubetterworseoff		
			worse off	better off	Total
creditowner	No	Count	13	10	23
		Expected Count	4,9	18,1	23,0
	Yes	Count	6	60	66
		Expected Count	14,1	51,9	66,0
Total		Count	19	70	89
		Expected Count	19,0	70,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	22,852[a]	1	,000		
Continuity Correction[b]	20,115	1	,000		
Likelihood Ratio	20,595	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	22,596	1	,000		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 4,91.

b. Computed only for a 2x2 table

Figure 66: Length of participation influence on overcoming poverty situation, contingency table (left) and Chi-square test (right)

Crosstab

			microcreditovercameyoursituation		
			No	Yes	Total
forhowlong	,0	Count	15	8	23
		Expected Count	6,5	16,5	23,0
	less 1 year	Count	6	18	24
		Expected Count	6,7	17,3	24,0
	1-2 years	Count	3	14	17
		Expected Count	4,8	12,2	17,0
	3-4 years	Count	1	11	12
		Expected Count	3,4	8,6	12,0
	5-6 years	Count	0	4	4
		Expected Count	1,1	2,9	4,0
	more 6 years	Count	0	9	9
		Expected Count	2,5	6,5	9,0
Total		Count	25	64	89
		Expected Count	25,0	64,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,124[a]	5	,000
Likelihood Ratio	26,256	5	,000
Linear-by-Linear Association	18,201	1	,000
N of Valid Cases	89		

a. 5 cells (41,7%) have expected count less than 5. The minimum expected count is 1,12.

Figure 67: Length of participation influence on perception being better off, contingency table (left) and Chi-square test (right)

Crosstab

			areyoubetterworseoff		
			worse off	better off	Total
forhowlong	,0	Count	13	10	23
		Expected Count	4,9	18,1	23,0
	less 1 year	Count	4	20	24
		Expected Count	5,1	18,9	24,0
	1-2 years	Count	2	15	17
		Expected Count	3,6	13,4	17,0
	3-4 years	Count	0	12	12
		Expected Count	2,6	9,4	12,0
	5-6 years	Count	0	4	4
		Expected Count	,9	3,1	4,0
	more 6 years	Count	0	9	9
		Expected Count	1,9	7,1	9,0
Total		Count	19	70	89
		Expected Count	19,0	70,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,976[a]	5	,000
Likelihood Ratio	26,865	5	,000
Linear-by-Linear Association	16,922	1	,000
N of Valid Cases	89		

a. 6 cells (50,0%) have expected count less than 5. The minimum expected count is ,85.

Figure 68: Length of participation influence over the amount of credit, contingency table (left) and Chi-square test (right)

forhowlong * amountofcredit Crosstabulation

			amountofcredit						Total
			,0	1000-2999	4000-6999	7000-9999	10000-12999	13000-15999	
forhowlong	,0	Count	23	0	0	0	0	0	23
		Expected Count	5,9	5,7	5,9	3,1	1,8	,5	23,0
	less 1 year	Count	0	14	6	1	1	2	24
		Expected Count	6,2	5,9	6,2	3,2	1,9	,5	24,0
	1-2 years	Count	0	5	10	1	1	0	17
		Expected Count	4,4	4,2	4,4	2,3	1,3	,4	17,0
	3-4 years	Count	0	2	4	4	2	0	12
		Expected Count	3,1	3,0	3,1	1,6	,9	,3	12,0
	5-6 years	Count	0	0	0	4	0	0	4
		Expected Count	1,0	1,0	1,0	,5	,3	,1	4,0
	more 6 years	Count	0	1	3	2	3	0	9
		Expected Count	2,3	2,2	2,3	1,2	,7	,2	9,0
Total		Count	23	22	23	12	7	2	89
		Expected Count	23,0	22,0	23,0	12,0	7,0	2,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	147,624[a]	25	,000
Likelihood Ratio	140,784	25	,000
Linear-by-Linear Association	38,413	1	,000
N of Valid Cases	89		

a. 30 cells (83,3%) have expected count less than 5. The minimum expected count is ,09.

Figure 69: Friends/family as source of credit influence on perception being better off, contingency table (left) and Chi-square test (right)

Crosstab

			areyoubetterworseoff		Total
			worse off	better off	
friendfamily	No	Count	18	57	75
		Expected Count	16,0	59,0	75,0
	Yes	Count	1	13	14
		Expected Count	3,0	11,0	14,0
Total		Count	19	70	89
		Expected Count	19,0	70,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,997[a]	1	,158		
Continuity Correction[b]	1,119	1	,290		
Likelihood Ratio	2,432	1	,119		
Fisher's Exact Test				,285	,143
Linear-by-Linear Association	1,974	1	,160		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 2,99.

b. Computed only for a 2x2 table

Figure 70: Money lenders as source of credit influence on overcoming poverty situation, contingency table (left) and Chi-square test (right)

Crosstab

			microcreditovercameyoursituation		
			No	Yes	Total
moneylender	No	Count	21	58	79
		Expected Count	22,2	56,8	79,0
	Yes	Count	4	6	10
		Expected Count	2,8	7,2	10,0
Total		Count	25	64	89
		Expected Count	25,0	64,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,791[a]	1	,374		
Continuity Correction[b]	,266	1	,606		
Likelihood Ratio	,745	1	,388		
Fisher's Exact Test				,458	,293
Linear-by-Linear Association	,782	1	,376		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 2,81.

b. Computed only for a 2x2 table

Figure 71: Money lenders as source of credit influence on perception being better off, contingency table (left) and Chi-square test (right)

Crosstab

			areyoubetterworseoff		
			worse off	better off	Total
moneylender	No	Count	18	61	79
		Expected Count	16,9	62,1	79,0
	Yes	Count	1	9	10
		Expected Count	2,1	7,9	10,0
Total		Count	19	70	89
		Expected Count	19,0	70,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,864[a]	1	,353		
Continuity Correction[b]	,270	1	,603		
Likelihood Ratio	1,005	1	,316		
Fisher's Exact Test				,683	,321
Linear-by-Linear Association	,854	1	,355		
N of Valid Cases	89				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 2,13.

b. Computed only for a 2x2 table

Figure 72: MFIs as source as source of credit influence on overcoming poverty situation, contingency table (left) and Chi-square test (right)

Crosstab

			microcreditovercameyoursituation		
			No	Yes	Total
mfi	No	Count	20	24	44
		Expected Count	12,4	31,6	44,0
	Yes	Count	5	40	45
		Expected Count	12,6	32,4	45,0
Total		Count	25	64	89
		Expected Count	25,0	64,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	12,990[a]	1	,000		
Continuity Correction[b]	11,346	1	,001		
Likelihood Ratio	13,669	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	12,844	1	,000		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 12,36.

b. Computed only for a 2x2 table

Figure 73: MFIs as source of credit influence on perception being better off, contingency table (left) and Chi-square test (right)

Crosstab

			areyoubetterworseoff		
			worse off	better off	Total
mfi	No	Count	15	29	44
		Expected Count	9,4	34,6	44,0
	Yes	Count	4	41	45
		Expected Count	9,6	35,4	45,0
Total		Count	19	70	89
		Expected Count	19,0	70,0	89,0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,415[a]	1	,004		
Continuity Correction[b]	6,981	1	,008		
Likelihood Ratio	8,839	1	,003		
Fisher's Exact Test				,004	,004
Linear-by-Linear Association	8,321	1	,004		
N of Valid Cases	89				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 9,39.

b. Computed only for a 2x2 table

QUESTIONNAIRE TO EVALUATE MICROCREDITS USE (COMITAN)

This survey as the objective to find out the improvements (if some) that microcredit users perceive, as well as to know the common practices of households in Comitán towards microcredits. The results of such survey are data that will be used in a Master thesis that aims to measure the impact of microcredits in this región and with no other means.

Please select the the box that corresponds o your answer. Please write your answer in the blanks.

1. Gender: 

2. Age: _____

3. Marital status: _____ Children? ☐ No

☐ Yes How many? _____

Age?_____

Do/did they attend school? ☐ Yes ☐ No

4. How much are your weekly expenditures? _____

5. Have you asked for a loan/microcredit?

☐ No Why? _____

☐ Yes Source? ☐ Friends/family

☐ Microfinance institution Which one? _____

☐ Money lenders

If your answer is NO in question 5, skip to question 14. If your answer is YES in question 5, go to question 6.

6. For how long you have had the loan? _____

7. How much money did you received? _____

If your answer is Microfinance institution in question 5, answer the following question. If not, skip to question 9.

8. What kind of credit did you get?

☐ Individual ☐ Oportunity ☐ House ☐ Other: _____

☐ Solidarity ☐ Village banking ☐ Auto

9. Your microcredit was used for…

☐ House ☐ Handcraft Production ☐ Textile Production ☐ Education

☐ Health ☐ Fishery ☐ Sowing ☐ Auto ☐ Debts payment

☐ Livestock breeding Which kind? _____

☐ Food business Which kind?: _____ 

☐ Own business Which kind? _____

10. What are the repayment terms?

☐ Weekly ☐ Bi-weekly ☐ Monthly ☐ Bi-monthly

Underline the words in bold the are closer to your situation. If you have another case, please mention it.

11. Now that I have a microcredit, my weekly expenditures are **higher / same / lower** that those before the credit.

12. Now that I have a microcredit, the income from the activities (result from the microcredit) is used for:

Providing schooling to my children	**Food consumption**
Health issues	**Reinvestment in business**
Detbs payment	**Savings**
Building a house	**Clothing, entertainment and other purposes**

3. With microcredits, I :

Overcame my poverty situation	**Did not overcame my poverty situation**
Am better off	**Am worse off**

14. Do you participate in Tandas? ☐ Yes
☐ No

15. What do you use this money for? _____

THANK YOU FOR YOUR TIME. YOUR ANSWERS WILL HELP ME TO MAKE A BETTER EVALUATION.

COMITÁN, MÉXICO, 2013.

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